1973

10.04 Association of American Cancer Institutes (AACI) - Application for Membership

Office of the President

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Application for Membership
(1973-74)
10.4
Applications Received for New Membership

Comprehensive Cancer Center of Greater Miami
Miami, Florida

Clinica Oncologica "Andres Grullasca"
Ponce Medical Center
Ponce, Puerto Rico

Howard University Cancer Research Center (updated information) on new form
Washington, D.C.

Kern Radiation Oncology Center
Bakersfield, California

Mayo Foundation
Rochester, Minnesota

Revised Applications Received from Existing Members of AACI

Johns Hopkins University Oncology Center
Baltimore, Maryland

I. Gonzalez Martinez Oncologic Hospital
Hato Rey, Puerto Rico

Fred Hutchinson Cancer Research Center
Seattle, Washington

Memorial Sloan-Kettering Cancer Center
New York, New York

University of Texas System Cancer Center
M. D. Anderson Hospital and Tumor Institute

St. Jude Children's Research Hospital (updated information - per letter)
Memphis, Tennessee

Applications Deferred - Pending Further Action

Division of Biomedical & Environmental Research (DBER)
U.S. Atomic Energy Commission
Washington, D.C.

Wisconsin Clinical Cancer Center
Madison, Wisconsin

Mountain States Tumor Institute (Approved for Special Cancer Center - pending revision of By-Laws)
Boise, Idaho
The following existing members of the AACI have not submitted revised application for reaffirmation:

Cancer Research Institute  
University of California, San Francisco

Eppley Institute for Research in Cancer  
Omaha, Nebraska

Southern Research Institute  
Birmingham, Alabama

National Cancer Institute  
Bethesda, Maryland

Applications not approved; inadequate credentials. No further information received since last meeting.

Boston University Cancer Research Center     (Mr. Fitzroy Kennedy)

Columbia University College of Physicians & Surgeons,     (Dr. Paul A. Marks)
Cancer Research Center

Tufts Cancer Research Center     (Dr. Wm. H. Fishman, Director)
May 3, 1974

Dr. Edwin A. Mirand
Associate Institute Director
Roswell Park Memorial Institute
666 Elm
Buffalo, New York 14203

Dear Doctor Mirand:

In reviewing our application to the Association of American Cancer Institutes we have just discovered that there is a discrepancy in the arithmetic in Section 4.2, page 4. The figures in the "Total" column should be corrected to read as follows

\[
\begin{array}{c}
185 \\
48 \\
21 \\
147 \\
401 \\
\end{array}
\]

We regret this error and would greatly appreciate your making the correction.

Sincerely yours,

(Mrs.) JoAnne Hale
Secretary to R. Lee Clark, M.D.
February 27, 1974

Dr. Edwin A. Mirand  
Associate Institute Director  
Roswell Park Memorial Institute  
666 Elm Street  
Buffalo, New York 14203

Dear Ed:

Enclosed herewith is our completed AACI Membership Application Form in an original and five copies, as requested by you.

We regret sincerely that a plethora of priority activities has delayed submitting this information to you -- a situation with which you are no doubt familiar.

Best Regards.

Sincerely yours,

R. Lee Clark, M. D.  
President

RLC:jh  
Enclosures
Marlon: In working on a project for RLC Virgie McG found that our figures for "personnel" don't add up right. I don't know how that got by us except maybe changes were made and we failed to readd? My notes show the same (figures from Teresa).

Shall I write a note to MMC Membership committee and ask that it be changed? Seems like it should be changed.

Did we submit our applic. to Mirand, the sec'y? He would seem to be the one we should write - that there is a discrepancy in the arithmetic, just discovered, in section 4.2, page 4. The figures in the "Total" column should be corrected to read as follows:

We regret this error and would greatly appreciate his making the correction.

Believe you could sign beats me how it could have been so far off and not noticed as many times as we reviewed this document. It isn't even added correctly for the figures used (396, not 296).
MEMO TO: Members of AACI

FROM: Dr. E. A. Mirand, Secretary-Treasurer

SUBJECT: New AACI Membership Application Form

November 20, 1973

As I indicated in my memorandum of August 15, 1973, at the last meeting of the Association in Seattle on June 24-26, 1973, the Chairman of the Membership Committee pointed out the inadequacy of the membership application form which was being used. It was decided then that a new application form should be devised.

The revised application form was sent to all members of the AACI with my memo of August 15, 1973, with the request that all of the existing members of the Association as well as recent applicants complete the form and return it to me as soon as possible. We would like to have a profile on every institute belonging to the AACI and this form appears to be very adequate for this purpose.

To date, we have not received your completed application. The Membership Committee will be meeting in Houston during the week of December 9th and they would like to review all these profiles at that time. Therefore, I am requesting once again that you complete the enclosed membership application form and return the original with 5 copies to me by December 5th.

Your cooperation in this matter would be very much appreciated.

EAM:co
Enclosure
MEMBERSHIP APPLICATION

ASSOCIATION OF AMERICAN CANCER INSTITUTES
1. Name and address of Applicant Institute

The University of Texas System Cancer Center
M. D. Anderson Hospital and Tumor Institute
Texas Medical Center
Houston, Texas 77025

2. Category of membership being applied for. (See Instruction Sheet 4b and b).

   X  Comprehensive
   ___ Special
   ___ Corresponding

3. Summarize purpose (objectives) of institute or organization.

   Diagnosis, treatment, study and prevention of neoplastic and allied diseases

4. ORGANIZATION

   Is the applicant institute an element of a larger organization, such as a university, hospital, research center, etc. _______no  X  yes Specify:____________________

   A component of The University of Texas System

   ____________________________
4.1 Provide an organization chart of the applicant institute

4.2 Provide the following information on personnel as follows:

PERSONNEL

Professional:

<table>
<thead>
<tr>
<th>Category</th>
<th>MD</th>
<th>PhD</th>
<th>DDS</th>
<th>MD/PhD</th>
<th>MD/DDS</th>
<th>DVM</th>
<th>DVM/PhD</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-time</td>
<td>98</td>
<td>76</td>
<td>-</td>
<td>8</td>
<td>-</td>
<td>3</td>
<td>-</td>
<td>185</td>
</tr>
<tr>
<td>Part-time</td>
<td>34</td>
<td>8</td>
<td>5</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>48</td>
</tr>
<tr>
<td>Volunteer</td>
<td>19</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>20</td>
</tr>
<tr>
<td>Consultants</td>
<td>96</td>
<td>19</td>
<td>19</td>
<td>4</td>
<td>2</td>
<td>6</td>
<td>1</td>
<td>143</td>
</tr>
</tbody>
</table>

Total number of technicians employed by the institution 358

Total Personnel - All Categories 2759

4.3 Accrediting Agencies, if any. Please list: See Exhibit B

4.4 To whom does the head of the applicant institute report?

Chancellor, The University of Texas System

4.5 Who appoints the head of the applicant institute?

Chancellor, The University of Texas System

4.6 Who has review authority over the appointment?

The Board of Regents of The University of Texas System

4.7 Who has approval authority?

The Board of Regents of The University of Texas System
head of applicant institute:

.1 Does he have final authority to establish the internal organization of the institute? _____ yes X(see note no  If no, who has approval authority?  

The University of Texas Board of Regents: May the approving authority change the institute's organizational structure? X(see note yes no  

If yes, explain conditions. The Board of Regents of The University of Texas System has final authority for organization and operation of all components of the system based on recommendations of the institutional heads and the Chancellor. It would be unusual for that Board to overrule the institutional head in matters relating to internal organization and operation of the institute, however it could legally do so.

Could changes be made over the objections of the head of the applicant institute? X(see note yes no  

above)

.2 Does he have final authority to appoint key medical, scientific, and management personnel? _____ yes X(see note no 

below)

If no, who has approval authority? The Board of Regents of The University of Texas System, however all such appointments are based on his recommendation.

Can the approving authority make personnel appointments? __ X no yes
5.1 Who coordinates the preparation of the institute's budget?

Mr. Joe E. Boyd, Jr., Vice President for Business and Hospital Affairs

5.2 What is the prime source of the institute's budget?  State Appropriation

State Appropriation

Percent of the total budget?  40.4%  The secondary source? Patient charges and other local income

Percent of the total budget?  25.4%

5.3 How much is the institute's total budget for fiscal year 1973? $39,715,124

Fiscal year 1974? $44,704,826  (estimated/actual)

5.4 To whom is the budget submitted?  Chancellor, The University of Texas System

5.5 Who reviews the budget submittal?  Same as 5.4

5.6 Who has approval authority over the budget submittal?

The Board of Regents of The University of Texas System

5.7 Is the approval authority authorized to modify the budget submittal?  ___ no  X yes

If yes, which approval authority(s)?

The Board of Regents of The University of Texas System

5.8 If the total budget submittal is not appropriated by the funding agency, does the head of the institute have final authority as to how the available funds will be allocated within the organizational structure of the institute?  ___ yes  X no

If no, who does?  The Board of Regents of The University of Texas System
6.1 Basic Science

1. Use the form on the next page to provide the following information:
   - List of basic science departments conducting research (Physics, Chemistry, Biomathematics, Biology, etc.)
   - The number of medical and scientific personnel in each department (M.D., Ph.D., etc.)
   - The number of technicians in each department
   - Indicate to whom each department reports
   - Total budget for each department (Fy 1973)
   - Total number of active projects in each department

2. For each department, list the principal projects being conducted. (Use separate sheets). Give only title of the project and its objective.
   See Exhibits C, D, E, F, G, and H

3. Within the institute, who reviews proposed basic science research projects?
   Research Committee

4. Within the institute, who has final approval/disapproval authority of proposed basic science research projects?
   President

5. Does the institute have a specific procedure for evaluating on-going or completed basic science research projects? __ no X yes If yes, outline.
   Periodic evaluation by the Research Committee

See Exhibits C, D, E, F, G, and H.
<table>
<thead>
<tr>
<th>BASIC SCIENCE DEPARTMENT</th>
<th>PERSONNEL</th>
<th>1973 Budget</th>
<th>To Whom Department Head Reports</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Professional</td>
<td>Technicians</td>
<td>No. of Projects</td>
</tr>
<tr>
<td>BIOCHEMISTRY</td>
<td>16</td>
<td>19</td>
<td>35</td>
</tr>
<tr>
<td>BIOLOGY</td>
<td>12</td>
<td>27</td>
<td>22</td>
</tr>
<tr>
<td>BIOMATHEMATICS</td>
<td>7</td>
<td>1</td>
<td>17</td>
</tr>
<tr>
<td>EPIDEMIOLOGY</td>
<td>1</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>PHYSICS</td>
<td>11</td>
<td>30</td>
<td>19</td>
</tr>
<tr>
<td>Virology</td>
<td>12</td>
<td>30</td>
<td>16</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>65</strong></td>
<td><strong>107</strong></td>
<td><strong>120</strong></td>
</tr>
</tbody>
</table>
6.2 Clinical Research

1. Use the form on the next page to provide the following information:
   - List of Clinical Departments conducting research (Surgery, Medicine, Pathology, Gynecology, Pediatrics, etc.)
   - The number of physicians personnel in each department
   - The number of technicians in each department
   - Indicate to where each department reports
   - Total budget for each department (FY 1973)
   - Total number of active research projects in each department

2. For each department, list the principal projects being conducted. (Use separate sheets). Give only title of the project and its objective.
   See Exhibits I, J, K, L, M, N, O, P, Q and R

3. Within the institute, who reviews proposed clinical research projects?
   Research Committee, Surveillance Committee

4. Within the institute, who has final approval/disapproval authority of proposed clinical research projects? President

5. Does the Institute have a specific procedure for evaluating on-going or completed clinical research projects? No X yes. If yes, outline. Annual evaluation by the Surveillance Committee
Does the institute have a statistical base for evaluation of results of its program activities, such as records which standardize disease classification to enable exchange of information between institutions. Briefly discuss.

Yes. Although not all areas are included, a substantial fraction of disease and treatment areas such as chemotherapy, radiotherapy and surgery do have a statistical base for evaluation of results of their programs. For example, the Southwest Oncology Group, the National Large Bowel Cancer Project, the Radiological Physics Center and most programs of the Department of Developmental Therapeutics.

What is the total square feet of space allocated to each Clinical department?

<table>
<thead>
<tr>
<th>Department</th>
<th>Sq. Ft. (Net)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anesthesiology</td>
<td>2,864</td>
</tr>
<tr>
<td>Clinical Chemistry &amp; Lab. Medicine</td>
<td>14,408</td>
</tr>
<tr>
<td>Developmental Therapeutics</td>
<td>16,003</td>
</tr>
<tr>
<td>Gynecology</td>
<td>1,082</td>
</tr>
<tr>
<td>Medicine</td>
<td>14,563</td>
</tr>
<tr>
<td>Pathology</td>
<td>11,440</td>
</tr>
<tr>
<td>Pediatrics</td>
<td>2,905</td>
</tr>
<tr>
<td>Diagnostic Radiology</td>
<td>13,727</td>
</tr>
<tr>
<td>Rehabilitation Medicine</td>
<td>2,509</td>
</tr>
<tr>
<td>Radiotherapy</td>
<td>21,267</td>
</tr>
<tr>
<td>Surgery</td>
<td>13,038</td>
</tr>
<tr>
<td>CLINICAL DEPARTMENT</td>
<td>PERSONNEL Professionals</td>
</tr>
<tr>
<td>-----------------------------------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>ANESTHESIOLOGY</td>
<td>6</td>
</tr>
<tr>
<td>CLINICAL CHEMISTRY &amp; LABORATORY MEDICINE</td>
<td>7</td>
</tr>
<tr>
<td>DEVELOPMENTAL THERAPEUTICS</td>
<td>22</td>
</tr>
<tr>
<td>GYNECOLOGY</td>
<td>3</td>
</tr>
<tr>
<td>MEDICINE</td>
<td>22</td>
</tr>
<tr>
<td>PATHOLOGY</td>
<td>10</td>
</tr>
<tr>
<td>PEDIATRICS</td>
<td>6</td>
</tr>
<tr>
<td>DIAGNOSTIC RADIOLOGY</td>
<td>11</td>
</tr>
<tr>
<td>REHABILITATION MEDICINE</td>
<td>2</td>
</tr>
<tr>
<td>RADIOTherapy</td>
<td>18</td>
</tr>
<tr>
<td>SURGERY</td>
<td>14</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>121</strong></td>
</tr>
</tbody>
</table>
7.1 How many hospital beds are devoted to inpatient care?

7.2 Complete the following table

<table>
<thead>
<tr>
<th>Service</th>
<th>Actual CY 1972</th>
<th>Estimated CY 1973</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients Seen</td>
<td>19,700</td>
<td>19,753</td>
</tr>
<tr>
<td>New Patients Registered</td>
<td>5,608</td>
<td>6,363</td>
</tr>
<tr>
<td>Outpatient Visits</td>
<td>141,525</td>
<td>152,746</td>
</tr>
<tr>
<td>Hospital Patient Days</td>
<td>96,493</td>
<td>94,144</td>
</tr>
<tr>
<td>Surgical Procedures</td>
<td>4,748</td>
<td>4,726</td>
</tr>
<tr>
<td>X-ray Therapy - Lesions Treated</td>
<td>1,975</td>
<td>1,931</td>
</tr>
<tr>
<td>X-ray Therapy - Areas Treated</td>
<td>55,467</td>
<td>71,342</td>
</tr>
</tbody>
</table>

*Fiscal year ending August 31, 1972 and 1973

7.3 List each clinical discipline providing patient care and the number of medical doctors in each discipline.

<table>
<thead>
<tr>
<th>Clinical Discipline</th>
<th>Full Time</th>
<th>Part Time</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medicine</td>
<td>15</td>
<td>4</td>
<td>19</td>
</tr>
<tr>
<td>Pathology</td>
<td>8</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td>Clinical Chemistry &amp; Laboratory Medicine</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Pediatrics</td>
<td>3</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Diagnostic Radiology</td>
<td>8</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>Radiotherapy</td>
<td>15</td>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td>Rehabilitation Medicine</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Surgery</td>
<td>9</td>
<td>6</td>
<td>15</td>
</tr>
<tr>
<td>Anesthesiology</td>
<td>6</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Gynecology</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Developmental Therapeutics</td>
<td>12</td>
<td>0</td>
<td>12</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>83</td>
<td>22</td>
<td>105</td>
</tr>
</tbody>
</table>

7.4 To whom do the heads of clinical departments report? Director


** Budgeting Division of Patient Care Activities only

7.6 What is the total square feet of space allocated to outpatient care? 26,000 sq.ft

***Does not include additional 25,000 square feet in Radiotherapy
8.1 Does the institute have a formal, documented education policy? ______ no \_ yes
If yes, please provide a copy.
   a. President's Regulations, Article III (See Exhibit S)
   b. Education Committee Policy and Organization (see Exhibit T)

8.2 Indicate the training programs being conducted within the direction and control of the institute. Use the following check list and show the number enrolled.

<table>
<thead>
<tr>
<th>Check</th>
<th>Program</th>
<th>No. in 1972</th>
<th>Est. in 1973</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M.S. and</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Predoctoral Fellows enrolled in Ph.D. programs</td>
<td>68</td>
<td>65</td>
</tr>
<tr>
<td></td>
<td>Predoctoral Fellows and Trainees (Special) not</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>enrolled in Ph.D. programs</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Postdoctoral Fellows and Project Investigators in basic research areas</td>
<td>49</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>Postdoctoral Fellows and Project Investigators in clinical research</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>areas</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Clinical Fellows and Project Investigators</td>
<td>98</td>
<td>95</td>
</tr>
<tr>
<td></td>
<td>Clinical Residents (including dental services:)</td>
<td>25*</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Observers, Visiting Scientists</td>
<td>22</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Postdoctoral Fellows and Project Investigators in both clinical</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>and basic research areas simultaneously</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Includes 17 on UT Integrated Program in Radiology

8.3 Does the institute have an Office of Education (or other title) functioning as a distinct organizational element? ______ no \_ yes If yes, does the office have a full time or part time director? \_ full \_ part. If part time, how many hours per week? ______ hrs/week

8.4 Does the institute have autonomy in determining all aspects of its education program, such as the areas in which education programs will be planned and conducted, the curricula, etc.? \_ yes \_ no. If no, who has review privileges?

Who has approval authority? President, Programs are guided by Office of Education.

8.5 Can any part of the education program be imposed by anyone outside the institute? ______ no \_ yes. If yes, specify? __________

Who has approval authority? __________
9.1 Does the institute have any kind of cooperative program with the local medical profession? _____ no  X ____ yes. If yes, describe

Texas Medical Association - M. D. Anderson Liaison Committee

In January, 1973 the President of the Texas Medical Association responded to an invitation to appoint six physicians as members of a liaison committee to promote communication between the Texas Medical Association, the M. D. Anderson Hospital and, The University of Texas System Cancer Center to serve as an advisory committee to these organizations in developing state-wide activities as they pertain to cancer control and related activities.

The Cancer Coordinating Committee of Texas

In May, 1972 the Texas Medical Association which reorganized and expanded its committee on cancer defined the role and functions of this coordinating committee as educational with the purpose of improving communications related to cancer control and research between the Cancer Center, the American Cancer Society, the Texas State Department of Health and all health professionals in the State. This expanded committee has representation from the Texas Medical Association, the Texas Dental Association, the Texas Association of Osteopaths, the Texas Nursing Association, the Texas Hospital Association, the American Cancer Society and several medical specialty societies. Two members of the M. D. Anderson Hospital staff, the Director of Extramural Programs of The University of Texas System Cancer Center and one or more faculty members from each of The University of Texas System Health Science Centers also serve on this committee.

9.2 What organizational element has responsibility for cancer control planning and implementation?

Director, Extramural Programs, Office of the President in collaboration with the Director, M. D. Anderson Hospital and Tumor Institute

In 1972, The University of Texas System Board of Regents established The University of Texas System Cancer Center and appointed Dr. R. Lee Clark President of this newly established university wide cancer center.

In 1973 four faculty members from each academic Health Science Center of The University of Texas System were recommended by the centers' presidents for appointment to The University of Texas System Cancer Center Oncology Council. This Council recommended establishment of six working committees on Inventory, Education, Cooperative Protocol Studies, Cancer Research, Uniform Data Base, and on outreach cancer detection clinics. We plan to utilize the working committees of the Oncology Council in developing plans for a cancer control program which can be established in certain selected public health regions of the State as well as in communities in which The University of Texas Health Science Centers are located.
Briefly describe plans for expansion. In each case, indicate whether or not funds are available.

10.1 Research

Construction will begin in January 1974 on the addition of approximately 100,000 square feet of research space on the top of the present building. Funds are available for this project.

The new hospital mentioned below will include two floors for research patients. New radiation therapy research space is also included in the construction program discussed under patient care below.

10.2 Patient Care

Construction is presently under way (approximately 15% complete) of 616,500 square feet of space which includes three hundred and fifty new hospital beds in a twelve story building and a ten-story clinic building which will be adequate to handle approximately 1,200 clinic patients each day. This project also includes 23,500 square feet of additional radiation therapy patient care and research space. Two of the floors on the new hospital building will be floors for treatment of patients under research protocol. Funds are available for this project.
Additional space for education and training is included in each of the projects described above under Research and Patient Care. The research addition includes approximately 3,300 square feet of space which is designated as conference and seminar rooms. The hospital building which is presently under construction contains approximately 12,000 square feet of space which is designated for clinical training for medical students, interns, residents and nurses. The clinic building includes approximately 4,000 square feet of space which is designated for classrooms and conference rooms. In addition this building will house education offices in approximately 1,000 square feet of space. The radiation therapy addition includes approximately 1,250 square feet of classrooms and seminar rooms. This training space is included in the square footage figures included in 10.1 and 10.2 above.

10.4 Cancer Control

The expansion programs described above are designed in such a manner that our cancer control programs may be materially expanded. Cancer Control activities are so integrated into our educational and patient care programs that it is difficult to segregate out that space that will be utilized specifically for this purpose. The projects described in 10.1 and 10.2 include all of our present plans for expansion.
ATTACHMENTS

Exhibit A  Organizational Chart
The University of Texas System Cancer Center

Exhibit B  Accrediting Agencies

LIST OF PRINCIPAL PROJECTS BY DEPARTMENT

Exhibit C  Biochemistry
Exhibit D  Biology
Exhibit E  Biomathematics
Exhibit F  Epidemiology
Exhibit G  Physics
Exhibit H  Virology
Exhibit I  Anesthesiology
Exhibit J  Clinical Chemistry and Laboratory Medicine
Exhibit K  Developmental Therapeutics
Exhibit L  Medicine
Exhibit M  Pathology
Exhibit N  Pediatrics
Exhibit O  Diagnostic Radiology
Exhibit P  Radiotherapy
Exhibit Q  Surgery
Exhibit R  Gynecology
Exhibit S  Excerpt from President's Regulations, dated October 23, 1970
Exhibit T  Education Committee Policy and Organization
<table>
<thead>
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<th>No.</th>
<th>Accrediting Agencies</th>
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<td>1</td>
<td>American Association for Accreditation of Laboratory Animal Care</td>
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<td>American Association of Blood Banks</td>
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<td>3</td>
<td>American Boards of Anesthesiology, Internal Medicine, Pathology, Pediatrics, Radiology, Surgery and Urology with the Council on Medical Education of the American Medical Association</td>
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<td>Boards of Schools of Medical Technology, Cytology and Histology (American Society of Clinical Pathologists) with the Council on Medical Education of the American Medical Association</td>
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<td>Committee on Technologist Training of American College of Radiology with the Council on Medical Education of the American Medical Association</td>
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<td>National Council on Social Work Education</td>
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<td>Texas State Board of Nursing Examiners</td>
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</table>
DEPARTMENT OF BIOCHEMISTRY
List of Principal Projects

Chemistry of Pituitary Hormones and Related Factors

The objective of this program is to increase our knowledge of the chemistry and mode of action of pituitary hormones.

Proteins of Cell Nucleus in Normal and Malignant Growth

This program objective studies the composition, heterogeneity, specificity, biosynthesis, and biological and biochemical functions of nuclear proteins in normal and neoplastic growth.

Investigation of Glycopeptides Obtained from The Surface of Normal and Neoplastic Cells

The objective is to correlate chemical alterations at the cell periphery with normal and neoplastic processes; and thereby provide a rational basis for the development of therapeutic approaches which emphasize the control of metastasis.

Immunoochemical and Immunological Studies on Glycoproteins

The objective of this study is the possible role of the carbohydrate moiety in the transport of glycoproteins across membranes.

Regulation of Enzymic Activities by Metabolites

The aim of this program is to study a few significant regulatory mechanisms, how these mechanisms operate, the extreme within which they are applicable, and the amplification or alteration of effects on other metabolic circuits.
DEPARTMENT OF BIOLOGY
List of Principal Projects

In Vitro Interactions between Bleomycin and DNA

An in vitro study of the mechanism of DNA-strand breakage and binding produced by the glycopeptide antibiotic bleomycin.

Early Detection of Familial Breast Cancer

An investigation of the genetic aspects of breast cancer and the possibility of genetic (and clinical) subtypes of the disease.

Genetic Study of the Nevloid Basal Cell Carcinoma Syndrome and Other Skin Tumors

A study of the inheritance of nevoid basal cell carcinoma and a hereditary form of malignant melanoma, and the genetic linkage patterns of the syndromes to blood type genes and serum enzyme genes.

Genetic Variation in Enzymes which Modify Chemical Carcinogens

A study of the genetic variation in human enzymes that metabolize hydrocarbon carcinogens, and the relationships of these genetic patterns to lung cancer and colon cancer. The study is being extended to other human tumors.

Hereditary Factors in Adenocarcinoma of the Colon

A study of hereditary forms of colon adenocarcinoma including its frequency, the degree of association between colonic polyps and the colon cancer in the patient population, the degree of association between adenocarcinoma of the uterus, stomach, breast, ovary, and prostate in the patient population, and other factors.

Studies on Chromosome Structure

This project employs various cytological techniques, including cytochemistry and electron microscopy, to decipher the organization of chromosomal components, and to study chromosome function synopsis segregation and change in neoplastic and normal cells.

RNA Tumor Virus Replication

The long-term goal of this research is the study of Rauscher leukemia virus-specific protein biosynthesis, characterize the products, and relate these findings to the induction of leukemia.
DEPARTMENT OF BIOMATHEMATICS
List of Principal Projects

Computer Analysis of Human Chromosomes

This project is aimed at providing computational ability to assist the cytogenetecist in the recognition, classification and quantitative analyses of human chromosomes.

Computation for Radiation Dosimetry

This program supports the research and development involved in the computation of radiation dosimetry for a variety of radiotherapy treatments.

Statistical Office for the Southwest Oncology Group

The Statistical Office of the Southwest Oncology Group (SWOG), a cooperative cancer chemotherapy clinical trials study group, provides design and analysis of over 50 ongoing clinical studies.

Decision Making for Patients with Acute Leukemia

The major objective of this project is to develop a methodology of decision making for patients with leukemia, utilizing all relevant clinical and laboratory data during the time course of the disease to predict therapeutic and toxic results of various schedules and doses of treatment.

Cellular Kinetics and Applications to Cancer Therapy

Knowledge of the cell cycle kinetics of normal and tumor cells is being exploited through mathematical models to develop more optimal therapy plans.

Planning and Analysis of Clinical Studies

In this program careful biostatistical guidance is given to a large number of ongoing clinical studies at M. D. Anderson Hospital and Tumor Institute in a variety of types of cancer with emphasis of use of design and analysis of these studies to extract as much useful information as possible employing as small a number of subjects as feasible.

Statistical Methods for Survival Time Studies

Length of survival or disease free interval is a common criterion used in cancer clinical studies for evaluating the benefit from treatment; therefore, this program is concerned with the development of statistical methods for the characterization and analysis of survival studies.
List of Principal Projects

**Incidence, Morbidity, Mortality, and Natural History of Various Types of Cancer by Three Major Ethnic Groups in Texas**

This project is to determine incidence, survival, natural history, and differences of various types of cancer by race and geographic area at the community level.

**Development of a State-wide Melanoma Registry, Analysis of the Distribution by Ethnic Groups and the Prognosis by Location of the Primary Lesion**

This program seeks to verify any existing differences in malignant melanoma in incidence, prevalence, and survival among the three major ethnic groups in Texas and to study the epidemiology of such differences.

**Epidemiology of Cancer of the Cervix in Three Ethnic Groups**

To determine whether apparent differences in prognosis and occurrence of cancer of the cervix and the corpus uteri among Negroes, Latin Americans and Anglo Americans can be ascertained.

**Distribution of Thyroid Cancer and Its Epidemiology by Histological Type**

To verify differences in incidence and prevalence of thyroid cancer and survival rates by ethnic group and histological type in Texas.

**Search for Leukemia Clusters, 1944-1964, Houston and El Paso, Texas**

To ascertain the presence of possible leukemia clusters or repeated occurrences over time in the same family, house or neighborhood by analyzing the leukemia and lymphoma deaths in Houston and El Paso, 1944-1964.
DEPARTMENT OF PHYSICS
List of Principal Projects

A Scintillation Camera for Imaging Radioisotopes

Development of new imaging systems for distributions of radioactive isotopes in patients.

Research Related to Fast Neutron Radiation Therapy

This program is designed to develop fast neutron beams for radiotherapy.

Alterations of Radiosensitivity by Biochemical Techniques

A study of changes in radiation sensitivity in different phases of the cell cycle, and also investigation of aspects of repair mechanisms in irradiated cells.

Structure of Mammalian and Other Chromosomes

Various biophysical tools and techniques are used to determine the molecular arrangement and architecture of interphase and mitotic chromosomes.

Dosimetry Related to Interinstitutional Clinical Trials

This program is to develop methods and carry out the quality control of physics dosimetry in interinstitutional clinical trials involving radiation therapy.
DEPARTMENT OF VIROLOGY
List of Principal Projects

Spontaneous and Induced Leukemia in Animals

The program is directed toward elucidation of the comparative morphologic, biological, immunological, and biochemical properties of the viruses associated with leukemia, lymphoma, and sarcomas of animals of various species.

Studies on Human Leukemia and Solid Tumors

An in-depth study of the relationship of viruses, particularly the RNA tumor viruses, to the origin of selected types of human neoplasia: human leukemia, lymphoma, breast cancer, cancer of the prostate, and sarcomas of bone and soft tissue.

Studies on DNA Virus-Host Cell Interaction

Investigation of the factors influencing cell transformation and virus replication in animal and human cells infected by small DNA tumor viruses, particularly polyoma and Simian Virus 40 (SV40).
**DEPARTMENT OF ANESTHESIOLOGY**

**List of Principal Projects**

**The Relief of Pain Secondary to Cancer**

Investigation of medications for the control of pain, apprehension and fear in preoperative management of the surgical patient.

**Evaluation of Newer Analgesic Drugs**

To determine the effect that various intravenous agents have upon the immediate post-operative analgesic state.
DEPARTMENT OF CLINICAL CHEMISTRY AND LABORATORY MEDICINE
List of Principal Projects

Cytogenetic and Ultrastructural Studies in Human Leukemia

The establishment of improved cytological criteria for evaluation of the clinical status, biological behavior and response to therapy of human leukemia.

Immunological Studies in vitro in Human Sarcoma

Investigation of a tumor-associated antigen found in an established human neurogenic sarcoma cell line which is common to various sarcoma tumors.

Tumor Antigens and Cell Cycle of Human Sarcomas

This program is designed to determine cell cycle dependence of tumor-associated antigen expression in human tumor cells cultured in vitro.

Early Detection of Bacteroides fragilis Sepsis by Gas-chromatography

To identify human anaerobes from specific patterns of volatile metabolic products isolated from selected media by gas chromatography.

Growth Kinetics of Plasma Cell Myeloma

To determine the following kinetic parameters of human neoplastic plasma cells before and after chemotherapy:
(a) length of the cell cycle
(b) fraction of cells in DNA synthesis phase
(c) population growth fraction
(d) population doubling time
and to analyze the data in order to estimate the possible cell loss factor, and to devise mathematical models suitable for investigation of different chemotherapeutic regimens.

The Limulus Test for Detection of Endotoxin and Gram-negative Sepsis in Cancer Patients

To detect endotoxemia as a source of fever in immunologically compromised cancer patients.
DEPARTMENT OF DEVELOPMENTAL THERAPEUTICS
List of Principal Projects

The Effect of a Germ-Free Environment on Cancer Chemotherapy

This program is designed to test the effects of the germ-free environment on cancer chemotherapy and suppression of granulocytopenia.

Chemotherapy of Hematological Malignancies

To investigate combination chemotherapy in advanced Hodgkin's Disease, lymphomas and adult acute leukemia.

Investigation of New Agents in Cancer Chemotherapy

This program integrates an interdisciplinary approach to cancer chemotherapy combining the pharmacological and therapeutic investigation of new agents of potential value in cancer chemotherapy.

Clinical Immunology

A multi-faceted investigation of the relationship between the host and his tumor, so that immunological methods can be applied to the diagnosis, evaluation and treatment of malignancies.

Physiology and Transfusion of Platelets and Leukocytes

This program is designed to provide and develop hematological supportive care for the myelosuppressed patient, and to investigate the role of leukocyte and platelet compatibility.

Diagnosis and Treatment of Infection in Cancer Patients

Most infections in cancer patients are caused by gram-negative bacilli, particularly E. coli, klebsiella species and pseudomonas species. Investigation of the endotoxins produced are studied, and clinical pharmacology is being investigated on new antibiotics in hopes of developing useful new single antibiotics or combinations of antibiotics.

The Therapy of Solid Tumor

This program is designed to develop new effective regimens combining two or more drugs and rational schemes designed to improve the response rate and its duration. It is designed to seek the best ways in which effective agents can be combined for maximal efficacy with minimal toxicity.

Cellular Chemotherapy and Kinetics

Factors Altering susceptibility of tumor cells to chemotherapeutic agents are studied to provide clues to differences in response rates among patients, and to form a rationale for new approaches to chemotherapy.
Clinical Evaluation of Combination Chemotherapy in Non-Oat Cell Bronchogenic Carcinoma

This program currently is directed toward investigating the use of Bleomycin by continuous infusion in combination with a 4 drug regimen (cytoxan, oncovin, methotrexate, and 5-Fluorouracil).

Comparison of Murine and Human Leukemia and Sarcoma

To compare murine and human leukemia and sarcoma from the virological, immunological and epidemiological points of view.

Immune Interactions of Lymphocytes and Antibodies with Tumor Specific Antigens

Investigation of some very controversial aspects of tumor immunology, such as: the occurrence in clinically normal individuals of lymphocytes cytotoxic toward tumor cells, investigation of serum factors antagonistic to- or synergistic with these lymphocytes; and investigation of possible deposition of soluble tumor-specific antigens in glomeruli of kidney specimens taken at autopsy from tumor-bearing patients.

Effect of Various Treatments and Management on Pituitary Tumors

Patients with pituitary tumors are selected for hypophysectomy either by cobalt irradiation or surgery. Pituitary hormone studies are conducted before and after some cases are subjected to irradiation and treatment; are followed up with additional studies at three-month intervals for 2-3 years to detect delayed effects of irradiation.

Family Study of Medullary (Solid) Carcinoma of the Thyroid Gland

This program is designed to determine the exact incidence of the familial type of medullary carcinoma of the thyroid using radioimmunoassay for the measurement of calcitonin in serum of high risk individuals (members of the family of patients with medullary carcinoma).
Application of Anatomic Pathology to Clinical Investigations of Cancer

This program is designed to enhance institution-wide understanding of neoplastic processes and morphologic changes incident to therapy.

Whole Organ Study of Primary Malignant Tumors

This program is designed to utilize the three-dimensional visualization technique to study neoplasms in relation to adjacent normal structures, preneoplastic changes, tumor distribution, routes of spread, sites of origin, and histologic variation.

Trace Metal Patterns in Normal and Malignant Tissue

For development of methodology at the ultracytochemical level to establish potential applications of trace metal analyses to current clinical problems.

Pathologic Changes Following Chemotherapy

Evaluation of the effectiveness and toxicity of chemotherapeutic agents used in management of neoplastic disease.

Cytopathology Studies

The improvement of techniques for obtaining and processing cytologic specimens and collaboration in screening programs and clinical studies directed toward earlier detection of neoplastic disease.

Electron Microscopy of Human Neoplasms

This program has the dual purpose of providing routine diagnostic assistance at the ultrastructural level for tumors which cannot be readily identified by conventional light microscopy, and of accumulating diagnostically significant data on the fine structure of human neoplasms.

X-Ray Fluorescence Studies of Biological Materials

A study of the biologic significance of trace and other important elements in human physiology, intermediary metabolism and pathology as related to the diagnosis and pathogenesis of human neoplasia.
DEPARTMENT OF PEDIATRICS
List of Principal Projects

Cancer Chemotherapy and Investigative Therapeutics in Children


Pharmacologic, Toxicologic, and Clinical Studies of the New Cancer Chemotherapeutic Agents

Phase I and II clinical and toxicologic studies of new drugs, new drug combinations, and new dosage regimens in children with advanced cancer.

Comparative Evaluation of New Chemotherapeutic Agents in Acute Leukemia in Children

Phase II and III studies of new drugs, new drug combinations, and new schedule dosage modifications in patients with all stages of acute leukemia.

Evaluation of the Effectiveness of Chemotherapeutic Agents in the Treatment of Children with Malignant Lymphomas

Phase II and III studies of new drugs, new drug combinations, new schedule dosage modifications and multimodal therapy in Hodgkin's disease and malignant lymphomas in children.

Evaluation of the Effectiveness of Chemotherapeutic Agents in the Treatment of Children with Brain Tumors, Retinoblastoma, Ewing's Sarcoma, Osteogenic Sarcoma, Neuroblastoma, Wilms' Tumor, Soft Tissue Sarcoma, and other Malignancies

Phase II and III clinical evaluations of new drugs, new drug combinations and new schedule/dosage modifications in various solid tumors of childhood.
DEPARTMENT OF DIAGNOSTIC RADIOLOGY
List of Principal Projects

Early Breast Cancer; Thermography and Histology

To evaluate the role of high resolution thermography as a mass screening device for the detection of early breast cancer.

Application of Laser Holography to Diagnostic Radiology

Storage and retrieval of three dimensional radiographic information utilizing the methods of optical holography and stereoradiography.

Xeromammography Versus Film Mammography: A Comparative Study

An inter-institutional research project designed to investigate the conditions of optimum image presentation of the xerox process as compared to conventional film mammography.

Vascular Changes Following Irradiation to the Liver

An experimental animal study of angiographic and histologic changes to the liver after irradiation.

The Use of an Induced Negative Charge in Minimizing Throbus Formation on Intravascular-dwelling materials

An experimental animal investigation of the potential application of an induced negative charge in reducing thrombus formation associated with angiography.

The Use of Prostaglandin E1 as a Pharmacologic Agent for the Radiological Enhancement of the Canine Splanchnic Circulation

An experimental animal investigation designed to improve the roentgen opacification of the portal vein for use in diagnosis of carcinoma of the pancreas.
DEPARTMENT OF RADIOThERAPY
List of Principal Projects

Correlation of Tumor-Dose-Time Relationships in Radiotherapy of Squamous Cell Carcinomas of the Oropharynx

This project is central to radiotherapy trying to obtain maximum control rates with minimum complications. With dosimetry, both for external beam and interstitial intracavitary radium therapy, which has been in use for several years, it allows an accurate determination of the dose received by the tumor and the normal structures.

Preoperative Irradiation in Treatment of Some Groups of Breast Cancers

Patients with carcinoma of the breast included in this study are those treated with preoperative irradiation and radical mastectomy. The purpose is to sterilize microscopic disease often present in the dermal lymphatics of the skin (tumor cells in microscopic nests are much more radiosensitive), and to devitalize tumor cells in the hope of preventing implants in the surgical area or metastases at a distance.

Whole Neck Irradiation of Lymphatics in the Anaplastic Tumors of the Head and Neck

The anaplastic tumors of the nasopharynx and oropharynx have a diffused bilateral spread. Because of the better tolerance of the tissues and much less skin reaction, one can with supervoltage treat the whole lymphatic area of the neck in continuity with the primary lesion. The project of combining whole neck irradiation with radical neck dissection in the anaplastic tumors of the oropharynx is further systematized.

Whole Abdominal Irradiation of Ovarian Cancers

The use of supervoltage in the irradiation of ovarian carcinoma is being investigated in this project in an attempt to evaluate the sensitivity of ovarian tumors that have spread into the rest of the abdominal cavity. Trunk bridge, open field and strip technique with the 60Cobalt teletherapy stationary unit is being used, and thus far the analysis shows that irradiation of the whole abdomen by the 60Cobalt moving strip and additional irradiation of the pelvis (2,000 rads in 2 weeks) to be the most effective postoperative treatment provided that residual tumor masses after surgery are less than 2cm. in diameter.

Evaluation of Fast Neutron Therapy in Head and Neck Cancers

This project is to determine the usefulness of fast neutron therapy in head and neck cancer; specifically to show whether fast neutron therapy can 1) improve the local control rate of bulky head and neck cancers, or 2) decrease the incidence of radiation complications and bothersome sequelae.
Radiobiology of Normal Tissues

This research is aimed at elucidating aspects of the response of normal tissues to irradiation with the goal of making possible a reduction in damage of normal tissue during the radiotherapy of cancer. In particular, the radiosensitivity and rates of postradiation recovery of stem cells of the small intestine and hair follicles are being measured and methods studied whereby these responses may be modified.
DEPARTMENT OF SURGERY
List of Principal Projects

Serum Tyrosinase in Patients With Malignant Melanoma

Experiments are now being conducted to isolate human tyrosinase from human malignant melanoma tumors. Attempts are being made to prepare antiserum against purified human tyrosinase to be utilized as a specific and sensitive test for determining the presence of this enzyme in human sera. This would be utilized for determining the presence of clinical undetectable disease or monitoring the effects of therapy for malignant melanoma.

Immunological Studies of Patients with Solid Tumors

Attempts are being made to ascertain mechanisms operative at the cellular and molecular level which deal with the inability of the host to destroy his malignant tumor. Studies are directed toward determining if specific immunoglobulins associated with human sarcoma and malignant melanoma might function as enhancing antibodies, and thereby promote tumor growth.

Investigation of the Treatment of Advanced Melanoma

This program is directed toward developing a profile of the way advanced melanoma patients handle tyrosine metabolism, the sensitivity of their tumors to chemotherapy agents, the tRNA patterns of their tissues and tumors, and, the melatonin-related content of the pineal gland.

Chemotherapy for the National Prostatic Cancer Project

This project proposes to determine the usefulness of single chemotherapeutic agents in the treatment of advanced prostatic carcinoma.

The Therapy of Bronchogenic Carcinoma

This investigation is designed to conduct studies of intensive multi-disciplinary therapy of patients with bronchogenic carcinoma and to determine the efficacy of each of a number of therapeutic approaches, the possible relationship to the morphological type of cancer, and the clinical stage of the disease as well as the influence of any concomitant pathology.
Chemotherapy or Advanced Ovarian Cancer

This is a clinical chemotherapy research protocol designed to identify chemotherapy agents effective in the treatment of ovarian cancer, and to compare these agents with an alkylating agent that has been used extensively in past treatment of this disease.
ARTICLE THREE
The Division of Education

Section A. The Division of Education shall be charged with the dissemination to students, the medical and related professions, and the public, of information concerning the occurrence, causes, treatment, relief, cure and prevention of neoplastic and allied diseases, including affiliation with, and participation in, all appropriate teaching functions of The University of Texas System. Its duties shall be performed in coordination with those of the Divisions of Research and Patient Care Activities.

Section B. The administrative head of the Division of Education shall be the Associate Director (Education) who shall be appointed and removed by the President. He shall be responsible to the President for the supervision of all education and training activities, and the recommendation of pertinent policies, procedures and fiscal arrangements. He shall implement professional appointments and programs in conjunction with the various department heads and shall prepare a plan for continuing education of medical and allied health professional personnel.

Section C. There shall be an Education Committee, appointed by the President, and responsible to the administrative head of the Division of Education, whose principal function is to advise that officer on correlated professional educational activities of the staff in the various services and departments of the hospital. The Committee shall be composed of the heads of the following departments or their designated alternates: Biochemistry, biology, biomathematics, developmental therapeutics, epidemiology, medical communications, medicine, nursing, anatomical pathology, clinical pathology, pediatrics, physics, publications, diagnostic radiology, radiotherapy, rehabilitation medicine, research medical library, surgery, and virology. Such other departments of similar rank as are later organized shall also be similarly represented on the Committee. Ex officio membership shall be as provided in the “Education Committee Policy and Organization” document.

Three of the subcommittees of the Education Committee shall be: (1) The Educational Policy Committee of the Graduate Faculty, appointed by the President, which shall be advisory to the Education Committee and the head of the Division of Education on all matters pertaining to the instruction and training of students of The University of Texas Graduate School of Biomedical Sciences who are working at the Anderson Hospital for academic credit toward advanced degrees; (2) the Residency Training Committee, selected by the Executive Committee of the Medical Staff, which shall be advisory to the Education Committee and the head of the Division of Education in the specific area of clinical residency and fellowship training; and (3) the Committee on Continuing Education of Medical and Allied Health Professional Personnel.
Section D. The head of each department and the chief of each section in the Tumor Institute and of each service in the hospital shall be responsible for the educational program in his area of professional activity. The execution of these programs in accordance with the general policies, procedures and recommendations of the head of the Division of Education is essential to effect the necessary coordination with other departments, services and staff divisions of both this institution and affiliated institutions.

Section E. Periodic scientific and medical reviews, seminars, symposia, refresher and continuation courses shall be conducted in conjunction with the other units of The University of Texas at Houston, the Texas Medical Center, the medical schools, hospitals, and tumor clinics of the State of Texas.
I. Purpose

The Education Committee, appointed by the President, serves in an advisory capacity to the Associate Director (Education) and to the President on matters concerning correlated professional-educational activities of the staff in the various services and departments of the institution.

Written reports and recommendations of the Education Committee will be submitted to the President's Advisory Council through the Associate Director (Education).

II. Membership

The Education Committee is composed of the heads of all basic science and clinical departments, the departments of Nursing, Epidemiology, Medical Communications, Research Medical Library and Publications, or their designated alternates; three members-at-large; all Associate Directors (Ex officio without vote) and the vice-president for Administration (Ex officio without vote).

The three members-at-large shall be elected annually in August from the full-time staff of the instructional departments of the institution. Procedure for their nomination and election shall be that listed below for nomination and election of officers of the Education Committee. They will serve for a period of one year and may be elected for an additional year; they will have the privileges and responsibilities of full members.

The retiring Chairman of the Education Committee when he is a member-at-large will continue to serve in the capacity of a member-at-large for one year following the termination of his office to maintain continuity of the policies instituted by the Committee.

III. Officers

The Education Committee shall have a Chairman and a Vice Chairman. At the June meeting the retiring Chairman shall appoint a Nominating Committee consisting of three members of the Education Committee. They shall make recommendations for the office of Chairman and Vice Chairman, which will be presented to the Education Committee at its July meeting. At this meeting additional nominations may be offered from the floor by any member of the Education Committee. The slate of nominees for each office will be published in the minutes of the July meeting, and the Chairman and Vice Chairman of the Education Committee will then be elected by secret ballot prior to the August meeting. A simple majority of the members of the Education Committee will be required for election. The Chairman will appoint three tellers from among the members who have not been nominated to tally the vote. Results of the election will be
submitted for approval by the President. The Chairman will serve for a period of one year and may be reelected for an additional term. The Chairman shall represent the Education Committee at the President's Advisory Council. He will appoint the chairman of all subcommittees of the Education Committee with the exception of the Clinical Conference Program Committee (appointed by the President) and the Residency Training Committee (appointed by the Executive Committee of the Medical Staff). The Chairman will request reports from subcommittee chairmen to be entered as agenda items for either regular or special Education Committee meetings. The Vice Chairman will serve for a term of one year and may be reelected for one additional term. He will assist the Chairman in all matters and function in the capacity of Chairman in the absence of the latter.

IV. Protocol for Meetings

A. Regularly scheduled meetings

The Education Committee will meet regularly on the first Monday of each month unless otherwise designated by the Chairman. Notification of change of date or time of a regularly scheduled meeting will be distributed to all members and alternates at least 10 days prior to each regularly scheduled meeting.

All items to be included on the agenda of a regularly scheduled meeting are to be submitted to the Chairman at least 10 days prior to the meeting. The agenda is prepared and circulated by the Office of Education along with appropriate documentation and the Minutes of the previous meeting to members and alternates at least 5 days prior to the next regular meeting. A quorum shall consist of 50% of the regular members or their designated alternates for any regularly scheduled meetings.

B. Special Meetings

Special meetings of the Education Committee may be called at any time by the Chairman; however, notification of a special meeting, its agenda and all relevant documentation must be distributed to the members and their alternates at least 5 days prior to the meeting. Items included on the agenda of a special meeting will be limited to those pertaining directly to the business for which the meeting is called. Matters not published on the agenda of special meetings may not be discussed at the meeting. A quorum shall be 50% of the members and alternates. The minutes of all special meetings will be circulated to all members and alternates within five days following the meeting, and always before the next regularly scheduled meeting.

Subcommittee reports will be included on the agenda for all regular meetings. Minutes of the previous meeting will be circulated to members and alternates at least 5 days prior to the next meeting.
V. Committees and Subcommittees Reporting to the Education Committee

A. Residency Training Committee advises the Associate Director (Education) and the Education Committee concerning Clinical fellowship and residency training; it also reports to the Executive Committee of the Medical Staff, which appoints the Residency Training Committee.

B. Annual Clinical Conference Program Committees are appointed by the president upon recommendation of the Education Committee; chairmen are responsible for program development, preparation of grant applications for support of the annual meetings, and planning and execution of the meeting itself. Each Program Committee serves also as the Health Award Committee, for the purpose of recommending candidates for the Heath Lecture and Award, a feature of each annual conference.

C. Standing Subcommittees

1. Clinical Conference Topic Subcommittee. Considers and recommends topics and program committee membership for each annual clinical conference at least three years in advance of the conference and no later than September of each year.

2. Curriculum Subcommittee for Summer Programs in the Biomedical Sciences. Advises concerning recruitment and appointment of secondary school students of high ability, selected for an annual summer program administered by the Office of Education, and evaluation of the students' work. It meets no less than twice each year generally between January and May.

3. Dial Access Review Subcommittee. Reviews and recommends additions, deletions and updating of Dial Access recorded medical consultations program. It meets at the discretion of the Executive Vice President and Director.

4. Instructional Aids Subcommittee. Reviews and recommends policies governing the acquisition and development of audiovisual and programmed instructional aids for educational programs, teaching activities, and in-service training. It meets no less than four times yearly.

5. Judging Subcommittee for Clinical Training Research Project Competition. Reviews and judges entries in the annual clinical training research project competition held each June, to select award winners. It meets no less than twice each year, usually in the spring.

6. Medical Student Advisory Subcommittee. Reviews medical student educational programs and interviews trainees in order to develop and maintain acceptable training levels. It meets no less than twice each year.

7. Postgraduate Education Review Subcommittee. Reviews continuing education efforts and makes recommendations concerning policies governing the institution's programs. It meets no less than twice each year.

8. Research Medical Library Subcommittee. Reviews and recommends policies concerning the effective administration of special library projects as an adjunct to educational and research programs of the institution. It meets no less than four times each year.
9. Staff Seminar Subcommittee. Plans programs and arranges for speakers for the monthly staff seminar, a teaching activity of the staff. It meets no less frequently than four times a year.

10. Stipend Subcommittee for Clinical Fellows and Residents. Reviews and recommends stipend levels and benefits for resident physicians for the effective implementation of recruitment efforts for trainees. It meets no less often than once yearly.

D. ad hoc Subcommittees

These and such other subcommittees as may be named by the Chairman of the Education Committee may initiate suggestions related to their specific areas of responsibility, to be presented to the Education Committee whose evaluation and recommendations will then serve to advise the Associate Director (Education) and the President.

Composition of subcommittees will be derived from the entire staff by the Chairman of the Education Committee, with the concurrence of the Associate Director (Education), and approval by the committee. Membership will be reported annually upon request to the President's office for the annual official list of committee membership.

The Associate Director (Education) and the Chairman of the Education Committee will be ex officio member without vote of all subcommittees of the Education Committee.

VI. Educational Programs

The head of each department and section in the institution and the chief of each service in the hospital is responsible for the educational program in his area of professional activity. Execution of these programs in accordance with the general policies and procedures of the institution and with the recommendations of the Associate Director (Education) is essential to effect necessary coordination with other departments, services and staff divisions of both this and affiliated institutions.

The Education Committee will assist in evaluation and review of educational programs so that trainees will have full advantage of all available facilities and talents of the professional staff.
Reference is made to our earlier request, August 22, for certain information relating to research to incorporate in a comprehensive form requested by the Association of American Cancer Institutes. In late November, when the need for the information became urgent, there apparently had been no opportunity in the Office of Research for the listings of projects to be compiled in an appropriate format, and the material was therefore forwarded to us as submitted to you by the various department heads. It could not be utilized in that fashion, however, and an extension of the deadline for submission of the form has therefore been obtained in order that our material may be prepared properly.

The request on the form is as follows:

"For each department, list the principal projects being conducted. (Use separate sheets). Give only title of the project and its objective".

You will note a wide variation in the responses from department heads, some of whom listed all of their projects, and others of whom provided too much detail.

It is requested that listings for both the basic science and the clinical departments be prepared in a uniform manner and that the number of "principal projects" for each department be limited -- to, say, five if you believe that feasible. Only the title and objective should be cited, as specified. These lists should be furnished to us by the end of February for incorporation in the form to be submitted to the Association of American Cancer Institutes. Your help will be appreciated.

R. Lee Clark, M.D.
August 22, 1973

Dear Mr. Boyd:

The Association of American Cancer Institutes has asked each existing member to complete a membership application to afford them updated information for their files.

The attached section pertains to your area and we would appreciate your completing this and returning it to our office as soon as possible.

Thank you.

(Mrs.) JoAnne Hale
Secretary to R. Lee Clark, M. D.

Enclosure

Like letter sent to Mr. Gilley, Dr. Felix Haas, Dr. G. Blumenschein, W. Rutherford, Suzan Weaver
1. The original and 5 copies of the completed Membership Application should be submitted to:

Dr. Edwin Miranda
Secretary-Treasurer of the American Association of Cancer Institutes
666 Elm Street
Roswell Park Memorial Institute
Buffalo, New York 14203

2. Questions pertaining to the application should be addressed to the Secretary-Treasurer.

3. Applicants may append additional pages to the application form if space is needed to provide complete answers to questions. But applicants are kindly requested NOT to provide extensive supplementary information. If the AACI requires additional data for a full evaluation of the applicant, it will be requested.

4. This application blank includes items both for Comprehensive and Special Centers. In the case of Special Centers many items may not be germane to the applicant's organization. It is requested that as many items as possible be completed designating those that the applicant considers not germane as "not applicable" (N/A).

Qualifications for Membership

5. The provisions for Regular Membership are outlined for your information and include the following qualifications as prescribed by the By-Laws. (There is no provision for Associate Membership).

a. Regular Membership of the American Association for Cancer Institutes shall include only those institutions and/or organizations within the United States which shall be designated as Comprehensive or Special Cancer Centers and have coordinated interdisciplinary programs such as:

   (1) (Comprehensive) Cancer Institutes and/or centers which include a wide variety of clinical disciplines related to patient care, a broad range of research and training programs which include clinical and biologic sciences, (genetics, carcinogenesis, virology, immunology, cytokektins, biomathematics, medical pharmacology, developmental therapeutics, radiation biology, surgery, animal models, etc.).

   (2) (Special Cancer Center, which is) a major component of an organization or institution (i.e. of a medical school, university, division of industrial organization, etc.) which will permit emphasis on manpower largely engaged in a broad spectrum of cancer research and training.
(3) Special Cancer Center which is an institution within the United States not related to a medical school, university, division of industrial organization, etc., but which place emphasis on the manpower largely engaged on a spectrum of clinical activities which serve as focal points for development and training and/or research providing quality care for cancer patients. These clinical activities must also provide education, training and/or research with clinical application for a regional area which is sparsely populated.

(4) Federal agencies with major cancer oriented programs as noted Section 2a(1) or 2a(2) above will be invited to participate in the activities of the Association.

Pedagogical mechanism must obtain in the categories above where applicable which will permit greater emphasis on recruitment of graduate and post-graduate students into basic or clinical cancer research, (and which will provide cooperative programs with the local medical profession, hospitals, etc.)

(5) Each Regular Member institution, organization, or agency is authorized to appoint up to three representatives, one of whom must be the Senior Scientific Director ..........

b. Corresponding Membership may be held by selected cancer institutes and centers or other organizations outside the United States with a major component devoted to cancer activities, and should be represented by the Senior Scientific Head in each instance.

6. The term "institute" as used in the application refers to any organizational pattern identified under Qualifications for Membership.
1. Name and address of Applicant Institute

The University of Texas System Cancer Center
M. D. Anderson Hospital and Tumor Institute
6723 Bertner Avenue
Houston, Texas 77025

2. Category of membership being applied for. (See Instruction Sheet 1a and b).

   - Comprehensive
   - Special
   - Corresponding

3. Summarize purpose (objectives) of institute or organization.

   Diagnosis, treatment, study and prevention of neoplastic and allied diseases

4. ORGANIZATION

   Is the applicant institute an element of a larger organization, such as a university, hospital, research center, etc. ________ no ________ x yes Specify: A component of

   The University of Texas System
4.1 Provide an organization chart of the applicant institute – Attached

4.2 Provide the following information on personnel as follows:

**PERSONNEL**

Professional:

<table>
<thead>
<tr>
<th></th>
<th>MD</th>
<th>PhD</th>
<th>DDS</th>
<th>MD/PhD</th>
<th>MD/DDS</th>
<th>DVM</th>
<th>DVM/PhD</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-time</td>
<td>98</td>
<td>76</td>
<td>-</td>
<td>8</td>
<td>-</td>
<td>3</td>
<td>-</td>
<td>185</td>
</tr>
<tr>
<td>Part-time</td>
<td>34</td>
<td>8</td>
<td>5</td>
<td>-1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>48</td>
</tr>
<tr>
<td>Volunteer</td>
<td>19</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>20</td>
</tr>
<tr>
<td>Consultants</td>
<td>96</td>
<td>19</td>
<td>19</td>
<td>4</td>
<td>2</td>
<td>6</td>
<td>1</td>
<td>143</td>
</tr>
</tbody>
</table>

Total number of technicians employed by the institution 358.

Total Personnel – All Categories 2759.

4.3 Accrediting Agencies, if any. Please list:

See Attached List

4.4 To whom does the head of the applicant institute report?

Chancellor, The University of Texas System

4.5 Who appoints the head of the applicant institute?

Chancellor, The University of Texas System

4.6 Who has review authority over the appointment?

The Board of Regents of The University of Texas System

4.7 Who has approval authority? The Board of Regents of The University of Texas System
Head of applicant institute:

1. Does he have final authority to establish the internal organization of the institute? yes no If no, who has approval authority?  

The University of Texas Board of Regents May the approving authority change the institute's organizational structure? yes no 

If yes, explain conditions: The Board of Regents of The University of Texas System has final authority for organization and operation of all components of the system based on recommendations of the institutional heads and the Chancellor. It would be unusual for that Board to overrule the institutional head in matters relating to internal organization and operation of the institute, however it could legally do so. 

Could changes be made over the objections of the head of the applicant institute? yes no

2. Does he have final authority to appoint key medical, scientific, and management personnel? yes no

If no, who has approval authority? Board of Regents of The University of Texas System, however, all such appoints are based on his approval.

Can the approving authority make personnel appointments? no yes
5.1 Who coordinates the preparation of the Institute's budget?

Mr. Joe E. Boyd, Jr., Vice President for Business and Hospital Affairs

5.2 What is the prime source of the institute's budget?  
State Appropriation

<table>
<thead>
<tr>
<th>Source</th>
<th>Percent of the Total Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charges and other local income</td>
<td>25.4%</td>
</tr>
<tr>
<td>State Appropriation</td>
<td>40.4%</td>
</tr>
</tbody>
</table>

5.3 How much is the institute's total budget for fiscal year 1973? $39,715,124

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Estimated/Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>1973</td>
<td>$39,715,124</td>
</tr>
<tr>
<td>1974</td>
<td>$44,704,826</td>
</tr>
</tbody>
</table>

5.4 To whom is the budget submitted?  
Chancellor, The University of Texas System

5.5 Who reviews the budget submittal?  
Same as 5.4

5.6 Who has approval authority over the budget submittal?

The Board of Regents of The University of Texas System

5.7 Is the approval authority authorized to modify the budget submittal?  
X yes

If yes, which approval authority(s)?

The Board of Regents of The University of Texas System

5.8 If the total budget submittal is not appropriated by the funding agency, does the head of the institute have final authority as to how the available funds will be allocated within the organizational structure of the institute?  
X no

If no, who does? The Board of Regents of The University of Texas System
### 6.1 Basic Science

1. Use the form on the next page to provide the following information:
   - List of basic science departments conducting research (Physics, Chemistry, Biomathematics, Biology, etc.)
   - The number of medical and scientific personnel in each department (M.D., Ph.D., etc.)
   - The number of technicians in each department
   - Indicate to whom each department reports
   - Total budget for each department (Fy 1973)
   - Total number of active projects in each department

2. For each department, list the principal projects being conducted. (Use separate sheets). Give only title of the project and its objective.

3. Within the institute, who reviews proposed basic science research projects?

   Research Committee

4. Within the institute, who has final approval/disapproval authority of proposed basic science research projects?

   Research Committee??

5. Does the institute have a specific procedure for evaluating on-going or completed basic science research projects? no X yes  If yes, outline.

   Periodic evaluation by the Research Committee
<table>
<thead>
<tr>
<th>BASIC SCIENCE DEPARTMENT</th>
<th>PERSONNEL</th>
<th>No. of Projects</th>
<th>1973 Budget</th>
<th>To Whom Department Head Reports</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Professional</td>
<td>Technicians</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIOCHEMISTRY</td>
<td>16</td>
<td>19</td>
<td>35</td>
<td>$987,785</td>
</tr>
<tr>
<td>BIOLOGY</td>
<td>18</td>
<td>27</td>
<td>22</td>
<td>1,318,273</td>
</tr>
<tr>
<td>BIOMATHEMATICS</td>
<td>7</td>
<td>1</td>
<td>17</td>
<td>606,058</td>
</tr>
<tr>
<td>EPIDEMIOLOGY</td>
<td>1</td>
<td>0</td>
<td>11</td>
<td>274,709</td>
</tr>
<tr>
<td>PHYSICS</td>
<td>11</td>
<td>30</td>
<td>19</td>
<td>878,642</td>
</tr>
<tr>
<td>Virology</td>
<td>12</td>
<td>30</td>
<td>16</td>
<td>831,455</td>
</tr>
</tbody>
</table>
6.2 Clinical Research

1. List of Clinical Departments conducting research (Surgery, Medicine, Pathology, Gynecology, Pediatrics, etc.)

2. The number of physicians personnel in each department

3. The number of technicians in each department

4. Indicate to whom each department reports

5. Total budget for each department (FY 1973)

6. Total number of active research projects in each department

2. For each department, list the principal projects being conducted. (Use separate sheets). Give only title of the project and its objective.

3. Within the institute, who reviews proposed clinical research projects?
   Research Committee, Surveillance Committee

4. Within the institute, who has final approval/disapproval authority of proposed clinical research projects?
   Research Committee

5. Does the institute have a specific procedure for evaluating on-going or completed clinical research projects? ___ no __X_ yes. If yes, outline. Annual Evaluation by the Surveillance Committee
Does the institute have a statistical base for evaluation of results of its program activities, such as records which standardize disease classification to enable exchange of information between institutions. Briefly discuss.

Yes. Although not all areas are included, a substantial fraction of disease and treatment areas such as chemotherapy, radiotherapy and surgery do have a statistical base for evaluation of results of their programs. For example, the Southwest Oncology Group, the National Large Bowel Cancer Project, the Radiological Physics Center and most programs of the Department of Developmental Therapeutics.

7. What is the total square feet of space allocated to each Clinical department?

<table>
<thead>
<tr>
<th>Department</th>
<th>Sq. Ft. (Net)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anesthesiology</td>
<td>2,864</td>
</tr>
<tr>
<td>Clinical Chemistry &amp; Lab. Medicine</td>
<td>14,408</td>
</tr>
<tr>
<td>Developmental Therapeutics</td>
<td>16,003</td>
</tr>
<tr>
<td>Gynecology</td>
<td>1,082</td>
</tr>
<tr>
<td>Medicine</td>
<td>14,563</td>
</tr>
<tr>
<td>Pathology</td>
<td>11,440</td>
</tr>
<tr>
<td>Pediatrics</td>
<td>2,905</td>
</tr>
<tr>
<td>Diagnostic Radiology</td>
<td>13,727</td>
</tr>
<tr>
<td>Rehabilitation Medicine</td>
<td>2,509</td>
</tr>
<tr>
<td>Radiotherapy</td>
<td>21,267</td>
</tr>
<tr>
<td>Surgery</td>
<td>13,038</td>
</tr>
<tr>
<td>Clinical Department</td>
<td>Personnel Professionals</td>
</tr>
<tr>
<td>---------------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>Anesthesiology</td>
<td>6</td>
</tr>
<tr>
<td>Clinical Chemistry &amp; Laboratory Medicine</td>
<td>7</td>
</tr>
<tr>
<td>Developmental Therapeutics</td>
<td>22</td>
</tr>
<tr>
<td>Gynecology</td>
<td>3</td>
</tr>
<tr>
<td>Medicine</td>
<td>22</td>
</tr>
<tr>
<td>Pathology</td>
<td>10</td>
</tr>
<tr>
<td>Pediatrics</td>
<td>6</td>
</tr>
<tr>
<td>Diagnostic Radiology</td>
<td>11</td>
</tr>
<tr>
<td>Rehabilitation Medicine</td>
<td>2</td>
</tr>
<tr>
<td>Radiotherapy</td>
<td>18</td>
</tr>
<tr>
<td>Surgery</td>
<td>14</td>
</tr>
</tbody>
</table>
7.1 How many hospital beds are devoted to inpatient care?

7.2 Complete the following table

<table>
<thead>
<tr>
<th></th>
<th>ACTUAL 1972</th>
<th>ESTIMATED 1973</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients Seen</td>
<td>19,700</td>
<td>19,753</td>
</tr>
<tr>
<td>New Patients Registered</td>
<td>5,608</td>
<td>6,363</td>
</tr>
<tr>
<td>Outpatient Visits</td>
<td>-141,525</td>
<td>152,746</td>
</tr>
<tr>
<td>Hospital Patient Days</td>
<td>96,493</td>
<td>94,144</td>
</tr>
<tr>
<td>Surgical Procedures</td>
<td>4,748</td>
<td>4,726</td>
</tr>
<tr>
<td>X-ray Therapy - Lesions Treated</td>
<td>1,975</td>
<td>1,931</td>
</tr>
<tr>
<td>X-ray Therapy - Areas Treated</td>
<td>55,467</td>
<td>71,342</td>
</tr>
</tbody>
</table>

* Fiscal year ending August 31, 1972 and 1973

7.3 List each clinical discipline providing patient care and the number of medical doctors in each discipline.

**Clinical Discipline**

<table>
<thead>
<tr>
<th>Clinical Discipline</th>
<th>PT</th>
<th>PT</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medicine</td>
<td>15</td>
<td>4</td>
<td>19</td>
</tr>
<tr>
<td>Pathology</td>
<td>8</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td>Clinical Chemistry &amp; Laboratory Medicine</td>
<td>3</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td>Pediatrics</td>
<td>3</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Diagnostic Radiology</td>
<td>8</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>Radiotherapy</td>
<td>15</td>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td>Rehabilitation Medicine</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Surgery</td>
<td>9</td>
<td>6</td>
<td>15</td>
</tr>
<tr>
<td>Anesthesiology</td>
<td>6</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Gynecology</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Developmental Therapeutics</td>
<td>12</td>
<td>0</td>
<td>12</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>83</td>
<td>22</td>
<td>105</td>
</tr>
</tbody>
</table>

7.4 To whom do the heads of clinical departments report? __________ Director ________


** Budgeting Division of Patient Care Activities only.

7.6 What is the total square feet of space allocated to outpatient care? 26,000 ***sq

*** Does not include additional 25,000 square feet in Radio Therapy.
<table>
<thead>
<tr>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>16</td>
<td>17</td>
</tr>
<tr>
<td>21</td>
<td>22</td>
<td>23</td>
</tr>
<tr>
<td>24</td>
<td>25</td>
<td>26</td>
</tr>
<tr>
<td>27</td>
<td>28</td>
<td>29</td>
</tr>
<tr>
<td>30</td>
<td>31</td>
<td>32</td>
</tr>
<tr>
<td>33</td>
<td>34</td>
<td>35</td>
</tr>
</tbody>
</table>

Pencil changes are mine.
8.1 Does the institute have a formal, documented education policy?  [ ] no  [x] yes  If yes, please provide a copy.

Policy is guided by Office of Education

8.2 Indicate the training programs being conducted within the direction and control of the institute. Use the following check list and show the number enrolled.

<table>
<thead>
<tr>
<th>Check</th>
<th>Program</th>
<th>No. in 1972</th>
<th>No. in 1973</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M.S. and Predoctoral Fellows enrolled in Ph.D. programs</td>
<td>68</td>
<td>65</td>
</tr>
<tr>
<td></td>
<td>Predoctoral Fellows and Trainees (Special) not enrolled in Ph.D. programs</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Postdoctoral Fellows and Project Investigators in basic research areas</td>
<td>49</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>Postdoctoral Fellows and Project Investigators in clinical research areas</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Clinical Fellows and Project Investigators</td>
<td>98</td>
<td>95</td>
</tr>
<tr>
<td></td>
<td>Clinical Residents (including dental services)</td>
<td>25*</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>*includes 17 on UT Integrated Program in Radiology Observers, Visiting Scientists</td>
<td>22</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Postdoctoral Fellows and Project Investigators in both clinical and basic research areas simultaneously</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

8.3 Does the institute have an Office of Education (or other title) functioning as a distinct organizational element?  [ ] no  [x] yes  If yes, does the office have a full time or part time director?  [x] full  [ ] part.  If part time, how many hours per week?  [ ] hrs/week

8.4 Does the institute have autonomy in determining all aspects of its education program, such as the areas in which education programs will be planned and conducted, the curricula, etc.?  [x] yes  [ ] no.  If no, who has review privileges?

8.5 Can any part of the education program be imposed by anyone outside the institute?  [x] no  [ ] yes.  If yes, specify?

Who has approval authority?  Department Heads have approval. Programs are guided by Office of Education
CANCER CONTROL

9.1 Does the institute have any kind of cooperative program with the local medical profession? no X yes. If yes, describe

Texas Medical Association - M.D. Anderson Liaison Committee

In January, 1973 the President of the Texas Medical Association responded to an invitation to appoint six physicians as members of a liaison committee to promote communication between the Texas Medical Association, the M.D. Anderson Hospital and the University of Texas System Cancer Center and to serve as an advisory committee to these organizations in developing state-wide activities as they pertain to cancer control and related activities.

The Cancer Coordinating Committee of Texas

In May, 1972 the Texas Medical Association which reorganized and expanded its committee on cancer defined the role and functions of this coordinating committee as educational with the purpose of improving communications related to cancer control and research between the Cancer Center, the American Cancer Society, the Texas State Department of Health and all health professionals in the State. This expanded committee has representation from the Texas Medical Association, the Texas Dental Association, the Texas Association of Osteopaths, the Texas Nursing Association, the Texas Hospital Association, the American Cancer Society and several medical specialty societies. Two members of the M.D. Anderson Hospital Staff, the Director of Extramural Programs of The University of Texas System Cancer Center and one or more faculty members from each of The University of Texas System Health Science Centers also serve on this committee.

9.2 What organizational element has responsibility for cancer control planning and implementation?

Director, Extramural Programs, Office of the President in collaboration with the Director, M. D. Anderson Hospital and Tumor Institute

In 1972, The University of Texas System Board of Regents established The University of Texas System Cancer Center and appointed Dr. R. Lee Clark, President of this newly established university wide cancer center.

In 1973 four faculty members from each academic Health Science Center of The University of Texas System were recommended by the centers' presidents for appointment to The University of Texas System Cancer Center Oncology Council. This Council recommended establishment of six working committees on Inventory, Education, Cooperative Protocol Studies, Cancer Research, Uniform Data Base, and on outreach cancer detection clinics. We plan to utilize the working committees of the Oncology Council in developing plans for a cancer control program which can be established in certain selected public health regions of the State as well as in communities in which The University of Texas Health Science Centers are located.
10.1 Research

Construction will begin in January 1974 on the addition of approximately 100,000 square feet of research space on the top of the present building. Funds are available for this project.

The new hospital mentioned below will include two floors for research patients. New radiation therapy research space is also included in the construction program discussed under patient care below.

10.2 Patient Care

Construction is presently under way (approximately 15% complete) of 616,500 square feet of space which includes three hundred and fifty new hospital beds in a twelve story building and a ten-story clinic building which will be adequate to handle approximately 1,200 clinic patients each day. This project also includes 23,500 square feet of additional radiation therapy patient care and research space. Two of the floors on the new hospital building will be floors for treatment of patients under research protocol. Funds are available for this project.
Briefly describe plans for expansion. In each case, indicate whether or not funds are available.

10.1 Research

Construction will begin in January 1974 on the addition of approximately 100,000 square feet of research space on the top of the present building. Funds are available for this project.

The new hospital mentioned below will include two floors for research patients. New radiation therapy research space is also included in the construction program discussed under patient care below.

10.2 Patient Care

Construction is presently under way (approximately 15% complete) of 616,500 square feet of space which includes three hundred and fifty new hospital beds in a twelve story building and a ten-story clinic building which will be adequate to handle approximately 1,200 clinic patients each day. This project also includes 23,500 square feet of additional radiation therapy patient care and research space. Two of the floors on the new hospital building will be floors for treatment of patients under research protocol. Funds are available for this project.
Additional space for education and training is included in each of the projects described above under Research and Patient Care. The research addition includes approximately 3,300 square feet of space which is designated as conference and seminar rooms. The hospital building which is presently under construction contains approximately 12,000 square feet of space which is designated for clinical training for medical students, interns, residents and nurses. The clinic building includes approximately 4,000 sq. ft. of space which is designated for classrooms and conference rooms. In addition this building will house education offices in approximately 1,000 sq. ft. of space. The radiation therapy addition includes approximately 1,250 sq. ft. of classrooms and seminar rooms. This training space is included in the square footage figures included in 10.1 and 10.2 above.

10.4 Cancer Control

The expansion programs described above are designed in such a manner that our cancer control programs may be materially expanded. Cancer control activities are so integrated into our educational and patient care programs that it is difficult to segregate out that space that will be utilized specifically for this purpose. The projects described in 10.1 and 10.2 include all of our present plans for expansion.
10. Briefly describe plans for expansion. In each case, indicate whether or not funds are available.

10.1 Research

Construction will begin in January 1974 on the addition of approximately 10,000 square feet of research space on the top of the present building. Funds are available for this project.

The new hospital mentioned below will include two floors for research patients. New radiation therapy research space is also included in the construction program discussed under patient care below.

Plans are underway for additional physical facilities at the Environmental Science Park. These include the immediate addition of approximately 20,000 square feet of laboratory and animal space and a waste disposal plant. Funds are available for these projects. In addition plans are being developed for additional physical facilities at an estimated cost of $2,900,000. Funds for this addition are in the application stage.

10.2 Patient Care

Construction is presently under way (approximately 15% complete) of 616,500 square feet of space which includes three hundred and fifty new hospital beds in a twelve story building and a ten story clinic building which will be adequate to handle approximately 1,200 clinic patients each day. This project also includes 23,500 square feet of additional radiation therapy patient care and research space. Two of the floors on the new hospital building will be floors for treatment of chemotherapy patients under research protocol. Funds are available for this project.
10.3 Education:

Additional space for education and training is included in each of the projects described above under Research and Patient Care. The research addition includes approximately 3,300 square feet of space which is designated as conference and seminar rooms. The hospital building which is presently under construction contains approximately 12,000 square feet of space which is designated for clinical training for medical students, interns, residents and nurses. The clinic building includes approximately 4,000 square feet of space which is designated for classrooms and conference rooms. In addition this building will house education offices in approximately 1,500 square feet of space. The radiation therapy addition includes approximately 1,250 square feet of classrooms and seminar rooms. This training space is included in the square footage figures included in 10.1 and 10.2 above.

10.4 Cancer Control:

The expansion programs described above are designed in such a manner that our cancer control programs may be materially expanded. Cancer control activities are so integrated into our educational and patient care programs that it is difficult to segregate out that space which will be utilized specifically for this purpose. The projects described in 10.1 and 10.2 include all of our present plans for expansion.
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<thead>
<tr>
<th>CLINICAL DEPARTMENT</th>
<th>PERSONNEL</th>
<th>No. of Projects</th>
<th>1973 Budget</th>
<th>To Whom Department Head Reports</th>
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*Include Clinical Fellows, Postdoctoral Fellows.*
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Also used: Total Sq. Ft. of Space
Allocated to each Clinical & Basic Science Dept.
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Interoffice Memorandum

TO:        Mrs. Jessie Huerta
           Office of Research

FROM:     Eleanor J. Macdonald
           Epidemiology

DATE: October 5, 1973

SUBJECT: Enclosed please find the information requested by the Association of American Cancer Institutes.

Eleanor J. Macdonald
Epidemiology

EJM/rc
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<th>Personnel</th>
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<th>Technicians</th>
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<th>To Whom Department Head Reports</th>
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MEMORANDUM

November 27, 1973

TO: Office of Research

FROM: Robert J. Shalek

Enclosed is the information requested by the Office of the President for the Association of American Cancer Institutes.

Please let us know if further information is required.

Robert J. Shalek

RJS: bh
Enc.
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<th>PERSONNEL</th>
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*Note: The table content includes a note indicating that 3 positions are joint appointments with another department.*
Interoffice Memorandum

TO: Office of Research

FROM: Dr. Leon Dmochowski, Head
Department of Virology

SUBJECT: Information for the Association of American Cancer Institutes

With reference to the memorandum on the above subject, enclosed please find the pertinent information.

Leon Dmochowski

LD/ej
Encl.
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<th>BASIC SCIENCE DEPARTMENT</th>
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MEMORANDUM

To: Office of Research

From: C. C. Shullenberger, M. D.
Acting Head, Department of Medicine

December 6, 1973

Enclosed is the completed form on the clinical research, the titles of projects and the objective for each project. The total space allocated to the Department of Medicine is approximately 15,660 square feet.
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<th>1973 Budget</th>
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<tbody>
<tr>
<td></td>
<td>Professionals</td>
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<td>32</td>
<td>42</td>
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President:
Executive Vice President & Director
<table>
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<th>Projects and Progress</th>
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<td>35</td>
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<tr>
<td></td>
<td>Technicians</td>
<td>26 - M.D.s &amp; Ph.D.s</td>
<td>19</td>
</tr>
<tr>
<td>CLINICAL DEPARTMENT</td>
<td>PERSONNEL</td>
<td>No. of Projects</td>
<td>1973 Budget</td>
</tr>
<tr>
<td>---------------------</td>
<td>---------------</td>
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</tr>
<tr>
<td></td>
<td>Professionals</td>
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<td></td>
</tr>
<tr>
<td>Anesthesiology</td>
<td>12</td>
<td>19</td>
<td>838,492.00</td>
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</tr>
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<td>---------------------</td>
<td>-----------</td>
<td>----------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Developmental Therapeutics</td>
<td><strong>Staff</strong> 15 M.D.s</td>
<td>47</td>
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<td></td>
<td>Staff 7 Ph.D.s</td>
<td></td>
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<tr>
<td></td>
<td>21 clinical fellows (M.D.s)</td>
<td>6 nurses</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6 postdoctoral fellows</td>
<td></td>
<td></td>
</tr>
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<td>---------------------</td>
<td>------------------</td>
<td>-----------------</td>
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<td>Department of Clinical Chemistry &amp; Laboratory Medicine</td>
<td>Professionals</td>
<td>Technicians</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 M.D.'s</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>1 M.D., Ph.D.</td>
<td></td>
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<tr>
<td></td>
<td>3 Ph.D.'s</td>
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<tr>
<td></td>
<td>80 M.T.(ASCP)'s</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>5 R.N.'s</td>
<td></td>
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</tr>
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<td></td>
<td></td>
<td>$2,120,474.80</td>
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<td>CLINICAL DEPARTMENT</td>
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<td>-----------</td>
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<td>Gynecology</td>
<td>Professionals 10</td>
<td>1</td>
<td>$121,904</td>
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<td></td>
<td>Technicians 1</td>
<td></td>
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</table>
Interoffice Memorandum

TO: E. Lee Clark, President

FROM: W. O. Russell, M.D., Head, Department of Pathology

DATE: 29 November 1973

SUBJECT: Information for Association of American Cancer Institutes

Attached is the completed questionnaire, as requested. Listing of active research projects appears on continuation pages.

encl.

cc/ Office of Research
<table>
<thead>
<tr>
<th>CLINICAL DEPARTMENT</th>
<th>PERSONNEL</th>
<th>1973 Projects</th>
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<tbody>
<tr>
<td></td>
<td>Professionals</td>
<td>Technicians</td>
<td></td>
</tr>
<tr>
<td>Department of Pathology</td>
<td>10 (M.D.)</td>
<td>40 (includes 11 apprentices)</td>
<td>31</td>
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<tr>
<td>Autopsy Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cytology Service</td>
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<td></td>
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<td>Histology Service</td>
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<td></td>
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<td>Electron Microscopy Service</td>
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<td>Experimental Pathology Section</td>
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<td>PERSONNEL</td>
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<td>1973 Budget</td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------</td>
<td>-----------------</td>
<td>-------------</td>
</tr>
<tr>
<td>PEDIATRICS</td>
<td>Professionals / Technicians</td>
<td>2</td>
<td>6</td>
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</table>

**Full-time**
- 4 clinicians
- 2 Ph.D. research

**Part-time**
- 3 active
- 2 inactive
<table>
<thead>
<tr>
<th>CLINICAL DEPARTMENT</th>
<th>PERSONNEL</th>
<th>No. of Projects</th>
<th>1973 Budget</th>
<th>To Whom Department Head Reports</th>
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</thead>
<tbody>
<tr>
<td>Diag. Radiology</td>
<td>Professionals</td>
<td>Technicians</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>8 - Full-time</td>
<td>17'</td>
<td>13</td>
<td>$49,349 (Research Budget)</td>
</tr>
<tr>
<td></td>
<td>3 part-time</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 - Ph. D.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>5 - volunteers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>14 - Consultants</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CLINICAL DEPARTMENT</td>
<td>PERSONNEL</td>
<td>No. of Projects</td>
<td>1973 Budget</td>
<td>To Whom Department Head Reports</td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------</td>
<td>----------------</td>
<td>-------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>Rehabilitation Medicine</td>
<td>3 MD's</td>
<td>Orthopedist</td>
<td>1</td>
<td>356,204</td>
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<td></td>
<td></td>
<td>Speech</td>
<td>1</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Recreational</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>PT's</td>
<td>6</td>
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</tr>
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<td></td>
<td></td>
<td>P.T.A.</td>
<td>1</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>O.T.'s</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>C.O.T.A.</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Aides</td>
<td>6</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Sænt f.</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total = 30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CLINICAL DEPARTMENT</td>
<td>PERSONNEL</td>
<td>No. of Projects</td>
<td>1973-74 Budget</td>
<td>To Whom Department Head Reports</td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------</td>
<td>----------------</td>
<td>---------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>Radiotherapy</td>
<td>Professionals: 18-Staff in Radiotherapy, 22-Fellows in Radiotherapy</td>
<td>46-X-ray-therapy Nurse Technicians, 31-Research Projects</td>
<td>$974,570</td>
<td>President/Director</td>
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<tr>
<td>CLINICAL DEPARTMENT</td>
<td>PERSONNEL</td>
<td>No. of Projects</td>
<td>1973 Budget</td>
<td></td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------</td>
<td>----------------</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Professionals</td>
<td>17</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Technicians</td>
<td>15</td>
<td>$976,961.00</td>
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<tr>
<td>SURGERY</td>
<td></td>
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</tr>
</tbody>
</table>
January 8, 1974

Dr. Walter J. Pories
Professor and Chief of Surgery
Cleveland Metropolitan General Hospital
3395 Scranton Road
Cleveland, Ohio 44109

Dear Doctor Pories:

In response to your recent request for application forms for membership in the Association of American Cancer Institutes, I am forwarding your letter to Dr. E. A. Mirand, Secretary-Treasurer of the Association, at Roswell Park Memorial Institute, Buffalo, New York.

I trust that you will soon receive the forms and, in the meantime, I extend best wishes for the New Year.

Sincerely yours,

R. Lee Clark, M.D.
President

RLC:jh
cc: Dr. E. A. Mirand

/8- Orig letter of Dr. Pories sent to Dr. M.
December 31, 1973

R. Lee Clark, M.D.
Director and Surgeon-In-Chief
The University of Texas
M.D. Anderson Hospital
and Tumor Institute
Houston, Texas

Dear Doctor Clark:

We are very interested in having our Cancer Center in Cleveland become a member of The Association for American Cancer Institutes. My previous requests for the appropriate application forms, however, have not been fulfilled. I wonder if you could help me.

I hope you have a fine New Year.

With best regards,

[Signature]

Walter J. Pories, M.D.

WJP: cjf
1. Name and address of Applicant Institute

   The University of Texas System Cancer Center
   M. D. Anderson Hospital and Tumor Institute
   Texas Medical Center
   Houston, Texas 77025

2. Category of membership being applied for. (See Instruction Sheet 45a and b).

   [X]  Comprehensive
   [ ]  Special
   [ ]  Corresponding

3. Summarize purpose (objectives) of institute or organization.

   Diagnosis, treatment, study and prevention of neoplastic and allied diseases

4. ORGANIZATION

   Is the applicant institute an element of a larger organization, such as a university, hospital, research center, etc. [ ] no  [X] yes Specify:__________________________

   A component of The University of Texas System
Provide an organization chart of the applicant institute  

See Exhibit A

4.2 Provide the following information on personnel as follows:

PERSONNEL

Professional:

<table>
<thead>
<tr>
<th></th>
<th>MD</th>
<th>PhD</th>
<th>DDS</th>
<th>MD/PhD</th>
<th>MD/DDS</th>
<th>DVM</th>
<th>DVM/PhD</th>
<th>TOTAL</th>
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<tbody>
<tr>
<td>Full-time</td>
<td>98</td>
<td>76</td>
<td>-</td>
<td>3</td>
<td>-</td>
<td>3</td>
<td>-</td>
<td>185</td>
</tr>
<tr>
<td>Part-time</td>
<td>34</td>
<td>8</td>
<td>5</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>48</td>
</tr>
<tr>
<td>Volunteer</td>
<td>19</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>20</td>
</tr>
<tr>
<td>Consultants</td>
<td>96</td>
<td>19</td>
<td>19</td>
<td>4</td>
<td>2</td>
<td>5</td>
<td>1</td>
<td>143.1/7</td>
</tr>
</tbody>
</table>

Total number of technicians employed by the institution: 358.

Total Personnel - All Categories: 2759.

4.3 Accrediting Agencies, if any. Please list: See Exhibit B

__________________________________________

__________________________________________

4.4 To whom does the head of the applicant institute report?

Chancellor, The University of Texas System

4.5 Who appoints the head of the applicant institute?

Chancellor, The University of Texas System

4.6 Who has review authority over the appointment?

The Board of Regents of The University of Texas System

4.7 Who has approval authority?

The Board of Regents of The University of Texas System
head of applicant institute:

1. Does he have final authority to establish the internal organization of the institute? _______yes X (see note no If no, who has approval authority?

The University of Texas Board of Regents. May the approving authority change the institute's organizational structure? X (see note. yes ______ no below)

If yes, explain conditions. The Board of Regents of The University of Texas System has final authority for organization and operation of all components of the system based on recommendations of the institutional heads and the Chancellor. It would be unusual for that Board to overrule the institutional head in matters relating to internal organization and operation of the institute, however it could legally do so.

Could changes be made over the objections of the head of the applicant institute? X (see note yes ______ no above)

2. Does he have final authority to appoint key medical, scientific, and management personnel? ______ yes X (see note no below)

If no, who has approval authority? The Board of Regents of The University of Texas System, however all such appointments are based on his recommendation.

Can the approving authority make personnel appointments? _X no ______ yes
5.1 Who coordinates the preparation of the institute's budget?

Mr. Joe E. Boyd, Jr., Vice President for Business and Hospital Affairs

5.2 What is the prime source of the institute's budget?  
State Appropriation

Percent of the total budget? 40.4%  
The secondary source? Patient charges and other local income

Percent of the total budget? 25.4%

5.3 How much is the institute's total budget for fiscal year 1973?  
$39,715,124

Fiscal year 1974?  
$44,704,826  (estimated/actual)

5.4 To whom is the budget submitted?  
Chancellor, The University of Texas System

5.5 Who reviews the budget submittal?  
Same as 5.4

5.6 Who has approval authority over the budget submittal?  
The Board of Regents of The University of Texas System

5.7 Is the approval authority authorized to modify the budget submittal?  
X yes

If yes, which approval authority(s)?  
The Board of Regents of The University of Texas System

5.8 If the total budget submittal is not appropriated by the funding agency, does the head of the institute have final authority as to how the available funds will be allocated within the organizational structure of the institute?  
X no

If no, who does?  
The Board of Regents of The University of Texas System
6.1 Basic Science

1. Use the form on the next page to provide the following information:

- List of basic science departments conducting research (Physics, Chemistry, Biomathematics, Biology, etc.)
- The number of medical and scientific personnel in each department (M.D., Ph.D., etc.)
- The number of technicians in each department
- Indicate to whom each department reports
- Total budget for each department (Fy 1973)
- Total number of active projects in each department

2. For each department, list the principal projects being conducted. (Use separate sheets). Give only title of the project and its objective.

See Exhibits C, D, E, F, G, and H

3. Within the institute, who reviews proposed basic science research projects?

   Research Committee

4. Within the institute, who has final approval/disapproval authority of proposed basic science research projects?

   President

5. Does the institute have a specific procedure for evaluating on-going or completed basic science research projects? ___ no  X ___ yes  If yes, outline.

   Periodic evaluation by the Research Committee

   ________________________________
   ________________________________
   ________________________________
   ________________________________
   ________________________________
   ________________________________
   ________________________________
   ________________________________
   ________________________________
   ________________________________
   ________________________________
   ________________________________
   ________________________________
<table>
<thead>
<tr>
<th>BASIC SCIENCE DEPARTMENT</th>
<th>PERSONNEL</th>
<th>No. of Projects</th>
<th>1973 Budget</th>
<th>To Whom Department Head Reports</th>
</tr>
</thead>
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<tr>
<td></td>
<td>Professional</td>
<td>Technicians</td>
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<td></td>
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<tr>
<td>BIOCHEMISTRY</td>
<td>16</td>
<td>19</td>
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<td>$987,785</td>
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<td>BIOLOGY</td>
<td>18</td>
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<td>1,318,273</td>
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<td>BIOMATHMATICS</td>
<td>7</td>
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<td>17</td>
<td>606,058</td>
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<td>EPIDEMIOLOGY</td>
<td>1</td>
<td>0</td>
<td>11</td>
<td>274,709</td>
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<tr>
<td>PHYSICS</td>
<td>11</td>
<td>30</td>
<td>19</td>
<td>878,642</td>
</tr>
<tr>
<td>VIROLOGY</td>
<td>12</td>
<td>30</td>
<td>16</td>
<td>831,455</td>
</tr>
<tr>
<td>TOTAL</td>
<td>65</td>
<td>107</td>
<td>120</td>
<td>$4,896,922</td>
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</table>
### Clinical Research

1. Use the form on the next page to provide the following information:
   - List of Clinical Departments conducting research (Surgery, Medicine, Pathology, Gynecology, Pediatrics, etc.)
   - The number of physicians personnel in each department
   - The number of technicians in each department
   - Indicate to whom each department reports
   - Total budget for each department (FY 1973)
   - Total number of active research projects in each department

2. For each department, list the principal projects being conducted. (Use separate sheets). Give only title of the project and its objective.
   See Exhibits I, J, K, L, M, N, O, P, Q and R

3. Within the institute, who reviews proposed clinical research projects?
   - Research Committee, Surveillance Committee

4. Within the institute, who has final approval/disapproval authority of proposed clinical research projects?
   - President

5. Does the institute have a specific procedure for evaluating on-going or completed clinical research projects? __ no ___ X ___ yes. If yes, outline. Annual evaluation by the Surveillance Committee
Does the institute have a statistical base for evaluation of results of its program activities, such as records which standardize disease classification to enable exchange of information between institutions. Briefly discuss.

Yes. Although not all areas are included, a substantial fraction of disease and treatment areas such as chemotherapy, radiotherapy and surgery do have a statistical base for evaluation of results of their programs. For example, the Southwest Oncology Group, the National Large Bowel Cancer Project, the Radiological Physics Center and most programs of the Department of Developmental Therapeutics.

What is the total square feet of space allocated to each Clinical department?

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<th>Department</th>
<th>Sq. Ft. (Net)</th>
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<tbody>
<tr>
<td>Anesthesiology</td>
<td>2,864</td>
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<td>Clinical Chemistry &amp; Lab. Medicine</td>
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<tr>
<td>Developmental Therapeutics</td>
<td>16,003</td>
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<td>Gynecology</td>
<td>1,082</td>
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<tr>
<td>Medicine</td>
<td>14,563</td>
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<td>Pathology</td>
<td>11,440</td>
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<tr>
<td>Pediatrics</td>
<td>2,905</td>
</tr>
<tr>
<td>Diagnostic Radiology</td>
<td>13,727</td>
</tr>
<tr>
<td>Rehabilitation Medicine</td>
<td>2,509</td>
</tr>
<tr>
<td>Radiotherapy</td>
<td>21,267</td>
</tr>
<tr>
<td>Surgery</td>
<td>13,038</td>
</tr>
<tr>
<td>CLINICAL DEPARTMENT</td>
<td>PERSONNEL</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>-----------</td>
</tr>
<tr>
<td></td>
<td>Professionals</td>
</tr>
<tr>
<td>ANESTHESIOLOGY</td>
<td>6</td>
</tr>
<tr>
<td>CLINICAL CHEMISTRY &amp; LABORATORY MEDICINE</td>
<td>7</td>
</tr>
<tr>
<td>DEVELOPMENTAL THERAPEUTICS</td>
<td>22</td>
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<tr>
<td>GYNECOLOGY</td>
<td>3</td>
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<tr>
<td>MEDICINE</td>
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<tr>
<td>PATHOLOGY</td>
<td>10</td>
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<td>PEDIATRICS</td>
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<td>DIAGNOSTIC RADIOMETRY</td>
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<tr>
<td>REHABILITATION MEDICINE</td>
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<tr>
<td>RADIOThERAPY</td>
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<tr>
<td>SURGERY</td>
<td>14</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>121</strong></td>
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7.2 Complete the following table

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<th>ACTUAL CY 1972</th>
<th>ESTIMATED CY 1973</th>
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</thead>
<tbody>
<tr>
<td>Patients Seen</td>
<td>19,700</td>
<td>19,753</td>
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<tr>
<td>New Patients Registered</td>
<td>5,608</td>
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<td>Outpatient Visits</td>
<td>141,525</td>
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<td>Hospital Patient Days</td>
<td>96,493</td>
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<td>Surgical Procedures</td>
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<td>4,726</td>
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<td>X-ray Therapy - Lesions Treated</td>
<td>1,975</td>
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</tr>
<tr>
<td>X-ray Therapy - Areas Treated</td>
<td>55,467</td>
<td>71,342</td>
</tr>
</tbody>
</table>

*Fiscal year ending August 31, 1972 and 1973*

7.3 List each clinical discipline providing patient care and the number of medical doctors in each discipline.

<table>
<thead>
<tr>
<th>Clinical Discipline</th>
<th>Number of M.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Full Time</td>
</tr>
<tr>
<td>Medicine</td>
<td>15</td>
</tr>
<tr>
<td>Pathology</td>
<td>8</td>
</tr>
<tr>
<td>Clinical Chemistry &amp; Laboratory Medicine</td>
<td>3</td>
</tr>
<tr>
<td>Pediatrics</td>
<td>3</td>
</tr>
<tr>
<td>Diagnostic Radiology</td>
<td>8</td>
</tr>
<tr>
<td>Radiotherapy</td>
<td>15</td>
</tr>
<tr>
<td>Rehabilitation Medicine</td>
<td>1</td>
</tr>
<tr>
<td>Surgery</td>
<td>9</td>
</tr>
<tr>
<td>Anesthesiology</td>
<td>6</td>
</tr>
<tr>
<td>Gynecology</td>
<td>3</td>
</tr>
<tr>
<td>Developmental Therapeutics</td>
<td>12</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>83</strong></td>
</tr>
</tbody>
</table>

7.4 To whom do the heads of clinical departments report? __Director__


**Budgeting Division of Patient Care Activities only**

7.6 What is the total square feet of space allocated to outpatient care? __26,000*** sq.ft.**

***Does not include additional 25,000 square feet in Radiotherapy**
8.1 Does the institute have a formal, documented education policy? ____ no X yes  
If yes, please provide a copy.  
  a. President's Regulations, Article III  (See Exhibit S)  
  b. Education Committee Policy and Organization  (see Exhibit T)  

8.2 Indicate the training programs being conducted within the direction and control of the institute. Use the following check list and show the number enrolled.  

<table>
<thead>
<tr>
<th>Check</th>
<th>Program</th>
<th>No. in 1972</th>
<th>Est. in 1973</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M.S. and</td>
<td></td>
<td></td>
</tr>
<tr>
<td>_____</td>
<td>Predoctoral Fellows enrolled in Ph.D programs</td>
<td>68</td>
<td>65</td>
</tr>
<tr>
<td>_____</td>
<td>Predoctoral Fellows and Trainees (Special) not enrolled in Ph.D. programs</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>_____</td>
<td>Postdoctoral Fellows and Project Investigators in basic research areas</td>
<td>49</td>
<td>50</td>
</tr>
<tr>
<td>_____</td>
<td>Postdoctoral Fellows and Project Investigators in clinical research areas</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>_____</td>
<td>Clinical Fellows and Project Investigators</td>
<td>98</td>
<td>95</td>
</tr>
<tr>
<td>_____</td>
<td>Clinical Residents (including dental services)</td>
<td>25*</td>
<td>8</td>
</tr>
<tr>
<td>_____</td>
<td>Observers, Visiting Scientists</td>
<td>22</td>
<td>20</td>
</tr>
<tr>
<td>_____</td>
<td>Postdoctoral Fellows and Project Investigators in both clinical and basic research areas simultaneously</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>*Includes 17 on UT Integrated Program in Radiology</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8.3 Does the institute have an Office of Education (or other title) functioning as a distinct organizational element? ____ no X yes  
If yes, does the office have a full time or part time director? _____ full _____ part. If part time, how many hours per week? _____ hrs/week

8.4 Does the institute have autonomy in determining all aspects of its education program, such as the areas in which education programs will be planned and conducted, the curricula, etc.? X yes ____ no. If no, who has review privileges?  

Who has approval authority? ____________________________________________  

Who has approval authority?  President, Programs are guided by Office of Education.

8.5 Can any part of the education program be imposed by anyone outside the institute? ____ no X yes. If yes, specify? ____________________________________________________________________
9.1 Does the institute have any kind of cooperative program with the local medical profession? ___ no  X ___ yes. If yes, describe

Texas Medical Association - M. D. Anderson Liaison Committee

In January, 1973 the President of the Texas Medical Association responded to an invitation to appoint six physicians as members of a liaison committee to promote communication between the Texas Medical Association, the M. D. Anderson Hospital and, The University of Texas System Cancer Center to serve as an advisory committee to these organizations in developing state-wide activities as they pertain to cancer control and related activities.

The Cancer Coordinating Committee of Texas

In May, 1972 the Texas Medical Association which reorganized and expanded its committee on cancer defined the role and functions of this coordinating committee as educational with the purpose of improving communications related to cancer control and research between the Cancer Center, the American Cancer Society, the Texas State Department of Health and all health professionals in the State. This expanded committee has representation from the Texas Medical Association, the Texas Dental Association, the Texas Association of Osteopaths, the Texas Nursing Association, the Texas Hospital Association, the American Cancer Society and several medical specialty societies. Two members of the M. D. Anderson Hospital staff, the Director of Extramural Programs of The University of Texas System Cancer Center and one or more faculty members from each of The University of Texas System Health Science Centers also serve on this committee.

9.2 What organizational element has responsibility for cancer control planning and implementation?

Director, Extramural Programs, Office of the President in collaboration with the Director, M. D. Anderson Hospital and Tumor Institute

In 1972, The University of Texas System Board of Regents established The University of Texas System Cancer Center and appointed Dr. R. Lee Clark President of this newly established university wide cancer center.

In 1973 four faculty members from each academic Health Science Center of The University of Texas System were recommended by the centers’ presidents for appointment to The University of Texas System Cancer Center Oncology Council. This Council recommended establishment of six working committees on Inventory, Education, Cooperative Protocol Studies, Cancer Research, Uniform Data Base, and on outreach cancer detection clinics. We plan to utilize the working committees of the Oncology Council in developing plans for a cancer control program which can be established in certain selected public health regions of the State as well as in communities in which The University of Texas Health Science Centers are located.
10.1 Research

Construction will begin in January 1974 on the addition of approximately 100,000 square feet of research space on the top of the present building. Funds are available for this project.

The new hospital mentioned below will include two floors for research patients. New radiation therapy research space is also included in the construction program discussed under patient care below.

10.2 Patient Care

Construction is presently under way (approximately 15% complete) of 616,500 square feet of space which includes three hundred and fifty new hospital beds in a twelve story building and a ten-story clinic building which will be adequate to handle approximately 1,200 clinic patients each day. This project also includes 23,500 square feet of additional radiation therapy patient care and research space. Two of the floors on the new hospital building will be floors for treatment of patients under research protocol. Funds are available for this project.
Additional space for education and training is included in each of the projects described above under Research and Patient Care. The research addition includes approximately 3,300 square feet of space which is designated as conference and seminar rooms. The hospital building which is presently under construction contains approximately 12,000 square feet of space which is designated for clinical training for medical students, interns, residents and nurses. The clinic building includes approximately 4,000 square feet of space which is designated for classrooms and conference rooms. In addition this building will house education offices in approximately 1,000 square feet of space. The radiation therapy addition includes approximately 1,250 square feet of classrooms and seminar rooms. This training space is included in the square footage figures included in 10.1 and 10.2 above.

10.4 Cancer Control

The expansion programs described above are designed in such a manner that our cancer control programs may be materially expanded. Cancer Control activities are so integrated into our educational and patient care programs that it is difficult to segregate out that space that will be utilized specifically for this purpose. The projects described in 10.1 and 10.2 include all of our present plans for expansion.
<table>
<thead>
<tr>
<th>Exhibit</th>
<th>Description</th>
</tr>
</thead>
</table>
| Exhibit A | Organizational Chart  
The University of Texas System Cancer Center |
<p>| Exhibit B | Accrediting Agencies |
| Exhibit C | Biochemistry |
| Exhibit D | Biology |
| Exhibit E | Biomathematics |
| Exhibit F | Epidemiology |
| Exhibit G | Physics |
| Exhibit H | Virology |
| Exhibit I | Anesthesiology |
| Exhibit J | Clinical Chemistry and Laboratory Medicine |
| Exhibit K | Developmental Therapeutics |
| Exhibit L | Medicine |
| Exhibit M | Pathology |
| Exhibit N | Pediatrics |
| Exhibit O | Diagnostic Radiology |
| Exhibit P | Radiotherapy |
| Exhibit Q | Surgery |
| Exhibit R | Gynecology |
| Exhibit S | Excerpt from President's Regulations, dated October 23, 1970 |
| Exhibit T | Education Committee Policy and Organization |</p>
<table>
<thead>
<tr>
<th>#</th>
<th>Accrediting Agencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>American Association for Accreditation of Laboratory Animal Care</td>
</tr>
<tr>
<td>2</td>
<td>American Association of Blood Banks</td>
</tr>
<tr>
<td>3</td>
<td>American Boards of Anesthesiology, Internal Medicine, Pathology, Pediatrics, Radiology, Surgery and Urology with the Council on Medical Education of the American Medical Association</td>
</tr>
<tr>
<td>4</td>
<td>American College of Surgeons</td>
</tr>
<tr>
<td>5</td>
<td>American Dental Association Council on Dental Education</td>
</tr>
<tr>
<td>6</td>
<td>American Dietetic Association</td>
</tr>
<tr>
<td>7</td>
<td>Boards of Schools of Medical Technology, Cytology and Histology (American Society of Clinical Pathologists) with the Council on Medical Education of the American Medical Association</td>
</tr>
<tr>
<td>8</td>
<td>Committee on Technologist Training of American College of Radiology with the Council on Medical Education of the American Medical Association</td>
</tr>
<tr>
<td>9</td>
<td>Joint Commission on Accreditation of Hospitals</td>
</tr>
<tr>
<td>10</td>
<td>National Council on Social Work Education</td>
</tr>
<tr>
<td>11</td>
<td>Texas State Board of Nursing Examiners</td>
</tr>
</tbody>
</table>
DEPARTMENT OF BIOCHEMISTRY
List of Principal Projects

Chemistry of Pituitary Hormones and Related Factors

The objective of this program is to increase our knowledge of the chemistry and mode of action of pituitary hormones.

Proteins of Cell Nucleus in Normal and Malignant Growth

This program objective studies the composition, heterogeneity, specificity, biosynthesis, and biological and biochemical functions of nuclear proteins in normal and neoplastic growth.

Investigation of Glycopeptides Obtained from The Surface of Normal and Neoplastic Cells

The objective is to correlate chemical alterations at the cell periphery with normal and neoplastic processes; and thereby provide a rational basis for the development of therapeutic approaches which emphasize the control of metastasis.

Immunochemoical and Immunological Studies on Glycoproteins

The objective of this study is the possible role of the carbohydrate moiety in the transport of glycoproteins across membranes.

Regulation of Enzymic Activities by Metabolites

The aim of this program is to study a few significant regulatory mechanisms, how these mechanisms operate, the extreme within which they are applicable, and the amplification or alteration of effects on other metabolic circuits.
**In Vitro Interactions between Bleomycin and DNA**

An *in vitro* study of the mechanism of DNA-strand breakage and binding produced by the glycopeptide antibiotic bleomycin.

**Early Detection of Familial Breast Cancer**

An investigation of the genetic aspects of breast cancer and the possibility of genetic (and clinical) subtypes of the disease.

**Genetic Study of the Nevoid Basal Cell Carcinoma Syndrome and Other Skin Tumors**

A study of the inheritance of nevoid basal cell carcinoma and a hereditary form of malignant melanoma, and the genetic linkage patterns of the syndromes to blood type genes and serum enzyme genes.

**Genetic Variation in Enzymes which Modify Chemical Carcinogens**

A study of the genetic variation in human enzymes that metabolize hydrocarbon carcinogens, and the relationships of these genetic patterns to lung cancer and colon cancer. The study is being extended to other human tumors.

**Hereditary Factors in Adenocarcinoma of the Colon**

A study of hereditary forms of colon adenocarcinoma including its frequency, the degree of association between colonic polyps and the colon cancer in the patient population, the degree of association between adenocarcinoma of the uterus, stomach, breast, ovary, and prostate in the patient population, and other factors.

**Studies on Chromosome Structure**

This project employs various cytological techniques, including cytochemistry and electron microscopy, to decipher the organization of chromosomal components, and to study chromosome function synopsis segregation and change in neoplastic and normal cells.

**RNA Tumor Virus Replication**

The long-term goal of this research is the study of Rauscher leukemia virus-specific protein biosynthesis, characterize the products, and relate these findings to the induction of leukemia.
Computer Analysis of Human Chromosomes

This project is aimed at providing computational ability to assist the cytogeneticist in the recognition, classification and quantitative analyses of human chromosomes.

Computation for Radiation Dosimetry

This program supports the research and development involved in the computation of radiation dosimetry for a variety of radiotherapy treatments.

Statistical Office for the Southwest Oncology Group

The Statistical Office of the Southwest Oncology Group (SWOG), a cooperative cancer chemotherapy clinical trials study group, provides design and analysis of over 50 ongoing clinical studies.

Decision Making for Patients with Acute Leukemia

The major objective of this project is to develop a methodology of decision making for patients with leukemia, utilizing all relevant clinical and laboratory data during the time course of the disease to predict therapeutic and toxic results of various schedules and doses of treatment.

Cellular Kinetics and Applications to Cancer Therapy

Knowledge of the cell cycle kinetics of normal and tumor cells is being exploited through mathematical models to develop more optimal therapy plans.

Planning and Analysis of Clinical Studies

In this program careful biostatistical guidance is given to a large number of ongoing clinical studies at M. D. Anderson Hospital and Tumor Institute in a variety of types of cancer with emphasis of use of design and analysis of these studies to extract as much useful information as possible employing as small a number of subjects as feasible.

Statistical Methods for Survival Time Studies

Length of survival or disease free interval is a common criterion used in cancer clinical studies for evaluating the benefit from treatment; therefore, this program is concerned with the development of statistical methods for the characterization and analysis of survival studies.
DEPARTMENT OF EPIDEMIOLOGY
List of Principal Projects

Incidence, Morbidity, Mortality, and Natural History of Various Types of Cancer by Three Major Ethnic Groups in Texas

This project is to determine incidence, survival, natural history, and differences of various types of cancer by race and geographic area at the community level.

Development of a State-wide Melanoma Registry, Analysis of the Distribution by Ethnic Groups and the Prognosis by Location of the Primary Lesion

This program seeks to verify any existing differences in malignant melanoma in incidence, prevalence, and survival among the three major ethnic groups in Texas and to study the epidemiology of such differences.

Epidemiology of Cancer of the Cervix in Three Ethnic Groups

To determine whether apparent differences in prognosis and occurrence of cancer of the cervix and the corpus uteri among Negroes, Latin Americans and Anglo Americans can be ascertained.

Distribution of Thyroid Cancer and Its Epidemiology by Histological Type

To verify differences in incidence and prevalence of thyroid cancer and survival rates by ethnic group and histological type in Texas.

Search for Leukemia Clusters, 1944-1964, Houston and El Paso, Texas

To ascertain the presence of possible leukemia clusters or repeated occurrences over time in the same family, house or neighborhood by analyzing the leukemia and lymphoma deaths in Houston and El Paso, 1944-1964.
A Scintillation Camera for Imaging Radioisotopes

Development of new imaging systems for distributions of radioactive isotopes in patients.

Research Related to Fast Neutron Radiation Therapy

This program is designed to develop fast neutron beams for radiotherapy.

Alterations of Radiosensitivity by Biochemical Techniques

A study of changes in radiation sensitivity in different phases of the cell cycle, and also investigation of aspects of repair mechanisms in irradiated cells.

Structure of Mammalian and Other Chromosomes

Various biophysical tools and techniques are used to determine the molecular arrangement and architecture of interphase and mitotic chromosomes.

Dosimetry Related to Interinstitutional Clinical Trials

This program is to develop methods and carry out the quality control of physics dosimetry in interinstitutional clinical trials involving radiation therapy.
DEPARTMENT OF VIROLOGY
List of Principal Projects

Spontaneous and Induced Leukemia in Animals

The program is directed toward elucidation of the comparative morphologic, biological, immunological, and biochemical properties of the viruses associated with leukemia, lymphoma, and sarcomas of animals of various species.

Studies on Human Leukemia and Solid Tumors

An in-depth study of the relationship of viruses, particularly the RNA tumor viruses, to the origin of selected types of human neoplasia: human leukemia, lymphoma, breast cancer, cancer of the prostate, and sarcomas of bone and soft tissue.

Studies on DNA Virus-Host Cell Interaction

Investigation of the factors influencing cell transformation and virus replication in animal and human cells infected by small DNA tumor viruses, particularly polyoma and Simian Virus 40 (SV40).
DEPARTMENT OF ANESTHESIOLOGY
List of Principal Projects

The Relief of Pain Secondary to Cancer

Investigation of medications for the control of pain, apprehension and fear in preoperative management of the surgical patient.

Evaluation of Newer Analgesic Drugs

To determine the effect that various intravenous agents have upon the immediate post-operative analgesic state.
Cytogenetic and Ultrastructural Studies in Human Leukemia

The establishment of improved cytological criteria for evaluation of the clinical status, biological behavior and response to therapy of human leukemia.

Immunological Studies in vitro in Human Sarcoma

Investigation of a tumor-associated antigen found in an established human neurogenic sarcoma cell line which is common to various sarcoma tumors.

Tumor Antigens and Cell Cycle of Human Sarcomas

This program is designed to determine cell cycle dependence of tumor-associated antigen expression in human tumor cells cultured in vitro.

Early Detection of Bacteroides fragilis Sepsis by Gas-chromatography

To identify human anaerobes from specific patterns of volatile metabolic products isolated from selected media by gas chromatography.

Growth Kinetics of Plasma Cell Myeloma

To determine the following kinetic parameters of human neoplastic plasma cells before and after chemotherapy:
   (a) length of the cell cycle
   (b) fraction of cells in DNA synthesis phase
   (c) population growth fraction
   (d) population doubling time
and to analyze the data in order to estimate the possible cell loss factor, and to devise mathematical models suitable for investigation of different chemotherapeutic regimens.

The Limulus Test for Detection of Endotoxin and Gram-negative Sepsis in Cancer Patients

To detect endotoxemia as a source of fever in immunologically compromised cancer patients.
The Effect of a Germ-Free Environment on Cancer Chemotherapy

This program is designed to test the effects of the germ-free environment on cancer chemotherapy and suppression of granulocytopenia.

Chemotherapy of Hematological Malignancies

To investigate combination chemotherapy in advanced Hodgkin's Disease, lymphomas and adult acute leukemia.

Investigation of New Agents in Cancer Chemotherapy

This program integrates an interdisciplinary approach to cancer chemotherapy combining the pharmacological and therapeutic investigation of new agents of potential value in cancer chemotherapy.

Clinical Immunology

A multi-faceted investigation of the relationship between the host and his tumor, so that immunological methods can be applied to the diagnosis, evaluation and treatment of amalignancies.

Physiology and Transfusion of Platelets and Leukocytes

This program is designed to provide and develop hematological supportive care for the myelosuppressed patient, and to investigate the role of leukocyte and platelet compatibility.

Diagnosis and Treatment of Infection in Cancer Patients

Most infections in cancer patients are caused by gram-negative bacilli, particularly E. coli, klebsiella species and pseudomonas species. Investigation of the endotoxins produced are studied, and clinical pharmacology is being investigated on new antibiotics in hopes of developing useful new single antibiotics or combinations of antibiotics.

The Therapy of Solid Tumor

This program is designed to develop new effective regimens combining two or more drugs and rational schemes designed to improve the response rate and its duration. It is designed to seek the best ways in which effective agents can be combined for maximal efficacy with minimal toxicity.

Cellular Chemotherapy and Kinetics

Factors Altering susceptibility of tumor cells to chemotherapeutic agents are studied to provide clues to differences in response rates among patients, and to form a rationale for new approaches to chemotherapy.
Clinical Evaluation of Combination Chemotherapy in Non-Oat Cell Bronchogenic Carcinoma

This program currently is directed toward investigating the use of Bleomycin by continuous infusion in combination with a 4 drug regimen (cytoxan, oncovin, methotrexate, and 5-Fluorouracil).

Comparison of Murine and Human Leukemia and Sarcoma

To compare murine and human leukemia and sarcoma from the virological, immunological and epidemiological points of view.

Immune Interactions of Lymphocytes and Antibodies with Tumor Specific Antigens

Investigation of some very controversial aspects of tumor immunology, such as: the occurrence in clinically normal individuals of lymphocytes cytotoxic toward tumor cells, investigation of serum factors antagonistic to-or synergistic with- these lymphocytes; and investigation of possible deposition of soluble tumor-specific antigens in glomeruli of kidney specimens taken at autopsy from tumor-bearing patients.

Effect of Various Treatments and Management on Pituitary Tumors

Patients with pituitary tumors are selected for hypophysectomy either by cobalt irradiation or surgery. Pituitary hormone studies are conducted before and after some cases are subjected to irradiation and treatment; are followed up with additional studies at three-month intervals for 2-3 years to detect delayed effects of irradiation.

Family Study of Medullary (Solid) Carcinoma of the Thyroid Gland

This program is designed to determine the exact incidence of the familial type of medullary carcinoma of the thyroid using radioimmunoassay for the measurement of calcitonin in serum of high risk individuals (members of the family of patients with medullary carcinoma).
DEPARTMENT OF PATHOLOGY
List of Principal Projects

Application of Anatomic Pathology to Clinical Investigations of Cancer

This program is designed to enhance institution-wide understanding of neoplastic processes and morphologic changes incident to therapy.

Whole Organ Study of Primary Malignant Tumors

This program is designed to utilize the three dimensional visualization technique to study neoplasms in relation to adjacent normal structures, preneoplastic changes, tumor distribution, routes of spread, sites of origin, and histologic variation.

Trace Metal Patterns in Normal and Malignant Tissue

For development of methodology at the ultracytochemical level to establish potential applications of trace metal analyses to current clinical problems.

Pathologic Changes Following Chemotherapy

Evaluation of the effectiveness and toxicity of chemotherapeutic agents used in management of neoplastic disease.

Cytopathology Studies

The improvement of techniques for obtaining and processing cytologic specimens and collaboration in screening programs and clinical studies directed toward earlier detection of neoplastic disease.

Electron Microscopy of Human Neoplasms

This program has the dual purpose of providing routine diagnostic assistance at the ultrastructural level for tumors which cannot be readily identified by conventional light microscopy, and of accumulating diagnostically significant data on the fine structure of human neoplasms.

X-Ray Fluorescence Studies of Biological Materials

A study of the biologic significance of trace and other important elements in human physiology, intermediary metabolism and pathology as related to the diagnosis and pathogenesis of human neoplasia.
Cancer Chemotherapy and Investigative Therapeutics in Children


Pharmacologic, Toxicologic, and Clinical Studies of the New Cancer Chemotherapeutic Agents

Phase I and II clinical and toxicologic studies of new drugs, new drug combinations, and new dosage regimens in children with advanced cancer.

Comparative Evaluation of New Chemotherapeutic Agents in Acute Leukemia in Children

Phase II and III studies of new drugs, new drug combinations, and new schedule dosage modifications in patients with all stages of acute leukemia.

Evaluation of the Effectiveness of Chemotherapeutic Agents in the Treatment of Children with Malignant Lymphomas

Phase II and III studies of new drugs, new drug combinations, new schedule dosage modifications and multimodal therapy in Hodgkin's disease and malignant lymphomas in children.

Evaluation of the Effectiveness of Chemotherapeutic Agents in the Treatment of Children with Brain Tumors, Retinoblastoma, Ewing's Sarcoma, Osteogenic Sarcoma, Neuroblastoma, Wilms' Tumor, Soft Tissue Sarcoma, and other Malignancies

Phase II and III clinical evaluations of new drugs, new drug combinations and new schedule/dosage modifications in various solid tumors of childhood.
Early Breast Cancer: Thermography and Histology

To evaluate the role of high resolution thermography as a mass screening device for the detection of early breast cancer.

Application of Laser Holography to Diagnostic Radiology

Storage and retrieval of three dimensional radiographic information utilizing the methods of optical holography and stereoradiography.

Xeromammography Versus Film Mammography: A Comparative Study

An inter-institutional research project designed to investigate the conditions of optimum image presentation of the xerox process as compared to conventional film mammography.

Vascular Changes Following Irradiation to the Liver

An experimental animal study of angiographic and histologic changes to the liver after irradiation.

The Use of an Induced Negative Charge in Minimizing Thrombus Formation on Intravascular-dwelling materials

An experimental animal investigation of the potential application of an induced negative charge in reducing thrombus formation associated with angiography.

The Use of Prostaglandin E1 as a Pharmacangiographic Agent for the Radiological Enhancement of the Canine Splanchnic Circulation

An experimental animal investigation designed to improve the roentgen opacification of the portal vein for use in diagnosis of carcinoma of the pancreas.
DEPARTMENT OF RADIOTherapy
List of Principal Projects

Correlation of Tumor-Dose-Time Relationships in Radiotherapy of Squamous Cell Carcinomas of the Oropharynx

This project is central to radiotherapy trying to obtain maximum control rates with minimum complications. With dosimetry, both for external beam and interstitial intracavitary radium therapy, which has been in use for several years, it allows an accurate determination of the dose received by the tumor and the normal structures.

Preoperative Irradiation in Treatment of Some Groups of Breast Cancers

Patients with carcinoma of the breast included in this study are those treated with preoperative irradiation and radical mastectomy. The purpose is to sterilize microscopic disease often present in the dermal lymphatics of the skin (tumor cells in microscopic nests are much more radiosensitive), and to devitalize tumor cells in the hope of preventing implants in the surgical area or metastases at a distance.

Whole Neck Irradiation of Lymphatics in the Anaplastic Tumors of the Head and Neck

The anaplastic tumors of the nasopharynx and oropharynx have a diffused bilateral spread. Because of the better tolerance of the tissues and much less skin reaction, one can with supervoltage treat the whole lymphatic area of the neck in continuity with the primary lesion. The project of combining whole neck irradiation with radical neck dissection in the anaplastic tumors of the oropharynx is further systematized.

Whole Abdominal Irradiation of Ovarian Cancers

The use of supervoltage in the irradiation of ovarian carcinoma is being investigated in this project in an attempt to evaluate the sensitivity of ovarian tumors that have spread into the rest of the abdominal cavity. Trunk bridge, open field and strip technique with the 60 Cobalt teletherapy stationary unit is being used, and thus far the analysis shows that irradiation of the whole abdomen by the 60 Cobalt moving strip and additional irradiation of the pelvis (2,000 rads in 2 weeks) to be the most effective postoperative treatment provided that residual tumor masses after surgery are less than 2cm. in diameter.

Evaluation of Fast Neutron Therapy in Head and Neck Cancers

This project is to determine the usefulness of fast neutron therapy in head and neck cancer; specifically to show whether fast neutron therapy can 1) improve the local control rate of bulky head and neck cancers, or 2) decrease the incidence of radiation complications and bothersome sequelae.
Radiobiology of Normal Tissues

This research is aimed at elucidating aspects of the response of normal tissues to irradiation with the goal of making possible a reduction in damage of normal tissue during the radiotherapy of cancer. In particular, the radiosensitivity and rates of postradiation recovery of stem cells of the small intestine and hair follicles are being measured and methods studied whereby these responses may be modified.
Serum Tyrosinase in Patients With Malignant Melanoma

Experiments are now being conducted to isolate human tyrosinase from human malignant melanoma tumors. Attempts are being made to prepare antiserum against purified human tyrosinase to be utilized as a specific and sensitive test for determining the presence of this enzyme in human sera. This would be utilized for determining the presence of clinical undetectable disease or monitoring the effects of therapy for malignant melanoma.

Immunological Studies of Patients with Solid Tumors

Attempts are being made to ascertain mechanisms operative at the cellular and molecular level which deal with the inability of the host to destroy his malignant tumor. Studies are directed toward determining if specific immunoglobulins associated with human sarcoma and malignant melanoma might function as enhancing antibodies, and thereby promote tumor growth.

Investigation of the Treatment of Advanced Melanoma

This program is directed toward developing a profile of the way advanced melanoma patients handle tyrosine metabolism, the sensitivity of their tumors to chemotherapeutic agents, the tRNA patterns of their tissues and tumors, and, the melatonin-related content of the pineal gland.

Chemotherapy for the National Prostatic Cancer Project

This project proposes to determine the usefulness of single chemotherapeutic agents in the treatment of advanced prostatic carcinoma.

The Therapy of Bronchogenic Carcinoma

This investigation is designed to conduct studies of intensive multi-disciplinary therapy of patients with bronchogenic carcinoma and to determine the efficacy of each of a number of therapeutic approaches, the possible relationship to the morphological type of cancer, and the clinical stage of the disease as well as the influence of any concomitant pathology.
Chemotherapy of Advanced Ovarian Cancer

This is a clinical chemotherapy research protocol designed to identify chemotherapy agents effective in the treatment of ovarian cancer, and to compare these agents with an alkylating agent that has been used extensively in past treatment of this disease.
ARTICLE THREE
The Division of Education

Section A. The Division of Education shall be charged with the dissemination to students, the medical and related professions, and the public, of information concerning the occurrence, causes, treatment, relief, cure and prevention of neoplastic and allied diseases, including affiliation with, and participation in, all appropriate teaching functions of The University of Texas System. Its duties shall be performed in coordination with those of the Divisions of Research and Patient Care Activities.

Section B. The administrative head of the Division of Education shall be the Associate Director (Education) who shall be appointed and removed by the President. He shall be responsible to the President for the supervision of all education and training activities, and the recommendation of pertinent policies, procedures and fiscal arrangements. He shall implement professional appointments and programs in conjunction with the various department heads and shall prepare a plan for continuing education of medical and allied health professional personnel.

Section C. There shall be an Education Committee, appointed by the President, and responsible to the administrative head of the Division of Education, whose principal function is to advise that officer on correlated professional educational activities of the staff in the various services and departments of the hospital. The Committee shall be composed of the heads of the following departments or their designated alternates: Biochemistry, biology, biomathematics, developmental therapeutics, epidemiology, medical communications, medicine, nursing, anatomical pathology, clinical pathology, pediatrics, physics, publications, diagnostic radiology, radiotherapy, rehabilitation medicine, research medical library, surgery, and virology. Such other departments of similar rank as are later organized shall also be similarly represented on the Committee. Ex officio membership shall be as provided in the "Education Committee Policy and Organization" document.

Three of the subcommittees of the Education Committee shall be: (1) The Educational Policy Committee of the Graduate Faculty, appointed by the President, which shall be advisory to the Education Committee and the head of the Division of Education on all matters pertaining to the instruction and training of students of The University of Texas Graduate School of Biomedical Sciences who are working at the Anderson Hospital for academic credit toward advanced degrees; (2) the Residency Training Committee, selected by the Executive Committee of the Medical Staff, which shall be advisory to the Education Committee and the head of the Division of Education in the specific area of clinical residency and fellowship training; and (3) the Committee on Continuing Education of Medical and Allied Health Professional Personnel.
Section D. The head of each department and the chief of each section in the Tumor Institute and of each service in the hospital shall be responsible for the educational program in his area of professional activity. The execution of these programs in accordance with the general policies, procedures and recommendations of the head of the Division of Education is essential to effect the necessary coordination with other departments, services and staff divisions of both this institution and affiliated institutions.

Section E. Periodic scientific and medical reviews, seminars, symposia, refresher and continuation courses shall be conducted in conjunction with the other units of The University of Texas at Houston, the Texas Medical Center, the medical schools, hospitals, and tumor clinics of the State of Texas.
EDUCATION COMMITTEE POLICY AND ORGANIZATION

I. Purpose

The Education Committee, appointed by the President, serves in an advisory capacity to the Associate Director (Education) and to the President on matters concerning correlated professional-educational activities of the staff in the various services and departments of the institution.

Written reports and recommendations of the Education Committee will be submitted to the President's Advisory Council through the Associate Director (Education).

II. Membership

The Education Committee is composed of the heads of all basic science and clinical departments, the departments of Nursing, Epidemiology, Medical Communications, Research Medical Library and Publications, or their designated alternates; three members-at-large; all Associate Directors (Ex officio without vote) and the vice-president for Administration (Ex officio without vote).

The three members-at-large shall be elected annually in August from the full-time staff of the instructional departments of the institution. Procedure for their nomination and election shall be that listed below for nomination and election of officers of the Education Committee. They will serve for a period of one year and may be elected for an additional year; they will have the privileges and responsibilities of full members.

The retiring Chairman of the Education Committee when he is a member-at-large will continue to serve in the capacity of a member-at-large for one year following the termination of his office to maintain continuity of the policies instituted by the Committee.

III. Officers

The Education Committee shall have a Chairman and a Vice Chairman. At the June meeting the retiring Chairman shall appoint a Nominating Committee consisting of three members of the Education Committee. They shall make recommendations for the office of Chairman and Vice Chairman, which will be presented to the Education Committee at its July meeting. At this meeting additional nominations may be offered from the floor by any member of the Committee. The slate of nominees for each office will be published in the minutes of the July meeting, and the Chairman and Vice Chairman of the Education Committee will then be elected by secret ballot prior to the August meeting. A simple majority of the members of the Education Committee will be required for election. The Chairman will appoint three tellers from among the members who have not been nominated to tally the vote. Results of the election will be
submitted for approval by the President. The Chairman will serve for a period of one year and may be reelected for an additional term. The Chairman shall represent the Education Committee at the President's Advisory Council. He will appoint the chairman of all subcommittees of the Education Committee with the exception of the Clinical Conference Program Committee (appointed by the President) and the Residency Training Committee (appointed by the Executive Committee of the Medical Staff). The Chairman will request reports from subcommittee chairmen to be entered as agenda items for either regular or special Education Committee meetings. The Vice Chairman will serve for a term of one year and may be reelected for one additional term. He will assist the Chairman in all matters and function in the capacity of Chairman in the absence of the latter.

IV. Protocol for Meetings

A. Regularly scheduled meetings

The Education Committee will meet regularly on the first Monday of each month unless otherwise designated by the Chairman. Notification of change of date or time of a regularly scheduled meeting will be distributed to all members and alternates at least 10 days prior to each regularly scheduled meeting.

All items to be included on the agenda of a regularly scheduled meeting are to be submitted to the Chairman at least 10 days prior to the meeting. The agenda is prepared and distributed by the Office of Education along with appropriate documentation and the minutes of the previous meeting to members and alternates at least 5 days prior to the next regular meeting. A quorum shall consist of 50% of the regular members or their designated alternates for any regularly scheduled meetings.

B. Special Meetings

Special meetings of the Education Committee may be called at any time by the Chairman; however, notification of a special meeting, its agenda and all relevant documentation must be distributed to the members and their alternates at least 5 days prior to the meeting. Items included on the agenda of a special meeting will be limited to those pertaining directly to the business for which the meeting is called. Matters not published on the agenda of special meetings may not be discussed at the meeting. A quorum shall be 50% of the members and alternates. The minutes of all special meetings will be circulated to all members and alternates within five days following the meeting, and always before the next regularly scheduled meeting.

Subcommittee reports will be included on the agenda for all regular meetings. Minutes of the previous meeting will be circulated to members and alternates at least 5 days prior to the next meeting.
V. Committees and Subcommittees Reporting to the Education Committee

A. Residency Training Committee advises the Associate Director (Education) and the Education Committee concerning Clinical fellowship and residency training; it also reports to the Executive Committee of the Medical Staff, which appoints the Residency Training Committee.

B. Annual Clinical Conference Program Committees are appointed by the President upon recommendation of the Education Committee; chairmen are responsible for program development, preparation of grant applications for support of the annual meetings, and planning and execution of the meeting itself. Each Program Committee serves also as the Heath Award Committee, for the purpose of recommending candidates for the Heath Lecture and Award, a feature of each annual conference.

C. Standing Subcommittees

1. Clinical Conference Topic Subcommittee. Considers and recommends topics and program committee membership for each annual clinical conference at least three years in advance of the conference and no later than September of each year.

2. Curriculum Subcommittee for Summer Programs in the Biomedical Sciences. Advises concerning recruitment and appointment of secondary school students of high ability, selected for an annual summer program administered by the Office of Education, and evaluation of the students' work. It meets no less than twice each year generally between January and May.

3. Dial Access Review Subcommittee. Reviews and recommends additions, deletions and updating of Dial Access recorded medical consultations program. It meets at the discretion of the Executive Vice President and Director.

4. Instructional Aide Subcommittee. Reviews and recommends policies governing the acquisition and development of audiovisual and programmed instructional aids for educational programs, teaching activities, and in-service training. It meets no less than four times yearly.

5. Judging Subcommittee for Clinical Training Research Project Competition. Reviews and judges entries in the annual clinical training research project competition held each June, to select award winners. It meets no less than twice each year, usually in the spring.

6. Medical Student Advisory Subcommittee. Reviews medical student educational programs and interviews trainees in order to develop and maintain acceptable training levels. It meets no less than twice each year.

7. Postgraduate Education Review Subcommittee. Reviews continuing education efforts and makes recommendations concerning policies governing the institution's programs. It meets no less than twice each year.

8. Research Medical Library Subcommittee. Reviews and recommends policies concerning the effective administration of special library projects as an adjunct to educational and research programs of the institution. It meets no less than four times each year.
9. Staff Seminar Subcommittee. Plans programs and arranges for speakers for the monthly staff seminar, a teaching activity of the staff. It meets no less frequently than four times a year.

10. Stipend Subcommittee for Clinical Fellows and Residents. Reviews and recommends stipend levels and benefits for resident physicians for the effective implementation of recruitment efforts for trainees. It meets no less often than once yearly.

D. ad hoc Subcommittees

These and such other subcommittees as may be named by the Chairman of the Education Committee may initiate suggestions related to their specific areas of responsibility, to be presented to the Education Committee whose evaluation and recommendations will then serve to advise the Associate Director (Education) and the President.

Composition of subcommittees will be derived from the entire staff by the Chairman of the Education Committee, with the concurrence of the Associate Director (Education), and approval by the committee. Membership will be reported annually upon request to the President's office for the annual official list of committee membership.

The Associate Director (Education) and the Chairman of the Education Committee will be ex officio member without vote of all subcommittees of the Education Committee.

VI. Educational Programs

The head of each department and section in the institution and the chief of each service in the hospital is responsible for the educational program in his area of professional activity. Execution of these programs in accordance with the general policies and procedures of the institution and with the recommendations of the Associate Director (Education) is essential to effect necessary coordination with other departments, services and staff divisions of both this and affiliated institutions.

The Education Committee will assist in evaluation and review of educational programs so that trainees will have full advantage of all available facilities and talents of the professional staff.
Interoffice Memorandum

TO: Mr. Van Wilhelm
General Accounting

FROM:

SUBJECT:

Dear Mr. Wilhelm:

Please find attached the "consignee copy" of an invoice from the Kingham Delivery Service for delivery of an American Association of Cancer Institute application form from Duke University. I am requesting payment at your early convenience. It should be charged to the account of the Office of the President.

The package delivered was sent AIR FREIGHT (via Eastern Airlines) and it was necessary to use the services of this carrier in order to receive the materials in time for a meeting of the Membership Committee being held at M. D. Anderson Hospital, Houston, on December 15.

Mr. John Vinson advised that we use this service.

Thank you for your kind attention to this matter.

Sincerely,

Murray M. Copeland, M.D.

MMC/wg

Enclosure

cc: Dr. R. Lee Clark
**KINGHAM DELIVERY SERVICE**
2000 W. CAPITOL • HOUSTON, TEXAS

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**PAY THIS AMOUNT**

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**CONSIGNEE COPY**
U. W. Shugart, M. D.
D. B. Buhl 3814
Duke University Medical Center
Durham, N.C. 27710

DR. MURRAY COPELAND
UNIVERSITY CANCER FOUNDATION
PRUDENTIAL ROOM 55
M. D. ANDERSON HOSPITAL
6723 BERTNER
HOUSTON, TEXAS 77025
Dear Dr. B. B. Clark,

I have received the Chairman's letter dated 6-22-75 and I am grateful for the information you have provided. I think that the data on recent studies is quite useful. Furthermore, I believe that the questions asked in the application form can be used as guidelines for on-site visits because they are quite specific.

I certainly enjoyed our conversations and look forward to seeing you again.

Sincerely yours,

[Signature]

William B. Hutchins
Dear Murray:

I have reviewed the Membership Application forms for the American Association of Cancer Institutes as well as the Guidelines. I think that you and your Committee are to be highly commended for an excellent job. It should make membership committee tasks relatively simple. Furthermore, I believe the questions asked could be used as a guideline for on site visits because the very guts of the desired information is laid out in this application form.

I certainly enjoyed our conversations in June which have proven to be quite a help to me.

Best regards.

Sincerely yours,

[Signature]

William B. Hutchinson, M.D.
Director

WBH/vwi
Cancer Plan Lists Strategy for Battling Disease, but Fails to Settle Controversies

By Jonathan Silver

WASHINGTON The long-awaited master plan for the nation's cancer program fails to settle any of the controversies surrounding the massive research effort.

The plan, which Congress called for in a 1971 law supported by the Nixon administration, is designed to outline a five-year strategy for reducing the toll from cancer, which is the second leading cause of death in the U.S. But the plan is more of a shopping list than a coherent strategy that fixes priorities for spending, not outcomes.

The fundamental controversies surrounding the program, which the National Cancer Institute administers, center on basic research as opposed to application of present knowledge, the degree of flexibility in control by federal administrators and the amount of freedom allowed individual scientists to pursue their own ideas without federal interference.

The cancer plan calls for an increase in expenditures from $500 million in the current fiscal year, ending June 30, 1974, to $852 million by fiscal 1978 and up to $1.7 billion by fiscal 1982. It also urges that the number of scientists involved in cancer research be raised from the current 5,500 to as many as 11,000 when the program hits its peak.

The plan, developed by the cancer institute in consultation with 250 leading cancer researchers, calls for ultimately eliminating all forms of human cancer but it doesn't set any specific deadline. To reach this goal, it outlines seven key objectives to serve as the strategy for cancer research expenditures.

List of Objectives

They are: reducing the ability of external agents, such as industrial chemicals, to produce cancer; enhancing the individual's resistance to development of cancer, perhaps through vaccination; preventing cells from converting into cancerous forms in the body; preventing the growth of tumors from small groups of cells that have become malignant; conducting field studies to show the risks of cancer in large populations as an aid to improving prevention and cure; applying present knowledge to cure as many patients as possible, and finally, stepping up efforts in patient rehabilitation.

Within these broad categories, the plan lists hundreds of individual research projects proposed by the non-governmental scientists who participated in its development—obviously far more than the program's resources will support.

Development of the plan began in 1971, and it was essentially completed in 1972. The long delay in its release stems from protracted review by other federal agencies that wouldn't let the cancer institute and its constituents design the plan alone, and from criticism by a substantial segment of the scientific community who feared too much federal direction in the plan.

But much of the quibbling turned out to be semantics. The plan, made public over the weekend and dated January 1973, differs little in substance from earlier preliminary drafts. The main revision is a matter of tone that makes the document appear much more of a vague and general blueprint than a policy actually permitting the cancer institute to dominate the pattern of cancer research in the country.

Spending Support Doubtful

The spending proposed in the plan is probably far greater than the administration would approve, even though President Nixon has promised to allot whatever sums are required. The administration has recommended spending $500 million in the current fiscal year, although the law authorizes $400 million and the cancer institute fought hard for that amount. The plan's authors hope that the future of the program in the U.S. because allocating such substantially increased amounts for cancer surely would reduce emphasis on other diseases.

Over the last two years, cancer institute planners and others have wrestled with the difficult issue of how much of the program should be directed toward basic biological research, which might ultimately produce the leads necessary to completely eradicate cancer, and how much should be funneled into immediate efforts to apply existing knowledge, particularly through earlier diagnosis, which would benefit those already stricken with the disease. It's estimated that 51 million Americans currently living will develop some form of cancer and that two-thirds of them will die. About 600,000 new cases of cancer are diagnosed each year and the disease is second as a cause of death to cardiovascular disease.

The cancer plan fails to provide any clues to solving this issue. Many congressional backers of the legislation were far more interested in getting immediate results, and the cancer institute is under considerable pressure to justify the massive federal spending increase. Cancer outlays were less than $200 million a year when the program began.

Two Programs Launched

The cancer plan calls for a strong new push for continued reliance on peer review, but it doesn't directly address the issue of how much federal direction is possible or practicable in a scientific endeavor where many key questions remain unanswered. And it leaves sufficient scope for the cancer institute to move towards increased centralized control if it so desires.

The cancer plan and a report released at the same time by Frank J. Rauscher Jr., program director, hewed to administration policy in eliminating direct support for training research scientists. The scientific community has bitterly attacked this decision. Mr. Rauscher has made it clear that the cancer program will allocate whatever funds are needed to provide the researchers necessary to reach its objectives and will seek to persuade the administration to reverse its policy if a shortage develops.

The cancer plan, in calling for massive increases in the number of researchers, would make it almost inevitable that the administration would have to do so.

Finally, the most bothersome issue within the scientific community has been how much control the cancer institute will exert over the scientists and whether individual project decisions will be made by federal bureaucrats or by other scientists in the field, the traditional "peer review" technique. The cancer plan makes a strong pitch for continued reliance on peer review, but it doesn't directly address the issue of how much federal direction is possible or practicable in a scientific endeavor where many key questions remain unanswered. And it leaves sufficient scope for the cancer institute to move towards increased centralized control if it so desires.
Nixon accepts 5-year plan
to erase cancer

By MARY JANE SCHER
Post Reporter

The national cancer program is "finally getting off the ground," Dr. R. Lee Clark, of Houston, said Friday after meeting with President Nixon in Washington.

After meeting with his special cancer panel, of which Clark is the senior physician-member, Nixon announced he is accepting the nation's first 5-year plan to eradicate cancer through improved research and treatment.

The plan has been held up for almost nine months, Clark told The Houston Post by telephone, due to Nixon's heavy schedule and Watergate troubles plus changes in top officials within the Department of Health, Education and Welfare.

Nixon told his cancer panel and others attending the noon meeting at the White House that he still wants the conquest of cancer to be a national goal.

But Clark said the President stressed he hopes conquering cancer will become an international aim as well.

The 5-year plan was the result of nearly 20 meetings attended by more than 250 American scientists and cancer specialists in late 1971 and early 1972. It has been ready for the President to pass on for several months.

Dr. Frank Rauscher, director of the National Cancer Institute, described the 5-year plan as "people-oriented" and said it will be supplemented with an operational plan later.

Seven objectives, the first four of which are devoted to finding the causes and prevention of malignant diseases, are outlined in the plan.

Clark said he was "heartened" because Nixon and his HEW advisers agreed "that more money must be spent on manpower training grants."

"We cannot succeed in our mission without quality personnel and we all told the President of the need to support grants for up-and-coming scientists," he said.

Clark, president of the University of Texas M.D. Anderson Hospital and Tumor Institute, said Nixon has asked Congress to appropriate $500 million in fiscal 1973 for the war on cancer. The law setting up the program predicted $600 million would be desirable.

Clark said "a compromise probably will be worked out" and predicted "about $575 million" will be the final figure.

Clark said new emphasis will be placed on recruiting young scientists interested in pursuing the cancer mystery and in expanding work in immunology.

The entire field of immunology and immunotherapy "must be widened greatly if we are to take advantage of the new clues in this field," Clark said.

Clark said Nixon recommended a $50 million allocation be restored to the budget of the National Institutes of Health to use for all types of scientific fellowships, some of which would help the cancer conquest.

An estimated 350,000 Americans are predicted to die from cancer in 1973.
August 15, 1973

MEMO TO: Members of AACI

FROM: Dr. E. A. Mirand, Secretary-Treasurer

SUBJECT: New AACI Membership Application

At the last meeting of the Association in Seattle on June 24-26, 1973, the Chairman of the Membership Committee pointed out the inadequacy of the membership application form which was being used. It was decided then that a new application form should be devised.

Enclosed is a new AACI Membership Application form. It is requested that existing members of the Association as well as recent applicants complete this form and return it to me as soon as possible. This form will be used in the future for any organization seeking membership in the Association.

EAM:co
Enclosure
July 30, 1973

Dr. R. Lee Clark

Dear Lee:

Please find attached a new application form and my letter of transmittal to Dr. Edwin Mirand with other germane material for your information and consideration.

Sincerely,

Murray M. Copeland, M.D.

MMC: jc/pc
July 25, 1973

Dr. Murray M. Copeland  
Vice President  
The University Cancer Foundation  
M. D. Anderson Hospital & Tumor Institute  
Houston, Texas  77025

Dear Dr. Copeland:

I have received copies of your correspondence to Dr. Spratt concerning the matter of changing the name of the association to the Association of American Cancer Institutes. I have already taken steps to rectify this matter with the lawyer pointing out to him that the Certificate of Incorporation stated incorrectly the name of our organization. My letter was sent to him before you had informed Dr. Spratt to do the same. I have not heard from the lawyer pertaining to this matter, but should I not hear from him in due time, I shall pursue the matter more vigorously. You might be interested to know that I have also notified Dr. Spratt of my actions since he is very familiar with the law firm and the lawyer who assisted in the incorporation of our Association. I deeply appreciate your assistance in reinforcing this issue to Dr. Spratt. I am sure that with your effort and my effort, the matter will be resolved.

I appreciate also receiving your correspondence pertaining to the reference on alteration of category of membership of the AACI. I shall pursue this with Dr. Spratt. Again, I have also informed him of this action prior to the receipt of your letter and in this instance too, I appreciate your assistance in reminding Dr. Spratt that this matter must be pursued since we are getting many requests for membership into AACI.

My very best wishes to you from Dr. Murphy and myself.

Sincerely,

Ed Mirand  
Associate Institute Director  
and Professor

EM:ai
cc: Dr. John S. Spratt

Roswell Park is now on a direct inward dialing telephone system. The number of this office is 716-845-3085
Dr. Edwin A. Mirand  
Assistant Director for  
Educational Affairs  
Roswell Park Memorial Institute  
666 Elm Street  
Buffalo, New York 14203

Dear Ed:

Please find attached Membership Application Form with instructions (Exhibit I) which we have been laboring over here some two weeks. We have been particularly fortunate to have the services of Mr. Patrick Leon, formerly of Booz-Allen, Assistant (Program and Planning Management) to Dr. Clark. He has arranged the format and display of items in the application form. The form is designed to establish the relevant information concerning each item of the checklist (guidelines) (Exhibit II).

I am sending this material to each member of the Membership Committee as follows: Dr. Philip Shubik, Dr. William B. Hutchinson, Dr. Robert O. Johnson and Dr. Timothy Talbot. I also am sending a copy to Dr. Jack Spratt, Chairman of the By-Laws Committee, to Dr. Clark and to Dr. Rusch. I am suggesting that those who have comments or suggestions send them directly to you.

In the meantime I believe we are agreed that we will proceed to use this application form for the institutions now applying for membership until an approved form is established. I feel that it is an excellent document and it has my vote of approval without further change.

In order to incorporate current identification of the various types of cancer centers, it will be necessary to change the By-Laws slightly under Article III, Section 2 (Exhibit III) revised Pages 2 and 3 of the By-Laws.

You will note that an additional paragraph has been added with transposition of (3) of the previous By-Laws to (4) and that a new (3) regarding another type of organization has been added. We are underlining the changes in the wording for consideration.
Although I have not received the minutes from the last meeting, it is my recollection that having established a new application form, we would require all current members of the organization to fill out the new form to establish a recorded baseline of their activities and status of membership. I am sure that you have this matter under advisement.

Very sincerely yours,

Murray H. Copeland, M.D.
Vice President
University Cancer Foundation

MMC:je
Enclosures (3)
Interoffice Memorandum

TO: Dr. R. Lee Clark
FROM: Murray M. Copeland, M. D.

DATE: June 14, 1973

SUBJECT:

Dear Lee:

Please find attached seven applications for membership in the American Association of Cancer Institutes for your perusal and comments.

We are now planning to have a meeting of the Membership Committee in Seattle beginning at 2:00 p.m. at the Sorrento Hotel on June 24, 1973. The Membership Committee is as follows:

1. Dr. Murray M. Copeland, Chairman
2. Dr. Philip Shubik
3. Dr. William B. Hutchinson
4. Dr. Robert O. Johnson
5. Dr. Edwin Mirand

Murray M. Copeland, M. D.

Enclosure
MEMBERSHIP APPLICATIONS - ASSOCIATION OF AMERICAN CANCER INSTITUTES

Dr. John R. Durant, Director
Cancer Research and Training Program
University of Alabama
1919 - 7th Avenue South
Birmingham, Alabama 35233

Dr. William W. Singleton, Director
Duke Comprehensive Cancer Center
Duke University Medical Center
Durham, North Carolina 27710

Dr. Lewis L. Coriell, Director
Institute for Medical Research
Copewood Street
Camden, New Jersey 08103

Dr. Denman Hammond, Associate Dean and Director
Los Angeles County-University of Southern California Cancer Center
2025 Zonal Avenue
Los Angeles, California 90033

Dr. John H. Weisburger, Vice President for Research
Maylor Dana Institute for Disease Prevention
American Health Foundation
2 East End Avenue
New York, New York 10020

Dr. William H. Fishman, Director
Tufts Cancer Research Center
136 Harrison Avenue
Boston, Massachusetts 02111

Dr. C. Ronald Koons, Associate Medical Director
Mountain States Tumor Institute
151 East Bannock Street
Boise, Idaho 83702

Dr. Howard E. Lessner
University of Miami Medical School
Coral Gables, Florida 33124
ASSOCIATION OF AMERICAN CANCER INSTITUTES

INSTITUTION: University of Alabama in Birmingham
Name: Cancer Research and Training Program
Address: University Station
Birmingham, Alabama 35294

Is the institution affiliated with a University, Hospital, or other organization? Yes If so, please specify: University of Alabama Hospitals and Clinics

Brief description of purpose of institution, including whether clinical or nonclinical: See attached.

If clinical, how many beds? Developed member of NCI cooperative group? Yes (Southeastern Chemotherapy Group, Gynecologic Oncology Group, Radiation Therapy Oncology Group)
Research (list main areas): Gynecologic Oncology, Surgery, Dentistry, Pediatrics, Medicine, Pathology, Immunology, Engineering Biophysics, Epidemiology, Molecular Biology, and Radiation Oncology

BUDGET:
Approximate annual budget: $2.6 million

Please specify sources and amount of support (e.g. Federal, State, private, etc.): State 163,089; Federal 2,176,775; American Cancer 85,455;
Endowments 50,000; Private Practice above 100,000

PERSONNEL AND PUBLICATIONS: see attached sheet.

Date of Application: May 8, 1973 Signed
Title: Director, Cancer Research and Training Program

Application should be submitted to Dr. Harold P. Rusch, President, AACI, McArdle Laboratory for Cancer Research, University of Wisconsin, Madison, Wisconsin 53706.
PERSONNEL:

Names and titles of senior personnel, including brief curricula vitae. List on separate pages.

Total number of employees, grouped by categories (e.g., professional, technicians, office, etc.):

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Do you have a training program? Yes

If so, what level of training? Clinical and Research; Postdoctoral and Student

For how many people? 9 Research Fellows; 4 Clinical Fellows; 16 Students

PUBLICATIONS:

Please list relevant publications during the past 3 years.

See Attached.
The University of Alabama Cancer Research and Training Program is an interdisciplinary Cancer Center whose main purpose is to develop and maintain a comprehensive approach to the problem of cancer. It was officially recognized by the University in 1970 at which time Dr. John R. Durant, Professor of Medicine, was named Director. The program is governed by a twelve member Executive Committee of which Dr. Durant is chairman and to which report a number of subcommittees. It is supported by an annual budget of approximately 2.6 million dollars per year, a large portion of which is provided by a center grant from the National Cancer Institute. There are 44 senior faculty and 25 junior faculty participating in the program of the Cancer Center at the present time.

The Center is composed of 25,899 net square feet of space allocated to members through departmental channels, of 23,400 net square feet of space currently being renovated and which will be completed within two years, and of 24,000 net square feet of space for a new radiation therapy facility which has been funded by the National Cancer Institute. In addition, an application has been funded which will provide 20,000 additional net square feet for basic, clinical and core space to be added to the new radiation therapy facility, ultimately to make up a four story building to be known as the Lurleen Wallace Memorial Tumor Institute. A dedicated 80 bed tower is also planned for future construction to be connected by a bridge to the Tumor Institute and which will be located directly above the University's outpatient building. Support for this has been obtained from revenue sharing.

The current research program of the Center include projects in clinical and viral carcinogenesis, cell separation, molecular pharmacology, radiation biology, biophysical engineering, immunology, ultrasonics, maxillofacial rehabilitation, and all the clinical disciplines concerned with cancer therapy and diagnosis. It supports a computerized tumor registry supported by the epidemiology unit which will be an important resource for the rehabilitation effort. It recognizes a major mission in outreach and is providing educational service through a radiation therapy dosimetry program, tumor clinics, and a system of telephonic consultation.
<table>
<thead>
<tr>
<th>NAME</th>
<th>ACADEMIC APPOINTMENT</th>
<th>CANCER RESEARCH AND TRAINING APPOINTMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>DURANT, John R., M.D.</td>
<td>Professor</td>
<td>Director</td>
</tr>
<tr>
<td>FLOWERS, Charles E., M.D.</td>
<td>Professor</td>
<td>Senior Scientist</td>
</tr>
<tr>
<td>CORE, Hazel M., M.D.</td>
<td>Professor</td>
<td>Senior Scientist</td>
</tr>
<tr>
<td>FULLER, Harold M., D.D.S.</td>
<td>Professor</td>
<td>Senior Scientist</td>
</tr>
<tr>
<td>ALFORD, Charles A., M.D.</td>
<td>Professor</td>
<td>Senior Scientist</td>
</tr>
<tr>
<td>HAMMACK, William J., M.D.</td>
<td>Professor</td>
<td>Senior Scientist</td>
</tr>
<tr>
<td>SACHS, George, M.D.</td>
<td>Professor</td>
<td>Senior Scientist</td>
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<tr>
<td>DOWLING, Edmund, M.D.</td>
<td>Professor</td>
<td>Senior Scientist</td>
</tr>
<tr>
<td>COOPER, Max D., M.D.</td>
<td>Professor</td>
<td>Senior Scientist</td>
</tr>
<tr>
<td>WEST, Seymour S., Ph.D.</td>
<td>Professor</td>
<td>Senior Scientist</td>
</tr>
<tr>
<td>PEACOCK, Peter B., M.D.</td>
<td>Professor</td>
<td>Senior Scientist</td>
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<tr>
<td>YIELDING, K. Lemone, M.D.</td>
<td>Professor</td>
<td>Senior Scientist</td>
</tr>
<tr>
<td>ROTH, Robert E., M.D.</td>
<td>Professor</td>
<td>Senior Scientist</td>
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<tr>
<td>CASTLE, John G., Ph.D.</td>
<td>Professor</td>
<td>Senior Scientist</td>
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<td>BENNETT, J. Claude, M.D.</td>
<td>Professor</td>
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<td>CURTISS, Roy, Ph.D.</td>
<td>Professor</td>
<td>Senior Scientist</td>
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<tr>
<td>FINLEY, Wayne H., M.D.</td>
<td>Professor</td>
<td>Senior Scientist</td>
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<tr>
<td>SHIOTA, Tetsuo, Ph.D.</td>
<td>Professor</td>
<td>Senior Scientist</td>
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<tr>
<td>HIRAMOTO, Raymond, Ph.D.</td>
<td>Professor</td>
<td>Senior Scientist</td>
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<tr>
<td>MC CANN, William P., M.D.</td>
<td>Professor</td>
<td>Senior Scientist</td>
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<tr>
<td>MADDOX, William A., M.D.</td>
<td>Clinical Professor</td>
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<td>MYERS, George H., M.D.</td>
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<td>Senior Scientist</td>
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<td>FROMMETER, Walter B., Jr., M.D.</td>
<td>Professor</td>
<td>Senior Scientist</td>
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<tr>
<td>TAUZE, W. N., M.D.</td>
<td>Professor</td>
<td>Senior Scientist</td>
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<tr>
<td>MURAD, Tariq, M.D.</td>
<td>Professor</td>
<td>Senior Scientist</td>
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<tr>
<td>WITTEN, David, M.D.</td>
<td>Professor</td>
<td>Senior Scientist</td>
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<tr>
<td>GAMS, Richard A., M.D.</td>
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<td>Associate Scientist</td>
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<tr>
<td>SHINGLETON, Hugh M., M.D.</td>
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<td>YOUNGER, J. Benjamin, M.D.</td>
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<td>CASTLEBERRY, Dwight J., D.M.D.</td>
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<td>BUGG, Charles E., Ph.D.</td>
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<td>MORENO, Hernan, M.D.</td>
<td>Associate Professor</td>
<td>Senior Scientist</td>
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<td>PRETLOW, Thomas G., II, M.D.</td>
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<td>Senior Scientist</td>
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<td>ROSENBLUM, William M., Ph.D.</td>
<td>Associate Professor</td>
<td>Senior Scientist</td>
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<td>BRASCHO, Donn J., M.D.</td>
<td>Associate Professor</td>
<td>Senior Scientist</td>
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<td>PEARSON, Colin, Ph.D.</td>
<td>Associate Professor</td>
<td>Senior Scientist</td>
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<tr>
<td>COMBS, C. Glenn, M.D.</td>
<td>Associate Professor</td>
<td>Senior Scientist</td>
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<tr>
<td>BOOTS, Larry, Ph.D.</td>
<td>Assistant Professor</td>
<td>Associate Scientist</td>
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<tr>
<td>OMURA, George A., M.D.</td>
<td>Assistant Professor</td>
<td>Associate Scientist</td>
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<tr>
<td>LAWTON, Alexander, M.D.</td>
<td>Assistant Professor</td>
<td>Associate Scientist</td>
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<tr>
<td>JOHNSTON, Richard B., M.D.</td>
<td>Assistant Professor</td>
<td>Associate Scientist</td>
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<tr>
<td>KEELE, Bernard B., Ph.D.</td>
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<td>Associate Scientist</td>
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<td>GAUDIN, David, Ph.D.</td>
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<td>GLECKSON, Jerry D., Ph.D.</td>
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<tr>
<td>DAVIS, Maxie L., Ph.D.</td>
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<td>Associate Scientist</td>
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<tr>
<td>SALTER, Merle M., N.D.</td>
<td>Assistant Professor</td>
<td>Associate Scientist</td>
</tr>
<tr>
<td>BLACKBURN, Benjamin, M.S.</td>
<td>Assistant Professor</td>
<td>Associate Scientist</td>
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<tr>
<td>LACEY, James, Ph.D.</td>
<td>Assistant Professor</td>
<td>Associate Scientist</td>
</tr>
<tr>
<td>LEHRMAN, Herman F., D.D.S.</td>
<td>Instructor</td>
<td>Associate Scientist</td>
</tr>
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</table>
PUBLICATION LIST

CORE UNIT 1 - GENERAL, ADMINISTRATIVE, AND CORE LABORATORIES

PRECLINICAL PUBLICATIONS

Manuscripts - Submitted
2. GLICKSON, J.D., GAMS, R.A., Kim, K.H., and Bordenca, M.M., "In Vitro Localization in 67-Gallium in L1210 Leukemia Cells" (Cancer Res.).

Manuscripts - Published

Manuscripts - In Press
11. DURANT, J.R., "What to Say About Prognosis When Treatment Has Failed in Advanced Cancer".
12. DURANT, J.R. and Lessner, H.E., "Development of 4-Drug BCNU Combination Chemotherapy Regimens" (Cancer).
13. DURANT, J.R., "Place of Chemotherapy in General Practice", (Consultant).

Manuscripts - Submitted
15. OMURA, G.A. and Roberts, G.A., "Combination Therapy of Solid Tumors Using 1,3-Bis(2-Chloroethyl)-1-Nitrosourea (BCNU), Vincristine, Methotrexate, and Fluorouracil" (Cancer).
16. OMURA, G.A., "Bleomycin in Advanced Cancer: Possible Hematologic Toxicity and One Unmaintained Remission" (Cancer).


Manuscripts - In Preparation


21. OMURA, G.A., "Adenine/Hypoxanthine Phosphoribosyl Transferase Ratios in Peripheral Blood Cells of Patients with Acute Myelogenous Leukemia: A Possible Indicator of Response to Ara-C and 6-Thioguanine".

Book Chapters - Published


Book Chapters - In Press


UNIT 2 - GYNECOLOGIC ONCOLOGY

CLINICAL PUBLICATIONS

Manuscripts - Published


Manuscripts - In Preparation

26. SHINGLETON, H.M. and Wilbanks, C.D., "Fine Structure of Human Cervical Intraepithelial Neoplasia In Vivo and In Vitro".

Abstracts - Published


UNIT 4-B - DENTAL MAXILLOFACIAL

CLINICAL PUBLICATIONS

Manuscripts - Published


Manuscripts - In Press

32. SOOUDI, Iraj, "Intraoral Prosthetic Rehabilitation in Patients with an Extensive Facial Reconstruction" (J. Pros. Dent.)

UNIT 5-A - PEDIATRICS

CLINICAL PUBLICATIONS


UNIT 5-B - PEDIATRICS

PRECLINICAL PUBLICATIONS

Abstracts - Published


CLINICAL PUBLICATIONS

Manuscripts - Submitted


Abstracts - Published

UNIT 6-B - MEDICINE

PRECLINICAL PUBLICATIONS

Manuscripts - Published


Manuscripts - In Press


46. SACHS, G., SPENNSY, J.G., SHOEMAKER, R.L., and Goodall, M.C., "Conductance Pathways in Epithelial Tissues" (J. Eye Res.).

Manuscripts - In Preparation

47. SACHS, G., Sung, C.P., Burns, L., and Wiebelhaus, V.D., "Adenylyl Cyclase in Rabbit Gastric Mucosa" (Amer. J. Physiol.).

48. SPENNEY, J.G., SHOEMAKER, R.L., and SACHS, G., "Conductance Pathway in Surface Epithelial Cells and Tubules of Gastric Mucosa" (J. Gen. Physiol.).

49. SPENNEY, J.G. and SACHS, G., "Zonal Preparation of Purified Gastric Membranes" (Biochim. Biophys. Acta).

50. SPENNEY, J.G., SHOEMAKER, R.L., and SACHS, G., "A Leak Pathway in Gastric Antrum: Physiological Significance" (Amer. J. Physiol.).
UNIT 7 - PATHOLOGY

PRECLINICAL PUBLICATIONS

Manuscripts - Published


Manuscripts - In Press


Manuscripts - Submitted

55. PRETLOW, T. G., Williams, E. E., DAVIS, M. L., and Zettergren, J. G., "Separation of Spleen Colony Forming Units (CFU-S) From Mouse Bone Marrow Cells Using Velocity Sedimentation in an Isokinetic Gradient of Ficoll in Tissue Culture Medium".

56. PRETLOW, T. G. and Williams, E. E., "Separation of Hepatocytes from Suspensions of Mouse Liver Cells Using Programmed Gradient Sedimentation in Gradients of Ficoll in Tissue Culture Medium".

57. PRETLOW, T.G. and Zettergren, J. G., "Separation of Lymphocytes from Human and Mouse Disaggregated Solid Tumors Using an Isokinetic Gradient of Ficoll and Tissue Culture Medium".

Abstracts - Published


Abstracts - In Press

60. PRETLOW, T. G., "Purification of Lymphocytes from Disaggregated Human and Experimental Solid Tumors" (Fed. Proc.).

61. PRETLOW, T. G. and DAVIS, M. L., "Separation of Spleen Colony Forming Units (CFU-S) from Mouse Bone Marrow Cells in an Isokinetic Density Gradient" (Amer. J. Path.).

62. PRETLOW, T. G., and Zettergren, J. G., "Separation of Hepatocytes from
UNIT 8-B - IMMUNOLOGY

PRECLINICAL PUBLICATIONS

Manuscripts - In Press

63. COOPER, M.D. and KINCADE, P. W., "Immunoglobulin A: Site and Sequence of Expression in Developing Chicks" (Science).

Manuscripts - Submitted


Abstracts - Published


CLINICAL PUBLICATIONS

Manuscripts - Published


Manuscripts - In Press


Abstracts - Published


UNIT 8-C - IMMUNOLOGY

PRECLINICAL PUBLICATIONS

Manuscripts - Published


Abstracts - Published


Other - Presentation

78. KLEIN, W. J., "Can Modification of Donor Rather Than Recipient Cells Mediate Immunosuppression?" Presented at the Fifth International Congress of Nephrology Meeting, Mexico City, October, 1972.

UNIT 12 - ENGINEERING BIOPHYSICS

PRECLINICAL PUBLICATIONS

Manuscripts - In Preparation

79. WEST, S. E. and GOLDEN, J.F., "Acridine Orange Fluorescence Metachromasy as a Means for Instrumental Detection of Abnormal Cells in Mixed Populations".

UNIT 13 - MOLECULAR BIOLOGY

PRECLINICAL PUBLICATIONS

Manuscripts - Published


Manuscripts - In Press

81. GAUDIN, D., GREGG, R.S., and YIELDING, K.L., "Inhibition of DNA Repair by Cocarcinogens" (Biochem. Biophys. Res. Comm.).

82. GAUDIN, D., Gregg, R. S. and YIELDING, K. L., "Inhibition of DNA Repair Replication by DNA Binding Drugs Which Sensitize Cells to Alkylating Agents and X-rays" (Proc. Soc. Exp. Biol. Med.).
Manuscripts - In Preparation

83. GAUDIN, D. and YIELDING, K. L., "Inhibition of DNA Repair Replication by Steroids".

Book Chapters - In Press


85. YIELDING, K. L., "The Role of DNA Repair in Cancer Biology", in International Symposium on Radiation Therapy.

UNIT 14 - RADIATION THERAPY

PRECLINICAL PUBLICATIONS

Manuscripts - In Preparation


88. DAVIS, M.L. and Caton, J.E., "Age Related Changes in the Serum Alpha-2 Macroglobulin Levels in Mice".

89. DAVIS, M.L., McDonald, T. P., and Caton, J. E., "Radiation Induced Changes in 19 S Alpha-2 Macroglobulin Fraction of Mouse Sera".

90. DAVIS, M.L. and Congdon, C. D., "An Assay for Injected Lymphocyte Localization in the Spleens of Irradiated Mice".

91. DAVIS, M. L. and Congdon, C.C., "Factors Influencing the Localization of Injected Lymphocytes in the Lymphatic Organ Structures of Irradiated Mice".

CLINICAL PUBLICATIONS

Manuscripts - Published


Charles A. Alford, Jr., M.D.
Born: December 8, 1928, Birmingham, Alabama
Marital Status: Married, two children
S.S. No.: 424-32-6594

1973-
Meyer Professor of Pediatric Research, Professor of Microbiology and Senior Scientist, Cancer Research and Training Program

1972-1973
Meyer Professor of Pediatric Research, Professor of Microbiology and Associate Professor of Clinical Pathology, University of Alabama in Birmingham

1969-1972
Meyer Professor of Pediatric Research, Associate Professor of Microbiology and Clinical Pathology, University of Alabama in Birmingham

1967-1969
Meyer Professor of Pediatric Research, University of Alabama in Birmingham

1966-1967
Associate Professor of Pediatrics, University of Alabama in Birmingham

1965-1966
Assistant Professor of Pediatrics, University of Alabama in Birmingham

1962-1965
Postdoctoral fellowship in virology USPHS (National Institute of Allergy and Infectious Diseases, special fellow, NIH), Department of Tropical Public Health, Harvard School of Public Health; Research Fellow in Medicine, Children's Hospital Medical Center, Boston, Massachusetts. Postdoctoral studies conducted on the role of rubella virus in congenital infections.

1960-1962
Instructor in Pediatrics, University of Alabama in Birmingham. Research Interest: Renal Physiology, Fluid and Electrolyte Problems and General Metabolic Disorders.

1958-1960
Pediatrician-in-Chief, Station Naval Hospital, Saeebo, Japan (Military requirements fulfilled)

1957-1958
Chief Resident, Pediatrics, University Hospital, University of Alabama in Birmingham

1955-1957
Straight Pediatric Internship and Junior Pediatric Resident, University Hospital, University of Alabama in Birmingham

1951-1955
Medical College of Alabama, Degree earned: M.D.

1947-1951
University of Alabama, Degree earned: B.S.
Majors: Biology and Physics
Membership:

Society for Pediatric Research
Southern Society for Pediatric Research
American Academy of Pediatrics
American Federation for Clinical Research
The New York Academy of Sciences
American Society of Microbiology
American Association for the Advancement of Science
American Public Health Association
The Infectious Disease Society of America
Sigma XI
Special consultant to Center for Disease Control (CDC)
Perinatal Biology and Infant Mortality Research and Training Committee of the National Institute of Child Health and Human Development, National Institutes of Health (July 1, 1971-June 30, 1975)

Pan American Medical Association, Inc. (PAMA), 1972
The American Association of Immunologists, 1972
American Venereal Disease Association
Teratology Society
Original Articles:


INSTITUTION:
Name: Duke University Comprehensive Cancer Center
Address: Durham, North Carolina

Is the institution affiliated with a University, Hospital, or other organization? Yes If so, please specify: Duke University

Brief description of purpose of institution, including whether clinical or nonclinical: Basic and Clinical (Comprehensive Cancer Center)

If clinical, how many beds? 10% Member of NCI cooperative group? Yes

Research (list main areas): Virology, Cell Biology, Immunology

BUDGET:
Approximate annual budget: $3.7 million annually Research Budget
$850,000 Core Grant

Please specify sources and amount of support (e.g. Federal, State, private, etc.):
Federal $3,332,251 Private $367,740 (Research Budget)
$850,000 Core Grant - Federal

PERSONNEL AND PUBLICATIONS: see attached sheet.

Date of Application: 5/1/73 Signed William W. Stratton
Title: Director

Application should be submitted to Dr. Harold P. Rusch, President, AACI, McArthur Laboratory for Cancer Research, University of Wisconsin, Madison, Wisconsin 53706.
PERSONNEL:

Names and titles of senior personnel, including brief curricula vitae.
List on separate pages. (See attached)

Total number of employees, grouped by categories (e.g., professional, technicians, office, etc.):

Professional - 94; Technicians - 94; Office - 75

Do you have a training program?  Yes

If so, what level of training? Basic Cancer Training and Clinical Cancer Training

For how many people?  approximately 57 per year

PUBLICATIONS:

Please list relevant publications during the past 3 years.

Publications are listed with Curriculum Vitae.
EDUCATION (Mark with deficiencies briefly, but include post-doctoral)

<table>
<thead>
<tr>
<th>INSTITUTION AND LOCATION</th>
<th>DEGREE</th>
<th>YEAR CONFERRED</th>
<th>SCIENTIFIC FIELD</th>
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<tbody>
<tr>
<td>University of North Carolina, Chapel Hill, North Carolina</td>
<td>A. B.</td>
<td>1939</td>
<td>OP3 10.4B</td>
</tr>
<tr>
<td>Atlantic Christian College, Wilson, N. C.</td>
<td>M. D.</td>
<td>1943</td>
<td>1 of 7</td>
</tr>
<tr>
<td>Wake Forest College, Winston-Salem, N. C.</td>
<td></td>
<td></td>
<td>Medicine</td>
</tr>
</tbody>
</table>

HONORS

A. B., Summa cum Laude, Atlantic Christian College, 1939

MAJOR RESEARCH INTEREST

Cancer

ROLE IN PROPOSED PROJECT

Director

RESEARCH SUPPORT (See Instructions)

Clinical Cancer Research Center Grant - Grant No. CA 11265

Clinical Cancer Training Grant - Grant No. 5 T12 CA08053 - $103,677

Central Oncology Group Grant - Grant No. CA 12290-02 - $29,420

RESEARCH AND/OR PROFESSIONAL EXPERIENCE (Starting with present position, list training and experience relevant to area of project. List all or most representative publications. On not exceed 3 pages for each individual)

Professor of Surgery, Duke University Medical Center

Attending Surgeon, Duke Hospital, Watts Hospital and Lincoln Hospital, Durham, N. C.

Consultant in Surgery, Veterans Administration Hospital, Durham, N. C.

Chief, General Surgery Division, Duke University Medical Center

Consultant General Surgery, Veterans Administration Hospital, Greer, N. C.

Present Cancer Activities

Director - Duke University Medical Center Comprehensive Cancer Program

Director of Clinical Cancer Training Program, Duke University Medical Center

Member - Central Oncology Group (20 university centers performing solid tumor chemotherapy)

Chairman, Subcommittee on Diagnosis and Treatment, National Advisory Cancer Council of the National Institutes of Health

Member - Commission on Cancer, American College of Surgeons

State Liaison Chairman - American College of Surgeons, Commission on Cancer

Member - Board of Directors N. C. Division, American Cancer Society

Member - Cancer Committee, The Association for the North Carolina Regional Medical Program

Member Cooperative Adjuvant Chemotherapy Programs Breast, Colon and Stomach

1-71
Publications


EDUCATION

<table>
<thead>
<tr>
<th>INSTITUTION AND LOCATION</th>
<th>DEGREE</th>
<th>YEAR</th>
<th>FIELD</th>
</tr>
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<tr>
<td>University of Sydney, Australia</td>
<td>B.Sc.</td>
<td>1947</td>
<td>Biochemistry</td>
</tr>
<tr>
<td>University of Sydney, Australia</td>
<td>M.Sc.</td>
<td>1948</td>
<td>Biochemistry</td>
</tr>
<tr>
<td>University of Oxford, England</td>
<td>D.Phil.</td>
<td>1952</td>
<td>Virology</td>
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</tbody>
</table>

HONORS:
- ACS Committee on Personnel 1972
- Editor, Virology 1965
- Associate Editor, Journal of Biological Chemistry 1971
- Chairman, First Gordon Conference on Animal Cells and Viruses 1967

MAJOR RESEARCH INTEREST
- Virology

RESOARCH SUPPORT (Give indications that research was supported by other agencies or foundations."

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<tr>
<th>SUPPORT</th>
<th>AGENCY</th>
<th>PROJECT DESCRIPTION</th>
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<th>START DATE</th>
<th>END DATE</th>
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<tr>
<td>AT(40-1)-3857</td>
<td>AEC</td>
<td>The Molecular Biology of Reovirus Multiplication</td>
<td>$47,000</td>
<td>10/1/71</td>
<td>9/30/73</td>
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<td>RR 06148</td>
<td>HSAA</td>
<td>An Interdisciplinary Plan for the Study of Biological Membranes</td>
<td>$237,082</td>
<td>6/1/69-5/31/72</td>
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<td>GB8077</td>
<td>NSF</td>
<td>Microbiology</td>
<td>$36,000</td>
<td>9/1/68-8/31/69</td>
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<td>AI08909</td>
<td>NIH</td>
<td>Macromolecular Synthesis in Virus Infected Cells</td>
<td>$86,363</td>
<td>9/1/69-8/31/70</td>
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RESEARCH AND/OR PROFESSIONAL EXPERIENCE
- 1968 to Present – Professor and Chairman, Department of Microbiology and Immunology, Duke University Medical Center, Durham, N. C.
- 1965-68 – Siegfried Ullman Professor of Cell Biology, Albert Einstein College of Medicine
- 1962-65 – Associate Professor, Albert Einstein College of Medicine
- 1956-62 – Fellow, Department of Microbiology, Australian National University, Canberra
- 1959-60 – USPHS Post-Doctoral Fellow, Laboratory of Cell Biology, NIAID, NIH, Bethesda
- 1953-56 – Research Fellow, Australian National University, Canberra
- 1953 – Research Fellow, Department of Cytophysiology, University of Copenhagen


Pharmacology B Study Section, 1970-

<table>
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<th>RESEARCH INTEREST</th>
<th>ROLE IN PROPOSED PROJECT</th>
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<td>Metabolism of leukemic cells</td>
<td>Research and Teaching</td>
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<th>INVESTIGATOR</th>
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<th>DESCRIPTION</th>
<th>SUPPORT</th>
<th>PROJECT PERIOD</th>
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<td>LIROCA03890</td>
<td>NIH Mechanism of Drug Inhibition of Human Leukemic Cells</td>
<td>$46,951</td>
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<tr>
<td>CA 11265</td>
<td>NIH General Clinical Cancer Center Grant</td>
<td>$264,625</td>
<td>11/1/71-10/30/72</td>
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<td>(Dr. W. C. Amoyal, Prin. Invest.)</td>
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<tr>
<td>V: Leukemic Cell Research</td>
<td>$30,966</td>
<td>7/1/71 - 6/30/75</td>
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</table>

(These grants support the basic research of Drs. Laszlo, Bari, Elford, Miller and Huang)

RESEARCH AND/OR PROFESSIONAL EXPERIENCE (Beginning with present position, biographical and experience relevant to area of project or most representative publications. Do not exceed 3 pages for each individual.)

1970- Professor of Medicine, Duke University Medical Center
1968- Chief of Medical Service, Durham VA Hospital
1965-70 Assoc. Professor Medicine, Duke University Medical Center
1963-68 Chief, Hematology Section, Durham VA Hospital
1963-65 Asst. Professor of Medicine, Duke University Medical Center
1960-63 Associate in Medicine, Duke University Medical Center

<table>
<thead>
<tr>
<th>Institution</th>
<th>Degree</th>
<th>Year Conferred</th>
<th>Scientific Code</th>
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</thead>
<tbody>
<tr>
<td>Gonzaga University, Spokane, Wash.</td>
<td>B.S.</td>
<td>1947</td>
<td>OP3.10.4B</td>
</tr>
<tr>
<td>St. Louis University School of Medicine, St. Louis, Missouri</td>
<td>M.D.</td>
<td>1951</td>
<td></td>
</tr>
</tbody>
</table>

**HONORS**

**MAJOR RESEARCH INTEREST**

Experimental Radiation Therapy of Cancer with emphasis of enhancement of radiation effects.

**ROLE IN PROPOSED PROJECT**

**RESEARCH SUPPORT (See Institutions)**

Veterans Administration - VA Project 18-68

Title: Radiation of Cancer Cells in Vivo and In Culture

Principal Investigator: Dr. John Evans

Amount of Support: $34,185

**RESEARCH AND/OR PROFESSIONAL EXPERIENCE (Starting with present position, list training and experience relevant to area of project. List all or most representative publications. (Do not exceed 3 pages for each individual.)**

Chief, Division of Therapeutic Radiology, Duke University Medical Center, April 1960 - present.

Program Director for Radiation, National Cancer Institute, National Institutes of Health, September 1, 1970 - September 3, 1971.

Director, Division of Radiation Therapy, University of Louisville School of Medicine, January 1957 - April 1960.

National Cancer Inst. Trainee

Resident, Therapeutic Radiology, Penrose Cancer Hospital, Colorado Springs.

**Publications**


### INSTITUTION AND LOCATION

<table>
<thead>
<tr>
<th>Institution and Location</th>
<th>Degree</th>
<th>Year Conferred</th>
<th>Specialty Field</th>
</tr>
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<tbody>
<tr>
<td>Emory University</td>
<td>B.S.</td>
<td>1944</td>
<td>Medicine</td>
</tr>
<tr>
<td>Emory University School of Medicine</td>
<td>M.D.</td>
<td>1947</td>
<td>Medicine</td>
</tr>
<tr>
<td>Grady Memorial Hospital, Atlanta, Ga. (Internship)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Grady Memorial Hospital, Atlanta, Ga. (Residency)</td>
<td></td>
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</tbody>
</table>

### MAJOR RESEARCH INTEREST

Community medicine

### ROLE IN PROPOSED PROJECT

Community Program Director

### RESEARCH SUPPORT (See instructions)

Institutional Support

### RESEARCH AND/OR PROFESSIONAL EXPERIENCE

Starting with present position, list training and experience relevant to area of project. List or most representative publications. Do not exceed 3 pages for each individual.

Professor and Chairman, Department of Community Health Sciences, Duke University School of Medicine, 1966 to date

Professor (Medicine) 1951 to date

Associate Professor (Medicine), 1952-1960

Assistant Professor (Medicine), 1958

Associate (Medicine), 1954-57

Instructor (Medicine), 1953-54.


EDUCATION (Begin with bachelor's degree training and include postdoctoral)

<table>
<thead>
<tr>
<th>INSTITUTION AND LOCATION</th>
<th>DEGREE</th>
<th>YEAR CONFERRED</th>
<th>FIELD</th>
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<tbody>
<tr>
<td>DePauw University</td>
<td>B.A.</td>
<td>1933</td>
<td>Arts &amp; Science</td>
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<tr>
<td>Cornell University</td>
<td>Ph.D.</td>
<td>1937</td>
<td>Anatomy</td>
</tr>
<tr>
<td>Duke University</td>
<td>M.D.</td>
<td>1940</td>
<td>Medicine</td>
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</tbody>
</table>

HONORS

Secretary, American Society of Hematology, 1962-65.
President, American Society of Hematology, 1957.

MAJOR RESEARCH INTEREST: \[\text{Internal medicine, hematology, cancer chemotherapy, purine metabolism}\]

ROLE IN PROPOSED PROJECT: Investigator

RESEARCH SUPPORT (See instructions)

Research training in cancer chemotherapy and hematology 1957 to date,
NIH, U.S. Public Health Service Grant #CA05042-14.

RESEARCH AND/OR PROFESSIONAL EXPERIENCE (Starting with present position, list training and experience relevant to area of project. List all or most representative publications. (Do not exceed 3 pages for each individual.)

Department of Medicine, Duke University, School of Medicine 1945 to present.
Instructor in Medicine, Research Associate, Simpson Memorial Institute, University of Michigan, 1943 to 1945.
Intern, Assistant Resident and Resident in Medicine, University Hospital, Ann Arbor, Michigan 1940-1943.


Research and Teaching

| EDUCATION *Excludes* postbaccalaureate training and *Excludes* postdoctoral *Training* |
|-----------------|-----------------|-----------------|-----------------|-----------------|

<table>
<thead>
<tr>
<th>ORGANIZATION AND LOCATION</th>
<th>DEGREE</th>
<th>CONFERRED</th>
<th>DISCIPLINE</th>
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<tbody>
<tr>
<td>Princeton University</td>
<td>A.B.</td>
<td>1946</td>
<td>Chemistry</td>
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<tr>
<td>Columbia University</td>
<td>M.D.</td>
<td>1948</td>
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*HONORS*
- Fellow, American College of Radiology
- Fellow, American College of Chest Physicians
- Honors Award, American College of Angiology
- Angiology Research Award-Honors Achievement Award
- Founders Award, North Carolina Heart Association

**MAJOR RESEARCH OR PROFESSIONAL INTEREST**

- Heart

**LIST RELEVANT PUBLICATIONS**

See attached.

**PROFESSIONAL AND/OR RESEARCH EXPERIENCE (But with present position and for other positions and affiliations related to present position)**

- Instructor in Radiology, University of Minnesota, 1954-56
- Assistant Professor, University of Minnesota, 1956-69
- Associate Professor, University of Minnesota, 1959-61
- Professor and Chairman, Medical College of Virginia, 1961-65
- Professor and Chairman, Duke University Medical Center, 1965-
Publications:


James B. Duke Professor of Immunology

1968 to Present - James B. Duke Professor of Immunology and Experimental Surgery, Duke University Medical Center, Durham, N. C.

1963 to Present - Chief, Division of Immunology, Department of Microbiology and Immunology, Duke University Medical Center, Durham, N. C.

1962 to Present - Professor of Immunology and Professor of Experimental Surgery, Duke University Medical Center, Durham, N. C.


March 1, 1973

Dr. Harold P. Rusch
President, AACI
Director, University of Wisconsin
   Clinical Cancer Center
701C Hospital
1300 University Avenue
Madison, Wisconsin 53706

Dear Dr. Rusch:

Enclosed is a completed application form for membership of the Institute for Medical Research in the Association of American Cancer Institutes. This institute would like very much to become affiliated.

Sincerely yours,

Lewis L. Coriell, M.D.,Ph.D.
Director

LLC: dmm
cc: Dr. B.A. Mirand
    Dr. T.R. Talbot, Jr.
Enclosure
Institution: Institute for Medical Research

Address: Copewood & Davis Streets
Camden, New Jersey 08103

Is the institution affiliated with a University, Hospital, or other organization? X If so, please specify: College of Medicine & Dentistry and University of Pennsylvania School of Medicine.

Brief description of purpose of institution, including whether clinical or nonclinical: See Attachment I.

If clinical, how many beds? Member of NCI cooperative group?

Research (list main areas): Cell Biology, Genetics & Cytogenetics, Cytological Biophysics, Microbiology, Biophysics, Virology, Immunology - all as related to cancer.

Budget:
Approximate annual budget: $1,520,632.00 (1972)

Please specify sources and amount of support (e.g. Federal, State, private, etc.): NIH approximately $1,142,477. $378,160 from United Funds, State of New Jersey and Research Professorship American Cancer Society.

Personnel and publications: see attached sheet.

Date of Application: March 1, 1973 Signed

Title: Director

Application should be submitted to Dr. Harold P. Rusch, President, AACI, Director, University of Wisconsin Clinical Cancer Center, 701C Hospital, 1300 University Avenue, Madison, Wisconsin 53706.
**PERSONNEL:**

Names and titles of senior personnel, including brief curricula vitae. List on separate pages. See Attachment II.

Total number of employees, grouped by categories (e.g., professional, technicians, office, etc.):

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional</td>
<td>20</td>
</tr>
<tr>
<td>Technicians</td>
<td>34</td>
</tr>
<tr>
<td>Office</td>
<td>14</td>
</tr>
<tr>
<td>Animal Caretakers</td>
<td>11</td>
</tr>
<tr>
<td>Maintenance</td>
<td>3</td>
</tr>
<tr>
<td>Instrument Maker</td>
<td>1</td>
</tr>
<tr>
<td>Photographer</td>
<td>2</td>
</tr>
<tr>
<td>Librarian</td>
<td>2</td>
</tr>
</tbody>
</table>

87 full time employees as listed below. 7 part time employees.

Do you have a training program? See Attachment III

If so, what level of training? "

For how many people? "

**PUBLICATIONS:**

Please list relevant publications during the past 3 years.

See Attachment IV for publications 1969-1971. More recent publications are attached to the curriculum vitae of each investigator.
III. INSTITUTE FOR MEDICAL RESEARCH

Two major diseases, poliomyelitis and cancer, have engaged the interest of the staff of the Institute for Medical Research. The battle against polio was well on its way when the Institute was conceived in 1952 following the demonstration in the first controlled mass field trials that paralytic polio can be controlled with gamma-globulin. Subsequently, the staff helped evaluate the Salk vaccine field trials, and devised effective procedures for vaccine production and for community wide immunization programs.

Studies on the viral etiology of cancer began with the completion of the first laboratory in 1966. The laboratory was designed to provide optimal conditions for growth of cell cultures, on the premise that the cell culture techniques that helped solve the polio problem and were rapidly leading to the control of other viral diseases would also play an important role in cancer research. Many improved cell culture techniques developed here have been widely adopted including laminar air flow transfer rooms and hoods, standardized media, standardized cell cultures stored in liquid nitrogen, antibiotic-free media, and cryogenic storage of skin grafts.

The etiology of cancer continues to be the major concern of each department: Biochemistry, Cell Biology, Cytogenetics, Cytological Biophysics, Microbiology and Virology. The common interest in cancer provides a bridge for free exchange of ideas, criticism and cooperation between disciplines and the administrative structure is designed to promote this cooperative effort.

Each department has made important contributions in its own field and has sponsored special meetings and conferences for exchange of ideas with other investigators. The present symposium on mammary neoplasia is stimulated by investigations in the Cytological Biophysics Department and their numerous collaborators in the Institute and from other institutions.

The Institute is independent, non-profit and governed by a Board of Trustees from the community and selected faculty members of the University of Pennsylvania.

Three expansions of the physical plant have been financed in part with matching funds from NIH. The last construction in 1967 increased the floor space 5-fold over the original laboratory to 42,000 square feet which currently accommodates a staff of 15 scientists and supportive personnel.

Operating expenses for the last fiscal year were $1.45 million, derived from contracts and grants in aid from the National Cancer Institute, the National Center for Health Services Research and Development, the State of New Jersey and contributions from United Funds, private foundations, local groups, auxiliaries, industry and individuals.
<table>
<thead>
<tr>
<th>DEPARTMENT</th>
<th>NAME</th>
<th>DEGREE</th>
<th>ACADEMIC RANK</th>
<th>DISCIPLINE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cell Biology</td>
<td>Coriell, L.L.</td>
<td>M.D., Ph.D.</td>
<td>Member</td>
<td>Director, Virology, Epidemiology</td>
</tr>
<tr>
<td></td>
<td>Greene, A.E.</td>
<td>D.Sc.</td>
<td>Assoc. Member</td>
<td>Cell Biology, Virology</td>
</tr>
<tr>
<td>Cytogenetics</td>
<td>Nichols, W.W.</td>
<td>M.D., Ph.D.</td>
<td>Member</td>
<td>Cytogenetics, Mutagenesis, Hematology</td>
</tr>
<tr>
<td></td>
<td>Miller, R.</td>
<td>Ph.D.</td>
<td>Associate</td>
<td>Cytogenetics, Mutagenesis, Reproductive Physiology</td>
</tr>
<tr>
<td></td>
<td>Toji, L.</td>
<td>Ph.D.</td>
<td>Associate</td>
<td>Mutagenesis, Nucleic Acid Enzymology</td>
</tr>
<tr>
<td>Biochemistry</td>
<td>Charney, J.</td>
<td>Sc.M.</td>
<td>Assoc. Member</td>
<td>Biochemistry, Immunology, Virology</td>
</tr>
<tr>
<td>Microbiology</td>
<td>McGarrity, G.J.</td>
<td>Ph.D.</td>
<td>Assoc. Member</td>
<td>Microbiology</td>
</tr>
<tr>
<td>Cytological Biophysics</td>
<td>Moore, D.H.</td>
<td>Ph.D.</td>
<td>Member</td>
<td>Biophysics, Electrophoresis, Electron Microscopy, Virology</td>
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<tr>
<td></td>
<td>Kramarsky, B.</td>
<td>D.Sc.</td>
<td>Assoc. Member</td>
<td>Microbiology, Electron Microscopy</td>
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<tr>
<td></td>
<td>Chen, P.</td>
<td>Ph.D.</td>
<td>Associate</td>
<td>Cytology, Genetics, Virology, Immunology</td>
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<tr>
<td></td>
<td>Sheffield, J.</td>
<td>Ph.D.</td>
<td>Associate</td>
<td>Developmental Biology, Cell and Viral Membranes</td>
</tr>
<tr>
<td>Cell Culture Section</td>
<td>Lasfargues, E.</td>
<td>V.M.D.</td>
<td>Assoc. Member</td>
<td>Cell Physiology</td>
</tr>
<tr>
<td>Molecular Biology Section</td>
<td>Dion, A.</td>
<td>Ph.D.</td>
<td>Assoc. Member</td>
<td>Molecular Biology, Biochemistry</td>
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<tr>
<td>Electron Microscopy Section</td>
<td>Vaidya, A.</td>
<td>Ph.D.</td>
<td>Associate</td>
<td>Molecular Biology, Electron Microscopy</td>
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<td></td>
<td>Sarkar, N.</td>
<td>Ph.D.</td>
<td>Assoc. Member</td>
<td>Biophysics, Virology</td>
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</tbody>
</table>

Immunology

Vacancy
Training Programs

Summer Fellowships for 10-20 undergraduate and graduate college students -- to advance their knowledge and laboratory skills and to help them financially.

Postdoctoral training for gifted scientists -- to accelerate the progress of medical research at other institutions. At any given time, there usually are several such scientists here -- and they stay from 3 months to 3 years. This program includes Exchange Visitors.

Frequent medical seminars to provide ongoing education for local physicians, health officers and biomedical scientists.

Lectures for high school students.

Formal postdoctoral courses for biomedical scientists and physicians throughout the area. These courses run a full academic year.

Institute medical doctors serve without fee on the staffs of local hospitals and the faculties of local colleges and universities and provide frequent lectures for the staffs of those institutions.
1969-1971
LIST OF PUBLICATIONS


3. ATHREYA, B. H. Infant feeding in India. A programmed report. (in Tamil)


BRENNAN, J.H. BURROWS, S.M. SIRSAT, J.C. PAYMASTER, AND A.B. VAIDYA.

NICHOLS, W.W. New directions in genetics utilizing tissue culture techniques.

NICHOLS, W.W., A. LEVAN, L. KJELLEN AND S. SHELDON. Differential susceptibility
of two cell types to the chromosome breaking effects of adenovirus type 5.

NICHOLS, W.W. Genetic hazards of drugs of abuse. Drug Abuse - Proceedings of

NICHOLS, W.W., C. BRADT, S. DWIGHT AND W. BOVNE. Somatic pairing in Diptera

NICHOLS, W.W. Mutations as environmental hazards. Lakartidningen (The Jrl.

NICHOLS, W.W., P. MOORHEAD, G. BREWEN. Chromosome methodologies in mutation

NOWINSKI, R.C., E. EDYNAK AND N.H. SARKAR. Serological and structural proper-
ties of Mason-Pfizer monkey virus isolated from the mammary tumor of a Rhesus

SARKAR, N.H., R.C. NOWINSKI AND D.H. MOORE. Characteristics of the structural
components of the mouse mammary tumor virus. I. Morphological and biochemical

SARKAR, N.H., R.C. NOWINSKI AND D.H. MOORE. A proposed model for the helical
nucloccapsid of RNA tumor viruses. North Holland Publishing Co. Amsterdam, The

SARKAR, N.H., R.C. NOWINSKI AND D.H. MOORE. Helical Nucleocapsis Structure of
the oncogenic ribonucleic acid viruses (oncornaviruses). J. of Virology, 8,

SARKAR, N.H., R.C. NOWINSKI AND D.H. MOORE. The internal structure of the on-
cogenic RNA viruses. 29th Annual EMSA Meeting (Abstract), 1971.


SCHLOM, J., S. SPIEGELMAN AND D.H. MOORE. RNA-dependent DNA polymerase activity


CURRICULUM VITAE

PERSONAL

Name: Jesse Charney
Business Address: Institute for Medical Research
Copewood Street, Camden, N. J. 08108
Home Address: 

Date of Birth: 
Place of Birth: 
Sex: Male

EDUCATION:

Undergraduate University: City College of N. Y., Degree granted: B. S., 1938.
Graduate School: N. Y. University, Degree granted: Sc.M., 1939
N. Y. University, Ph.D. (interrupted by service with Chem. War. Serv.) in 1942.

PROFESSIONAL BACKGROUND

<table>
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<tr>
<th>Year</th>
<th>Research Appointment</th>
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<tr>
<td>1942 - 1943</td>
<td>Civilian Chemist</td>
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<td>1943 - 1947</td>
<td>Research Appointment</td>
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<td>1947 - 1952</td>
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<td>1951 - 1960</td>
<td>Research Appointment</td>
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<tr>
<td>1961 - present</td>
<td>Research Appointment</td>
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</table>

Head, Dept. of Biochemistry, cancer immunology and biochemistry. Institute for Medical Research, Camden, N. J.


SOCIETY MEMBERSHIPS
Society of American Biochemists
American Association for the Advancement of Science
American Chemical Society, Biol. Division
PUBLICATIONS

A. Mammary Tumor Virus Research


B. Cancer Immunology


C. Tissue Culture Immunology


D. Poliomyelitis Virus Research


INSTITUTION:

Name: Institute for Medical Research

Address: Copewood & Davis Streets
Camden, New Jersey 08103

Is the institution affiliated with a University, Hospital, or other organization? X if so, please specify: College of Medicine & Dentistry and University of Pennsylvania School of Medicine.

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Total number of employees, grouped by categories (e.g., professional, technicians, office, etc.):

87 full time employees as listed below. 7 part time employees.

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<tr>
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<tr>
<td>Professional</td>
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</tr>
<tr>
<td>Instrument Maker</td>
<td>1</td>
</tr>
<tr>
<td>Technicians</td>
<td>34</td>
</tr>
<tr>
<td>Photographer</td>
<td>2</td>
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<td>Office</td>
<td>14</td>
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<td>Librarian</td>
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Do you have a training program? See Attachment III

If so, what level of training?

For how many people?

PUBLICATIONS:

Please list relevant publications during the past 3 years.

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<th>ACADEMIC RANK</th>
<th>DISCIPLINE</th>
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</thead>
<tbody>
<tr>
<td>Cell Biology</td>
<td>Coriell, L.L.</td>
<td>M.D., Ph.D.</td>
<td>Member</td>
<td>Director, Virology, Epidemiology</td>
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<tr>
<td></td>
<td>Greene, A.E.</td>
<td>D.Sc.</td>
<td>Assoc. Member</td>
<td>Cell Biology, Virology</td>
</tr>
<tr>
<td>Cytogenetics</td>
<td>Nichols, W.W.</td>
<td>M.D., Ph.D.</td>
<td>Member</td>
<td>Cytogenetics, Mutagenesis, Hematology</td>
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<tr>
<td></td>
<td>Miller, R.</td>
<td>Ph.D.</td>
<td>Associate</td>
<td>Cytogenetics, Mutagenesis, Reproductive Physiology</td>
</tr>
<tr>
<td></td>
<td>Toji, L.</td>
<td>Ph.D.</td>
<td>Associate</td>
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<td>Biochemistry</td>
<td>Charney, J.</td>
<td>Sc.M.</td>
<td>Assoc. Member</td>
<td>Biochemistry, Immunology, Virology</td>
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<td>Microbiology</td>
<td>McGarrity, G.J.</td>
<td>Ph.D.</td>
<td>Assoc. Member</td>
<td>Microbiology</td>
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<tr>
<td>Cytological Biophysics</td>
<td>Moore, D.H.</td>
<td>Ph.D.</td>
<td>Member</td>
<td>Biophysics, Electrophoresis, Electron Microscopy, Virology</td>
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<td>Kramarsky, B.</td>
<td>D.Sc.</td>
<td>Assoc. Member</td>
<td>Microbiology, Electron Microscopy</td>
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<tr>
<td></td>
<td>Chen, P.</td>
<td>Ph.D.</td>
<td>Associate</td>
<td>Cytology, Genetics, Virology, Immunology</td>
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<tr>
<td></td>
<td>Sheffield, J.</td>
<td>Ph.D.</td>
<td>Associate</td>
<td>Developmental Biology, Cell and Viral Membranes</td>
</tr>
<tr>
<td>Cell Culture Section</td>
<td>Lasfargues, E.</td>
<td>V.M.D.</td>
<td>Assoc. Member</td>
<td>Cell Physiology</td>
</tr>
<tr>
<td>Molecular Biology Section</td>
<td>Dion, A.</td>
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<td>Assoc. Member</td>
<td>Molecular Biology, Biochemistry</td>
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<tr>
<td></td>
<td>Vaidya, A.</td>
<td>Ph.D.</td>
<td>Associate</td>
<td>Molecular Biology, Electron Microscopy</td>
</tr>
<tr>
<td>Electron Microscopy Section</td>
<td>Sarkar, N.</td>
<td>Ph.D.</td>
<td>Assoc. Member</td>
<td>Biophysics, Virology</td>
</tr>
<tr>
<td>Immunology</td>
<td></td>
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</tr>
</tbody>
</table>
Training Programs

Summer Fellowships for 10-20 undergraduate and graduate college students -- to advance their knowledge and laboratory skills and to help them financially.

Postdoctoral training for gifted scientists -- to accelerate the progress of medical research at other institutions. At any given time, there usually are several such scientists here -- and they stay from 3 months to 3 years. This program includes Exchange Visitors.

Frequent medical seminars to provide ongoing education for local physicians, health officers and biomedical scientists.

Lectures for high school students.

Formal postdoctoral courses for biomedical scientists and physicians throughout the area. These courses run a full academic year.

Institute medical doctors serve without fee on the staffs of local hospitals and the faculties of local colleges and universities and provide frequent lectures for the staffs of those institutions.
1969-1971
LIST OF PUBLICATIONS


3. ATHREYA, B. H. Infant feeding in India. A programmed test for mothers. (in Tamil)


12. *CORIELL, L. L. AND G. J. McGARRITY. Use of laminar flow to prevent infection during microbiological procedures. In Proceedings, American Association for Contamination Control 1


*abstract


Scandalios AEC Plant Research Laboratory, Michigan State University, East Lansing, 1970.


# PERSONAL

**Name:** Pearl L. Chen  
**Business Address:** Institute for Medical Research  
**Copewood Street, Camden, N. J. 08103**  
**Home Address:**  
**Date of Birth:**  
**Place of Birth:**

# EDUCATION

| Undergraduate School | Huanan College, China. Degree granted: B.A., 1926. |
| Graduate School | Syracuse University, . Y. Degree granted: M.A., 1931. |
| | The University of Michigan, Ann Arbor, Michigan. Degree granted: Ph.D., 1937. |

# PROFESSIONAL BACKGROUND

<table>
<thead>
<tr>
<th>Year</th>
<th>Position</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1972 - present</td>
<td>Research Associate</td>
<td>Institute for Medical Research</td>
</tr>
<tr>
<td>1964 - 1972</td>
<td>Academic Appointment</td>
<td>Associate Professor Emeritus of Biological Sciences, Purdue University, Fort Wayne, Ind</td>
</tr>
<tr>
<td>1956 - 1964</td>
<td>Academic Appointment</td>
<td>Associate Professor of Biology, Albion College, Albion, Michigan</td>
</tr>
<tr>
<td>1949 - 1956</td>
<td>Academic Appointment</td>
<td>Director of Biology Div. Overseas Branch, Cambridge University and Teachers College, Singapore</td>
</tr>
<tr>
<td>1948 - 1949</td>
<td>Academic Appointment</td>
<td>Chairman, Dept. of Biology and Professor of Biology, Hsieho University, Fukien, China</td>
</tr>
<tr>
<td>1940 - 1948</td>
<td>Academic Appointment</td>
<td>Professor of Biology, The Great China University, Shanghai, China</td>
</tr>
<tr>
<td>1936 - 1940</td>
<td>Academic Appointment</td>
<td>Associate Professor of Biology &amp; Lecturer, Hua Chung University, Wachang, China</td>
</tr>
</tbody>
</table>
SOCIETY MEMBERSHIPS

Society of Sigma Xi
Electron Microscopy Society of America
American Association for the Advancement of Science
American Society for Microbiology
The Botanical Society of America
American Institute of Biological Sciences
Michigan Academy of Science, Arts & Letters
New York Academy of Sciences
American Institute of Biological Sciences
PUBLICATIONS


CURRICULUM VITAE

NAME, ADDRESS AND TELEPHONE:  
Lewis L. Coriell  
Institute for Medical Research  
Copewood Street  
Camden, New Jersey 08103  
609-966-7377  
215-627-4855

BIRTH DATE:  

EDUCATION:  
University of Montana - 1930-1934  
B.A. 1934  
Major: Biology  
Minor: Bacteriology

University of Kansas - 1934-1936  
M.A. 1936  
Major: Bacteriology & Immunology  
Admitted to Graduate & Medical School 1935  
with advanced standing from University of Montana

University of Kansas Graduate School - 1936-1940  
Ph.D. 1940  
Major: Immunology  
Minor: Physiology & Anatomy

University of Kansas School of Medicine - 1939-1942  
M.D. 1942  
First in class of 82  
Sophomore, junior and senior honors  
Alpha Omega Alpha Honorary Medical Society

FELLOWSHIPS:  
Tuition Fellowship - University of Montana 1930-1934  
Teaching Fellowship - University of Kansas 1934-1940
CERTIFICATION BY SPECIALTY BOARDS:

American Board of Pediatrics 1953
American Board of Microbiology 1961

HONORARY SOCIETIES:

Sigma Xi
Phi Sigma
Alpha Omega Alpha
The John Morgan Society

MILITARY HISTORY:

Instructor, Civilian Military Training Corp Camp,
Fort Missoula, Montana, 1933
Active Duty 1943-1946
Carlisle Barracks Medical Officer Training School 1943
Camp Detrick, Md., Biological Research Division 1943-1946
Chief, Biological Research Division, Camp Detrick 1946
Honorable Discharge, U.S.A.R. 1946

HONORS AND AWARDS:

Porter Scholastic Award, University of Kansas Medical School 1942
Boyle Award, Camden County Bar Association 1952
Camden County Chamber of Commerce Distinguished Public Service Award 1953
First Annual Citation of South Jersey Public Relations Group 1955
Camden County Hebrew Association Award for Medical Research 1956
Presidential Award Fourth International Poliomyelitis Congress 1957
"Man of the Year", Delaware Valley Council 1963
Hannah G. Solomon Award, Outstanding Person in the Field of Humanities 1967
Honorary Award to Man of Reknown to Commemorate 20th Anniversary Hadassah Hospital Hebrew University Medical School 1969
Physician's Recognition Award in Continuing Medical Education, American Medical Association, 1969-1971
Camden County Achievement Award for Science, 1969
Exhibit of Merit, "Basic and Other Biomedical Research at the Institute for Medical Research" presented by Medical Society of N.J. at 204th Annual Meeting, Atlantic City, 1970
Man of the Year Award of Lodge 41 Brith Sholom Nov. 4, 1972.
HOSPITAL AND TEACHING APPOINTMENTS:

University of Montana, Missoula
Laboratory Assistant in botany, 1934

Mercy Hospital, Independence, Kansas
Laboratory technician, 1936

Children's Mercy Hospital, Kansas City, Missouri
Extern, 1941-42

University of Kansas, Kansas City
Assistant Instructor in bacteriology, 1934-36
Instructor in bacteriology, 1936-40
Research Assistant, 1941-42

Henry Ford Hospital, Detroit, Michigan
Intern, 1942-43

Sydenham Hospital, Baltimore, Maryland
Assistant Chief Resident, 1949

Camden Municipal Hospital for Contagious Diseases
Medical Director and Chief of Staff, 1949-61

Institute for Medical Research, Camden, N.J.
Director (formerly South Jersey Medical Research Foundation), 1953-present

Burlington County Memorial Hospital, Mt. Holly, N.J.
Consulting Staff, Epidemiologist, 1964-present

U.S. Naval Hospital, Philadelphia, Pennsylvania
Consultant-lecturer in Pediatrics, 1956-present

The Children's Hospital of Philadelphia, Pennsylvania
Research Resident, 1946-48
Member Research Staff, 1946-55
Assistant Physician, 1949-56
Senior Physician, 1957-present

The Cooper Hospital, Camden, New Jersey
Epidemiologist, 1959-65
Assistant Pediatrician, 1950-65
Consultant in Epidemiology and Pediatrics, 1965-
Senior Physician, 1967-
Consultant, Hospital Infections Committee, 1968
Research Committee, 1967-68
Member, Board of Managers, 1969-
The University of Pennsylvania, Philadelphia
Instructor, Graduate School of Arts & Sciences
1954-present
Instructor in Pediatrics, School of Medicine,
1946-48
Assistant Professor of Immunology in Pediatrics,
School of Medicine, 1949-52
Associate Professor of Pediatrics, School of
Medicine, 1952-62
Professor of Pediatrics, School of Medicine,
1963-present
Pediatrician, CARE-MEDICO emergency team to
Algiers, 1962
Member Advisory and Executive Committee of
Department of Pediatrics, School of Medicine, 1968
Member of Pediatric Staff, The Graduate Hospital
(Assoicate Pediatrician - Attending Medical Staff

PROFESSIONAL
SOCIETIES:

American Academy of Microbiology, Charter Member
American Academy of Pediatrics, Fellow, Life Member
American Academy of Pediatrics; Chairman, Committee
on Control of Infectious Diseases, 1965-66
American Association for the Advancement of Science
American Association for Cancer Research
American Medical Association
American Pediatric Society
American Public Health Association, Fellow
American Society for Cell Biology
American Society for Microbiology
American Type Culture Collection
American Cell Culture Collection Committee of
ATCC, Advisory Committee
Camden County Medical Society
John Morgan Society
Medical Society of New Jersey
National Research Council Fellowship in Virus
Diseases, 1946-49
New York Academy of Sciences
Philadelphia Pediatric Society
Physiology Society of Philadelphia
Society for Cryobiology
Society for Pediatric Research
Tissue Culture Association
Physiological Society of Philadelphia
COMMITTEE MEMBERSHIP:

American Academy of Pediatrics
Chairman, Committee on the Control of Infectious Diseases, 1959-66
Polio Advisory Committee, Philadelphia Department of Health
Advisory Council to United States Food & Drug Administration, 1963-66
Medical Consultant to Project Head Start, 1967

American Cancer Society
Member, Board of Managers (N.J. Division) 1968-69
Member, Executive Committee (N.J. Division)
Member, Board of Managers (Camden County) 1970
Member, Executive Committee (Camden County)

American Medical Association
Consultant, Council on Drugs, August 1965-present

American Red Cross
Board of Directors, Camden County Chapter

American Type Culture Collection
Advisory Committee on Animal Cell Culture Collection, 1965-present

Camden County Medical and Dental College Site Committee
(Committee appointed by Camden Board of Freeholders, 1967)

Camden County Medical Society
Advisor, Visiting Nurse Association of Camden County, 1959
Member, Disaster Committee, 1959
Delegate to New Jersey Medical Society, 1965-68

Camden County Tuberculosis and Health Association
Respiratory Disease Committee, 1965-64
Board of Directors, 1964-68
Executive Committee, 1965-66

CARE-MEDICO Committee of Eastern Pennsylvania, 1972-
Community Air Pollution Committee of Camden County 1967-

Comprehensive Health Planning Committee of Southern New Jersey, Chairman Health Manpower Task Force 1971-

Foundation for Community Health Medical Advisory Subcommittee, Philadelphia, Pa. 1965

Health and Welfare Council of Camden County
Board of Directors, 1967-present
Executive Committee, 1969-present
Comprehensive Planning Committee, 1969-70

Medical Society of New Jersey
Delegate from Camden County Medical Society, 1965-68
Chairman, Public Health Committee, 1953
Member, Special Committee on Medical Research 1953-54

National Institutes of Health
Advisory group on hospital ventilation systems 1967
General Research Support Advisory Committee, 1971-74

New Jersey Regional Medical Program
Appointment, Council on Cancer (standing committee of the Regional Advisory Group, 1969-70

Tissue Culture Association
Trustee, 1969-present
Assistant Editor, IN VITRO, Journal Tissue Culture Association, 1970-
Member, Educational Committee, 1972-74

United Fund of Camden County
Executive Committee
Chairman, Professional Division, 1969-70
Chairman, Special Groups Department, 1970-71
Chairman, Hospital Allocation Panel, 1971-72
Prospect Rating Committee, 1971
W. Alton Jones Cell Science Center
  Member, Committee, 1967
  Chairman, Ad Hoc Executive Committee, 1968-71
  Member, Board of Governors, 1971

E.R. Johnstone Training and Research Center
  Member, Research Advisory Committee,
    Biochemical Research Section, 1972


CURRICULUM VITAE

PERSONAL

Name: Arnold S. Dion
Business Address: Institute for Medical Research
Home Address: Copewood Street, Camden, N.J. 08103

Date of Birth: Place of Birth: Sex:

EDUCATION

Under Graduate University: University of New Hampshire, Degree
Graduate School: University of New Hampshire, Degrees
Other: Phage Genetics, Cold Spring Harbor Laboratory, 1970.

PROFESSIONAL BACKGROUND

1972 - Present Research Appointment: Associate Member, Institute for Medical Research, Camden, N.J.
1972 - Present Head, Molecular Biology Section Institute for Medical Research, Camden, N.J.
1971 Research Appointment: Assistant Member, Institute for Medical Research, Camden, N.J.
Curriculum Vitae (cont'd)

1968 - 1970
Postdoctoral Fellow,

1967
N.I.H. Predoctorial Fellow,
University of New Hampshire

1968
Teaching Assistant
University of New Hampshire

1966 - 1967
N.I.H. Predoctorial Fellow,
University of New Hampshire

1964 - 1966
Teaching Assistant
University of New Hampshire

MEMBERSHIP IN NATIONAL SOCIETIES

Alpha Epsilon Delta
American Association for the Advancement of Science
Sigma Xi
American Society for Microbiology
New York Academy of Sciences

AWARDS RECEIVED

Kassner Science Award
Phi Sigma Award

PUBLICATIONS


Publications (cont'd)


### MILITARY HISTORY:

### EDUCATION:
<table>
<thead>
<tr>
<th>Degree</th>
<th>Institution</th>
<th>Year</th>
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<tbody>
<tr>
<td>A.B.</td>
<td>University of Pennsylvania - Biology</td>
<td>1947</td>
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<tr>
<td>B.Sc.</td>
<td>Philadelphia College of Pharmacy and Science - Bacteriology</td>
<td>1949</td>
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<tr>
<td>M.Sc.</td>
<td>Philadelphia College of Pharmacy and Science - Bacteriology</td>
<td>1950</td>
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<tr>
<td>D.Sc.</td>
<td>Philadelphia College of Pharmacy and Science - Bacteriology</td>
<td>1952</td>
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### SCIENTIFIC SOCIETIES:
- American Association for the Advancement of Science
- American Society for Microbiology
- New York Academy of Science
- Society for Cryobiology
- Society of the Sigma Xi
- Tissue Culture Association

### TEACHING APPOINTMENTS:
- Instructor in Bacteriology, Philadelphia College of Pharmacy and Science. 1949-1951.
- Instructor in Pharmacology and Pathology, Philadelphia College of Pharmacy and Science. 1954-1955.
- Visiting Lecturer in Virology and Bacteriology, Philadelphia College of Pharmacy and Science. 1955-present.
- Visiting Lecturer in Virology, Philadelphia College of Osteopathic Medicine, 1961-present.
- Visiting Research Assistant Professor in Virology, School of Veterinary Medicine, University of Pennsylvania. 1963-1965.
- Research Associate, Harrison Department of Surgical Research, University of Pennsylvania Medical School, 1965-present.
- Visiting Associate Professor of Microbiology, Jefferson Medical College, Philadelphia, 1969-
HONORS:


Diplomat of the American Board of Microbiology.
Certified in Public Health and Medical Laboratory Virology, 1965.

RESEARCH EXPERIENCE:

Research Fellow in Virology, Skin Virus Laboratory, Children's Hospital of Philadelphia. Dr. T.F. McNair Scott, Director of Research, 1952-1953.

Research Associate in Virology, Poliomyelitis Research Laboratory, Children's Hospital of Philadelphia. Dr. Lewis L. Coriell, Director, 1953-1956.

Research Associate in Virology and Tissue Culture, South Jersey Medical Research Foundation (associated with Children's Hospital of Philadelphia. Dr. Lewis L. Coriell, Director, 1956-1957.


Associate Member and Head of the Department of Cell Biology, South Jersey Medical Research Foundation. Dr. Lewis L. Coriell, Director, 1961-present.

a. Virologist and Tissue Culturist on the Tissue Cell Bank at the SJMRF. The Tissue Cell Bank is sponsored by the Cell Culture Collection Committee of the National Institutes of Health through a grant from the National Cancer Institute of the National Institutes of Health. The purpose of the Cell Bank is to standardize, characterize and freeze away tissue culture cell lines so that future research in virology and cancer shall be conducted in standard cell lines.

b. Research on the cell lines involves the study of virological, tissue culture, and immunological techniques, tumor formation, chromosome and morphological changes in cells chosen to be included in the Cell Bank.


CURRICULUM VITAE

PERSONAL

Name: Bernhard Kramarsky
Business Address: Institute for Medical Research
               Copewood Street, Camden, N. J. 08103
Home Address: 

Date of Birth:
Place of Birth: 

EDUCATION

Undergraduate University Cornell University, New York State College of Agriculture, Degree Granted: B.S.C., 1950.

PROFESSIONAL BACKGROUND

1967 - Present Research Appointment: Associate Member, Electron Microscopist, Institute for Medical Research

1966 - 1967 Research Appointment: Research Assistant, Electron Microscopist Albert Einstein Medical Center

1964 - 1966 Academic Appointments: 1) Instructor of Microbiology, University of Southern California School of Medicine
                                  2) Specific Teaching Responsibilities: Supervision of Student Laboratory

1943 - 1945 Military Service: Military Intelligence Service as Interrogator of P. O. W's. Rank held: P.F.C.
SOCIETY MEMBERSHIPS
1967 Greater Philadelphia Society of Electron Microscopists
1964 - 1966 Southern California Society of Electron Microscopists
1964 - 1970 American Society of Microbiology

RESEARCH ACTIVITIES
1) Electron Microscopic Studies of Mammary Tumor Viruses in Mice and Man
3) Electron Microscopic Study of the Survival of Platelets Transfused into Thrombocytopenic Patients.
4) Electron Microscopic Study of Liver Involvement in Leprosy.

PUBLICATIONS
9. **Stimulation of Mammary tumor Virus Production in a Mouse Mammary Tumor Cell Line.**
Cancer Research 30, 1109-1117, 1970

10. **Cross Species Adaptation of Cells and Viruses in the Mammary Tumor System.**
Lasfargues, E.Y., Kramarsky, B., and Moore, D.H.
In: Immunity and Tolerance in Oncogenesis
The Div. of Cancer Research, Perugia, Italy, 1969.

11. **Effects of Cell Fusion on Production of the Mouse Mammary Tumor Virus - Immunofluorescence Study.**

12. **Search for Human Breast Cancer Virus.**

13. **Sedimentation of Mouse Mammary Tumor Virus (MTV) in various Density Gradient Media.**

14. **Ultrastructural Changes in Mammary Tumor Virus Upon Ingestion or Intraperitoneal Inoculation in Mice.**

15. **Whole Cell Mount Electron Microscopy: A Rapid Technique for the Detection and Identification of Viruses.**
B. Kramarsky and A. E. Greene
In Vitro, 6:375 (1972) (Abstract)

16. **Ultrastructural Comparison of a Virus from a Rhesus Monkey Mammary Carcinoma with Four Oncogenic RNA Viruses.**

17. **Some Aspects of the Search for a Human Mammary Tumor Virus.**
Cancer, 28:1415 (1971)

18. **An Established RIII Mouse Mammary Tumor Cell Line; Kinetics of MTV Production.**

19. **Reduction of MTV Production in Cell Cultures by Streptovaricin Complex.**
B. Kramarsky, E.Y. Lasfargues and D.H. Moore
In Vitro, 7:236 (1972) (Abstract)

CURRICULUM VITAE

Name: LASFARGUES, Etienne, Yves, Leon

Born: 

Nationality: 

Degrees: Bachelor Science' - Philosophy (B.S.)
Paris University 1935-1936

Doctor of Veterinary Medicine (D.V.M.)
Paris University 1942

Post-Doctoral Fellowships:

Fondation Roux, Institut Pasteur 1942-1944


Awards and Distinctions:

JENSEN PRIZE, Academie Nationale de Medecine, Paris 1945

Honorary Head of Laboratory, Institut Pasteur, Paris 1955

Silver & Bronze Medals - Institut Pasteur 1969

Member Harvey Society 1972

Positions Held:

Foundation Roux research fellow, Institut Pasteur, Paris 1942-1944

Assistant and Staff member, Institut Pasteur 1944-1947


Head of the Tissue Culture Laboratory Institut Pasteur, Garches 1950-1955
Associate in Microbiology, Columbia University, New York, N.Y. 1955-1959
Assistant Professor in Microbiology, Columbia University, New York, N.Y. 1959-1966
Associate Member, Institute for Medical Research, Camden, N.J. 1966 to date.

Fields of Interest:
Tissue culture; virology; oncology.

Training in Tissue Culture:
Carlsberg Institute - (Dr. Albert Fisher) 1947
Copenhagen - Denmark
Strangeways Research Laboratories (Dame H. B. Fell), Cambridge - England 1954
Laboratory for Cell Physiology (Dr. M. R. Murray), New York, N.Y. 1955

Membership in Scientific Societies:
European Tissue Culture Society
International Society for Cell Biology
American Society for Cell Biology
American Association for Cancer Research
American Association for the Advancement of Sciences

LIST OF PUBLICATIONS


77. LASFARGUES, E. Y., COUTINHO, W. G. and MOORE, D. H.

78. LASFARGUES, E. Y., COUTINHO, W. G. AND LASFARGUES, J. C.
A serum substitute that can support the continuous growth of neoplastic cells. (abstract) In Vitro: 7, 264(94), 1972.

79. KRAMARSKY, B., LASFARGUES, E. Y., and MOORE, D. H.
Reduction of MTV production in cell cultures by streptovaricin complex. (abstract) In Vitro: 7, 256(66), 1972.

80. LASFARGUES, E. Y., COUTINHO, W. G. AND MOORE, D. H.
CURRICULUM VITAE

Name, Address and Telephone:
Gerard J. McGarrity

Institute for Medical Research
Copewood Street
Camden, New Jersey 08103
609-966-7377
215-627-4855

Date of Birth:

City and State of Birth:

Social Security No.:

Education:
B.S., St. Joseph's College, Philadelphia, Pa., 1962
M.S., Jefferson Medical College, Philadelphia, Pa., 1964
Ph.D., Jefferson Medical College, Thomas Jefferson University, Philadelphia, Pa., 1970

Experience:
Teaching Fellow in Medical Microbiology, Jefferson Medical College, Philadelphia, Pa., 1962-1964
Instructor in Medical Microbiology, Jefferson School of Nursing, Philadelphia, Pa., 1962-1964
Assistant Professor of Biological Science, Glassboro State College, Glassboro, New Jersey, 1964-1965
Research Associate, Institute for Medical Research, 1965-1970
Assistant Member, 1970-
Head, Dept. of Microbiology, 1971-
Clinical Instructor, Dept. of Surgery, University of Pennsylvania School of Medicine, 1970-
Lecturer, Short course on Biohazard and Injury Control in Viral Oncology Laboratories. Co-sponsored by University of Minnesota and National Cancer Institute, 1972.

Fields of Major Scientific Interest:
Infection Control, Medical Environments, Germfree Technology

Professional Association:
American Society for Microbiology, American Association for Advancement of Science, Reticuloendothelial Society, Association for Gnotobiotics, New Jersey Academy of Science, Tissue Culture Association

Honorary Societies:
Sigma Xi
Membership in National Societies

1. American Society for Microbiology
2. American Association for Advancement of Science
3. Association for Gnotobiotics
4. Tissue Culture Association
5. Sigma Xi

Advisory Appointments

Lecturer, Short course on Biohazard Control in Viral Oncology Laboratories. Co-sponsored by the University of Minnesota and the National Cancer Institute.

Invited Lectures, 1971-72


PUBLICATIONS
Gerard J. McGarrity, PH.D.


19. Microbiological and Engineering Evaluation of a Vertical Laminar Flow Room with Variable Air Velocity Proceedings, Association for Gnotobiotics, Columbus, Ohio. June 18, 1971 (Abstract)


Papers in press and submitted.


CURRICULUM VITAE

Robert C. Miller

Born:

1953: Graduated from Lincoln High School, Lincoln, Nebraska

1954-1958: U.S. Navy (photographer)

1958-1959: University of Texas, Austin, Texas

1959-1962: University of Nebraska, Lincoln, Nebraska

Laboratory technician: Typing and cross-matching bloods for transfusion
Supervisor: Eloise R. Giblett, M.D.

1963-1965: Employed - Cleveland Clinic Foundation Hospital, Cleveland, Ohio
Laboratory technician, special hematology. Blood counts, differentials, L.E., clotting studies, blood volumes, bone marrows, cytochemistry, etc.
Supervisor: George Hoffman, M.D.

1965-1966: Employed - Ohio State University Hospital, Columbus, Ohio
Research assistant, cytogenetics laboratory
Supervisor: Richard M. Goodman, M.D. (Now living in Israel)

1966-1971: Graduate Research Associate, Ohio State University
Graduate School, College of Agriculture, Dept. of Dairy Science, Cytogenetics Laboratory, Columbus, Ohio.
Area of study: Genetics, cytogenetics, reproductive physiology
Advisor: Nathan S. Fechheimer, Ph.D.
Dept. Chairman: Noland L. VanDemark, Ph.D.

Degrees: B.S. (Zoology) University of Nebraska, June 1962
M.S. (Genetics) Ohio State University, December 1968
Ph.D. (Genetics) Ohio State University, September 1971

1972-Present:
Employed Institute for Medical Research, Camden, N.J.
Associate 1972
Assistant Member 1973
Supervisor: Warren W. Nichols, M.D., Ph.D.
Description Graduate Preparation 1966-1971:

Graduate program included course work in mathematics, statistical analysis, genetics, cytogenetics, mammalian physiology, endocrinology, cell physiology, reproductive physiology, biochemistry, microanatomy and animal breeding. This program was specifically designed to emphasize applications to independent research and provide the training necessary to approach biological problems from a variety of viewpoints and at the same time retain some flexibility regarding postgraduate specialization.

Graduate Research

Prior to enrolling in the Graduate School at the Ohio State University, organized and subsequently supervised a small cytogenetics laboratory (primarily a research laboratory) in the Ohio State University Hospital. Graduate research was conducted in the cytogenetics laboratory of Prof. Nathan S. Fechheimer in the Animal Reproduction Teaching and Research Center, Dept. of Dairy Science, the Ohio State University, Columbus, Ohio.

Three general problem areas were under study in Dr. Fechheimer's laboratory during this period involving the behavior and function of chromosomes in man and domestic animals, particularly with regard to reproduction, both of cells and individuals. Specifically:

1. The genetics of sex, including the role of the sex chromosomes in sex determination and differentiation.
   Approach: examination of various naturally-occurring or artificially induced intersexual states.

2. The role of chromosome aberrations in embryo mortality, particularly:
   (a) The incidence and modes of origin of the various types of chromosome aberrations in embryos and adults.
   (b) The genetics of meiosis and mitosis.
   Approach: Examination of the chromosome complements of normal populations of domestic animals and embryos produced by these animals. Selection experiments designed to increase the incidence of certain types of aberrations. Production of chromosome aberrations by the use of artificial inseminations with irradiated semen.

3. The effects of sperm ageing on various components of reproductive performance: fertility, embryo mortality, litter size, hatchability, etc.
   Approach: Artificial inseminations with ageing of semen in vitro (mammals) and in vivo (domestic fowl). Examination of resulting embryos at various stages of development including cytogenetic analysis.
Dissertation research involved the ascertainment of the incidence and modes of origin of spontaneous chromosome aberrations in early chick embryos.

Administrative duties involved the supervision of the cytogenetics laboratory and the various funded research projects of Prof. Fechheimer during his absence on sabbatical leave to the Genetics Institute, The University of Edinburgh, Edinburgh, Scotland, from July 1970 to July 1971.

**Extra-curricular Activities (Graduate School)**


**Honoraries**

- Sigma Xi, scientific honorary
- Gamma Sigma Delta, agricultural honorary

**Scholarship**

Lester O. Gilmore Memorial Scholarship, 1971

**Postgraduate Experience**

Institute for Medical Research, Dept. of Cytogenetics.

Research in following areas:


2. Giemsa and fluorescent banding patterns of chromosomes from cultured human embryo cell lines and genetic mutant cell lines.


4. Pilot study of the cytogenetic effects of viruses in vivo on rat bone marrow, spermatogonial cells and early embryo somatic cells.
Publications


BIOGRAPHICAL SKETCH

of

DAN H. MOORE

PERSONAL

EDUCATION

Duke University, Durham, North Carolina
B.A. Degree granted 1932 - Major: Physics
Minor: Chemistry.
M.A. Degree granted 1933 - Major: Physics
Minor: Chemistry.

University of Virginia, Charlottesville, Va.
Ph.D. Degree granted 1936 - Major: Physics
Minor: Chemistry.

APPOINTMENTS

1936-38
Assistant in Physics, Columbia University

1938-39
Research Assistant, Lederle Laboratories

1939-57
Research Associate, Assistant Professor, Associate Professor, College of Physicians and Surgeons Columbia University.
Research in macromolecules and viruses, employing electrophoresis, ultracentrifugation and electron microscopy. Commenced work on mouse milk in search of the mammary tumor agent in 1940. The agent was finally identified and isolated by about 1965-70.

1957-66
Associate Professor, The Rockefeller Institute. Interest was primarily in characterizing the mouse mammary tumor virus.

1966-present
Member and Head of Department of Cytological Biophysics, Institute for Medical Research. Continued work on the mouse mammary tumor virus and began search in human milk for a similar virus.

ACTIVITIES

1949-51

1951

1959-61
Member Virology and Rickettsiology Study Section, U.S. Public Health Service.

1970 -
Associate Editor for Cancer Research.

PUBLICATIONS

Published 175 papers and chapters; editor of two books dealing with biophysical methods.

Honors

1972
Made Professor by American Cancer Society.
Publications of Dr. Dan H. Moore

1960's and 1970's continued


Publications of Dr. Dan H. Moore

1970's continued


Publications of Dr. Dan H. Moore

1970-71 continued


CURRICULUM VITAE

PERSONAL
Name: Nurul Haque Sarkar
Business Address: Institute for Medical Research
Copewood Street, Camden, N. J. 08103
Home Address: 26A Eldridge Gardens
West Collingswood, N. J. 08107
Date of Birth: Place of Birth: Sex:

EDUCATION
Graduate School
Calcutta University, Degree granted: M.S., 1960
Calcutta University, Degree granted: Ph.D., 1966

PROFESSIONAL BACKGROUND
1971 - present
Research Appointment
Associate Member
Institute for Medical Research
1969 - 1971
Research Appointment
Associate
Institute for Medical Research
1968 - 1969
Research Appointment
Research Associate
Institute for Medical Research
1967 - 1968
Research Appointment
Research Fellow
Institute for Medical Research
1961 - 1967
Academic Appointment
Lecturer in the Graduate College of Science, Calcutta University
1961 - 1967
Academic Appointment
Honorary Research Scholar in Biophysics Division, Saha Institute of Nuclear Physics, Calcutta.
SOCIETY MEMBERSHIPS

Electron Microscope Society of America
American Society for Microbiology
Electron Microscope Society of India


### Joel B. Sheffield

#### Curriculum Vitae, 1973

Present Address: Department of Cytological Biophysics  
Institute for Medical Research  
Camden, New Jersey

<table>
<thead>
<tr>
<th>Dates</th>
<th>Position</th>
<th>Department</th>
<th>Institution</th>
<th>Remarks</th>
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| 9/59-6/63   | Undergraduate Biology     |                     | Brandeis University Waltham, Mass. | A.B. Degree awarded 1963  
Research conducted on head regeneration in *Dugesia tigrina*.          |
| 9/64-6/65   | Graduate Student Biology  |                     | Clark University Worcester, Mass. | Laboratory assistant for first year biology course and for course in electron microscopy.  
Research on the fine structure of the retina of marine snails.          |
| 9/65-3/66   | Graduate Student Physiology |                     | Univ. of Illinois Medical Center Chicago, Ill. | Course experience in immunochemistry with Dr. S. Dray. |
| 3/66-12/69  | Graduate Student Biology  |                     | Univ. of Chicago Chicago, Ill.    | Ph.D. awarded 1969. Research with Dr. A.A. Moscona on a fine structure analysis of the developing neural retina with attention to factors controlling aggregation and orientation of dissociated cells and the synthesis of intercellular junctions. |
| 1/70-9/71   | Postdoctoral Trainee Biochemistry |                     | A. v. Leeuwenhoekhuis, Netherlands Cancer Institute, Amsterdam | Studies with Dr. P. Emmelot of antigenic characteristics of isolated plasma membranes and attempts to isolate junction components. Supported by the World Health Organization, International Agency for Research on Cancer. |


15. Sheffield, J.B. Studies of the Envelope of the Mouse Mammary Tumor Virus - Freeze Etch and Freeze Fracture. Submitted for Publication.
NAME, ADDRESS AND TELEPHONE: Lorraine Hellenga Toji

Institute for Medical Research
Copewood Street
Camden, New Jersey 08103
609-966-7377 (215-627-4855)

BIRTH DATE: 

EDUCATION:

Hope College, Holland Michigan - 1956-1960
A.B. 1960, Chemistry

Wayne State University, Detroit, Michigan - 1960-1961
M.S. 1962, Biochemistry

Stanford University, Palo Alto, California 1964-1965
Pharmacology

Ph.D. 1969, Biochemistry

FELLOWSHIPS:


PROFESSIONAL SOCIETIES:

American Chemical Society
American Association for the Advancement of Science

PROFESSIONAL EXPERIENCE AND ACTIVITIES:

Instructor in chemistry at Hope College, 1961-1964
Participant in National Science Foundation Institutes for College Chemistry Teachers, summers 1962 & 1963, Georgia Institute of Technology and University of Colorado, respectively
Research Assistant, biochemical pharmacology, summer 1964
Research Associate, Institute for Medical Research, Camden, N.J. 1969-

RESEARCH INTERESTS:

Biochemistry - Specific: Nucleic acids and somatic cell genomics


CURRICULUM VITAE

Name: Akhil Babubhai Vaidya

Sex: 

Date of Birth: 

Place of Birth: 

Education: 

B.Sc. University of Bombay, 1967
Major: Microbiology

Ph.D. University of Bombay, 1972
Applied Biology

Positions Held: 

Research Associate, Institute for Medical Research, Camden, N. J. 1972 - present

Scientific Assistant, Cancer Research Institute, Bombay, India 1970 - 1972

Research Fellow, Cancer Research Institute, Bombay, India 1967 - 1970

Awards:

Gold Medal for being first in B.Sc. class.

Publications:


INSTITUTION:
Name: The Los Angeles County-University of Southern California Cancer Center
Address: 2025 Zonal Avenue
                     Los Angeles, California 90033
Is the institution affiliated with a University, Hospital, or other organization? Yes  If so, please specify: Affiliated hospitals of the University of Southern California and the County of Los Angeles
Brief description of purpose of institution, including whether clinical or nonclinical: A comprehensive regional cancer center including clinical care, clinical and basic research, education and community service.
See Appendix A - Summary Brochure
If clinical, how many beds? Note 1  Member of NCI cooperative group? Note 2  Research (list main areas):
See Appendix B - list of cancer-related support as of January 1, 1973

BUDGET:
Approximate annual budget: $7,036,528 from extramural sources as of January 1, 1973
Please specify sources and amount of support (e.g. Federal, State, private, etc.): See Appendix B

PERSONNEL AND PUBLICATIONS: see attached sheet. See Appendix C - Biographical Sketches
Date of Application: May 2, 1973  Signed
Title: Associate Dean, Director

Application should be submitted to Dr. Harold P. Rusch, President, AACI, McAndie Laboratory for Cancer Research, University of Wisconsin, Madison, Wisconsin 53706.
PERSONNEL:

Names and titles of senior personnel, including brief curricula vitae. List on separate pages.

See Appendix C

Total number of employees, grouped by categories (e.g., professional, technicians, office, etc.):

________________________________________

________________________________________

________________________________________

________________________________________

________________________________________

________________________________________

Do you have a training program? 
If so, what level of training? See Note 3
For how many people?

PUBLICATIONS:

Please list relevant publications during the past 3 years.

See Appendix C
1. **CANCER BEDS**

The average daily census of cancer patients under direct care and clinical investigation by USC Cancer Staff are as follows:

- LAC-USC Medical Center: 200
- Childrens Hospital - L.A.: 15
- John Wesley County Hospital: 30

2. USC Cancer Staff now participate as funded members of the following NCI cooperative groups:

- Western Cancer Study Group
- Childrens Cancer Study Group A
- Gynecologic Oncology Group
- Radiation Therapy Oncology Group
- National Wilms' Tumor Study Group

The Chairman and Operations Offices of the first two groups listed are at USC.

3. **CANCER RELATED TRAINING PROGRAMS**

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<td>CA 0823-06</td>
<td>Training Grant - Dental</td>
<td>Albert Abrams, D.D.S.</td>
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<td>CA 08099-07</td>
<td>Clinical Cancer Training</td>
<td>Arthur Donovan, M.D.</td>
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<td>Training in Pediatric Hematology and Oncology</td>
<td>Myron Karon, M.D.</td>
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<td>Clinical Cancer Training Program</td>
<td>Daniel Hays, M.D.</td>
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<td>CA 05205</td>
<td>Hematopathology Training in Lymphomas and Leukemia</td>
<td>Robert J. Lukes, M.D.</td>
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<td>Graduate Training Grant in Hematology</td>
<td>Samuel I. Rapaport, M.D.</td>
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<td>Training of Radiopharmacy Technicians</td>
<td>Walter Wolf, Ph.D.</td>
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<td>Specialists in Radiopharmaceuticals (Radiopharmacist)</td>
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<td>Training of Pharmacists as Technician Supervisors</td>
<td>Walter Wolf, Ph.D.</td>
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<tr>
<td>AI 00157-14</td>
<td>Microbiology Training Grant</td>
<td>Irving Gordon, M.D.</td>
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SUMMARY .......................................................... 1
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May 1973
SUMMARY

An understanding between the University of Southern California and the County of Los Angeles was reached in December 1968, to jointly develop a regional cancer center by raising local funds to augment those anticipated from the Federal government.

Planning to bring the project to reality has continued under the guidance of a joint University-County Cancer Planning Committee and with involvement of a broad segment of the faculty. All planning has involved both parties in all major program decisions.

The past two years have been spent in vigorous planning of the medical and scientific programs of the Center under the supervision of a full time Director. The requirements of the program for an appropriate new facility for advanced treatment, research and education have been determined and preliminary architectural studies have been completed. During the planning period the project required major applications for grant funds and additional commitments by the County and the University. Major grant awards for construction and operational funds have been approved by the National Cancer Institute.

During this period also, the Federal government has recognized the conquest of cancer as an important new national priority. The LAC-USC Cancer Center planning effort was found to be completely consistent with the provisions of the National Cancer Act which called for development of new Comprehensive Regional Cancer Centers.

During the past two years the LAC-USC Cancer Center effort has stood the test of three intensive reviews by distinguished groups of cancer scientists who visited to evaluate grant applications and recommended each favorably.

Major landmarks in bringing the project to its present status as a highly regarded potential new Comprehensive Cancer Center are as follows:

**Grant Applications and Awards – since January 1971**

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<td>New Planning Grant Application</td>
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<td>Cancer Research Center Operational Grant</td>
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(3 years)
Grant for Renovation of Existing Facilities approved for $2,145,700

Grant for Construction of Cancer Hospital and Research Institute Facility approved for 11,880,000

American Cancer Society Career Research Professorship approved for 584,000

Fiscal Commitments by Los Angeles County

Establishment of 9 permanent Cancer Hospital positions $230,000 (per annum)

Agreement to purchase California College of Medicine property and allocate 25,000 gross square feet in three buildings for the initial Cancer Center needs. Appraised Value $800,000

Allocation of funds for architectural costs to develop schematic and preliminary drawings $530,000

Allocation of Medical Center hospital space to develop a 20-bed ward for clinical cancer investigation
CANCER PLANNING COMMITTEE

**USC School of Medicine**
- Franz K. Bauer, M.D.
- Thomas Brem, M.D.
- John Bethune, M.D.
- Edward J. Quilligan, M.D.
- Leonard Rosoff, M.D.
- Paul F. Wehrle, M.D.
- George Donnell, M.D.
- Hugh Edmondson, M.D.
- Nancy Warner, M.D.
- Harold Mazur, M.D.
- Arnold F. Brodie, Ph.D.
- Samuel Bessman, M.D.
- George Jacobson, M.D.
- Paul R. Saunders, Ph.D.
- Allen Mathies, M.D.

**Dean**
A. Chairman, Department of Medicine (to 9/6/72)
B. Chairman, Department of Medicine (from 9/7/72)
C. Chairman, Department of Obs. and Gyn.
D. Chairman, Department of Surgery
E. Chairman, Department of Pediatrics (LAC-USC)
F. Chairman, Department of Pediatrics (CHLA)
G. Chairman, Department of Pathology (to 8/31/72)
H. Chairman, Department of Pathology (from 9/1/72)
I. Chairman, Department of Community Medicine
J. Chairman, Department of Biochemistry
K. Chairman, Department of Pharmacology
L. Chairman, Department of Radiology
M. Associate Dean, Basic Sciences
N. Associate Dean

**USC School of Pharmacy**
- John A. Biles, Ph.D.

**Dean**

**USC School of Dentistry**
- John Ingle, D.D.S.
- William Crawford, D.D.S.

**Dean (to October 1972)**

**L.A. County, Chief Administrator's Office**
- William A. Leone

**Chief, Capital Projects Division**

**L.A. County, Department of Health Services**
- Liston A. Witherill
- John E. Affledt, M.D.
- David Odell
- Donald Avant

**Director**
A. Medical Director
B. Director of Planning (to August 1972)
C. Deputy Director for Operations

**L.A. County - USC Medical Center**
- Leslie R. Smith
- Robert E. Tranquada, M.D.

**Executive Director**

**Medical Director**

**L.A. County - USC Cancer Center**
- Denman Hammond, M.D.
- William J. Weitkamp
- Thomas C. Hall, M.D.
- Robert J. Hasterlik, M.D.

**Director and Associate Dean, School of Medicine**
A. Administrator
B. Associate Director for Clinical Investigation
C. Associate Director for Regional Activities
NCI CANCER RESEARCH CENTERS

In 1964, the National Cancer Institute activated a Cancer Research Centers Program ... "to provide grants for the support and development of cancer complexes which could engage in clinical and basic research, improved diagnosis and treatment of patients, train an effective cancer cadre for the future and radiate influence to upgrade cancer care in surrounding communities."

PLANNING GRANTS TO USC

Recognizing the absence of any major cancer center in the far West, officials of the NCI explored with the USC School of Medicine their possible mutual interest in developing such a project. This led to an award to USC of a grant for support of exploratory planning for a cancer hospital and research institute. Since 1966, a Cancer Planning Committee of the School of Medicine and the County Department of Hospitals has been exploring plans for development of a cancer center for this region. The efforts have been supported by a succession of planning grants from the NCI totalling over $300,000.

COUNTY-USC CANCER HOSPITAL AND RESEARCH INSTITUTE

A proposal to join the County in developing a cancer center for this region was presented to the Board of Trustees in November 1968 by the President of the University, Dr. Norman Topping. Leadership in sponsoring the undertaking was provided by Mr. Kenneth T. Norris, of the USC Board of Trustees and Chairman of the Medical School Board of Councilors.

In December 1968 a representative of the County Board of Supervisors, Mr. Kenneth Hahn, and the President of the University, Dr. Topping, announced plans to develop a regional cancer center to be operated jointly by the County and USC.

Initially a 200-bed hospital and 200,000 square feet of research laboratories were proposed for construction at the County-USC Medical Center. The facility was to house a $5 million annual clinical and basic research program to be operated as an integral part of the USC School of Medicine. Construction funding of 50% was anticipated from the federal government with the remainder to be raised locally by the County and the University.
A Cancer Program for the Region

The Cancer Center was envisioned, not simply as a physical facility, but as the focus of a regional program in which the institutions, health specialists and scientists of Southern California would participate and which would include programs of basic and clinical research, clinical care, education and community service. The program and facility was to provide a center of excellence for the region serving the needs of private and public patients alike.

Cancer Planning Committee

Based upon the understanding between the County and the University the Cancer Planning Committee continued to meet to develop the broad concepts and guidelines concerning the organization and operation of the Cancer Center Program. To ensure the benefits of an interdisciplinary approach and to acknowledge cancer research activities in other health disciplines, representatives from the Schools of Pharmacy and Dentistry were added as were the Chairmen of the principal academic departments involved in cancer activities.

Organizational Concepts

The Cancer Center is conceived of as the Cancer Hospital and Research Institute and programs of treatment, research, and education throughout the community for which these facilities will provide the focus. Programs of the Cancer Center will be task-oriented, interdepartmental, and multidisciplinary rather than following the traditional academic departmental organization. They will be developed by the faculty and staff of the Medical School, its affiliated hospitals and other schools of the University, combining the fundamental research and teaching competence of the University with the facilities and capabilities of a specialized teaching and research hospital. It will provide the scientific and administrative headquarters for programs of clinical cancer investigation, basic research, education, and service to the health specialists and institutions of the community and to their cancer patients.

The planned structure will provide the central focus for Cancer Center programs; however, it is not planned to physically consolidate all cancer programs into the new facility. Cancer Center programs are expected to be conducted in the existing facilities of the health science schools of the University, the LAC-USC Medical Center and other affiliated hospitals, including, in particular, the Children's Hospital of Los Angeles and the John Wesley Hospital. The Cancer Center will provide an additional mechanism for coordination and funding of cancer research, particularly for research which can be developed best in a multidisciplinary, interdepartmental, and collaborative setting.
The cancer activities of the University and its affiliated institutions will be coordinated in an effort to integrate appropriate cancer interests in a regional program which will intensify the overall effort. In particular, there will be interdigitation of basic science research with clinical investigation and patient care in order to effect rapid introduction of research advances to the treatment of cancer-bearing patients.

OPERATIONAL CONCEPTS

The Cancer Hospital will provide treatment on a clinical research basis. Most cancer patients will continue to receive their primary and continuing cancer care in an appropriate community hospital. Patients may be referred to the Cancer Center for special types of treatment, special diagnostic procedures or when their cancer is optimally handled only by their inclusion in a current investigative program at the Cancer Center.

Links will be established with cooperating University and community hospitals in the region in order to provide consultation and collaboration in uniform high standards for cancer detection, diagnosis, staging, multidisciplinary treatment planning and an optimum distribution of cancer care.

Links to cooperating medical institutions and cancer centers in other regions of the state and the nation will be established. These will include scientific communication, collaboration and coordination of the programs of other cancer centers and community hospitals with those of the LAC-USC Cancer Center.

The facility will provide and/or enhance training opportunities for undergraduate and graduate students in various disciplines related to cancer research and clinical oncology. In addition, training will be provided for other types of health care personnel in cancer prevention, detection, treatment and rehabilitation.

DIRECTOR OF THE CANCER HOSPITAL AND RESEARCH INSTITUTE

During 1970-71, a Search Committee appointed by Dean Franz K. Bauer arranged visits for each of several cancer scientists to evaluate the program objectives and plans and to propose their recommendations for development of the program. One of these, Dr. Denman Hammond, accepted the appointment as Director and began to assume the duties of this full time position in February 1971.
INVOLENEMENT OF FACULTY IN SCIENTIFIC PROGRAM PLANNING

Having established broad policy guidelines within which the program was to be developed and an understanding between the University and the County to jointly develop the program and facility, the major task for the Director was planning and development of the scientific programs of the center. During the spring of 1971 over 125 members of the faculty and staff were involved in meetings, interviews and completion of questionnaires about their cancer activities. An assessment was made of the current staff, space, facilities and support of programs related to cancer. Faculty also provided information about their future plans. It was clear there was major faculty interest and talent involved in existing cancer programs; that there were plans for substantial expansion, given suitable opportunities, and that there was broad support for development of the proposed Cancer Hospital and Research Institute.

STUDY OF APPROPRIATE SIZE AND SCOPE OF THE PROGRAM

The data provided by the faculty, together with projections on patterns of cancer care and investigation for the period 1975 to 1985 and studies of cancer facilities in greater Los Angeles, were used in developing an ALTERNATIVES STUDY. This document, prepared with the assistance of Enviro-Med, Inc., examined a series of eight alternatives for size and scope of a regional cancer program and for the facilities which would be required for each. The facility alternatives which were studied covered the range from conducting the program in existing facilities to construction of a new 400 bed cancer hospital.

PROPOSED CANCER HOSPITAL AND RESEARCH INSTITUTE

The facility proposed for construction was selected after thorough analysis of the size and scope of the present and planned cancer activities of the faculty, the cancer patient population, and the needs for facilities that do not now exist, to house those portions of the program that require multidisciplinary interdigitation between basic and clinical scientists.

The proposed facility provides fewer beds and less research space than was planned in the original proposal presented to the USC Board of Trustees and the County Board of Supervisors in late 1968. However, it was based upon a detailed study of present needs and carefully determined needs for development of existing capabilities. Although it is modest by comparison to the major cancer centers in New York and Houston, it is a significant undertaking for this area.
ARCHITECTURAL PROGRAM

A detailed narrative description of the proposed facility was developed based upon the Alternatives Study. It identifies the major space elements in the structure, identifies their function and requirements and identifies the rooms that comprise each major element of the facility. It was developed following the usual architectural guidelines and the requirements of the L.A. County Capital Projects Division, Chief Administrative Office. The architects will use this program in developing schematic and working drawings.

CONCEPTUAL DESIGN DRAWINGS

To assist faculty and staff in providing advice for incorporation in the Architectural Program, conceptual drawings of a theoretical cancer hospital and research institute of the size and scope proposed were made. These underwent several drafts and numerous modifications as advice and critique were obtained from faculty members with experience in conducting clinical programs in cancer and cancer related research.

The Conceptual Drawings evolved along with the Architectural Program. They illustrate a seven floor structure consisting of three architectural elements: a research laboratory component, a hospital component, and a third component housing clinical laboratories, nuclear medicine, diagnostic and therapeutic radiology, and the ambulatory cancer clinics.

These are not actual floor plans, but concepts only. The architects will be at liberty to determine the ultimate design in collaboration with the clients and in consideration of site requirements, etc., however, the elements to be included and their relative size and relationships have been illustrated as accurately as possible at this stage of planning.

CONSTRUCTION GRANT APPLICATION

Based upon the concepts and cost estimates of the elements described in the Architectural Program and illustrated in the Conceptual Drawings, a grant application for federal participation in construction costs was prepared. Those areas of the proposed facility which are to be devoted to clinical or basic research related to cancer are eligible for funding by the NCI.

With approval of officers of the Medical School, the University administration, the Medical Center, the Department of Health Services and the Board of Supervisors, the application was submitted in September 1972.
SIGNIFICANT PROGRAM ACCOMPLISHMENTS SINCE 1971

1971

- Recruitment of Dr. Denman Hammond as full-time Director of the Cancer Hospital and Research Institute and Associate Dean of the School of Medicine.

- Involvement of over 150 members of the faculties of the Schools of Medicine, Dentistry and Pharmacy in questionnaires and interviews to assess cancer related current activities and projection of future plans.

- Allocation by the Medical Center of approximately 25,000 GSF of space for creating laboratories and offices for newly developing cancer center programs, in Research Building I on the Medical Center campus and in three buildings on the former campus of the California College of Medicine.

- Approval by the Los Angeles County Board of Supervisors of the Master Plan for the LAC-USC Medical Center, including plans for the LAC-USC Cancer Hospital and Research Institute.

- Approval of Public Authority financing for funding construction of County Health facilities.

- Establishment of an office for Cancer Center Development reporting to the USC Development Office to establish a base of private community support.

- Approval by the Los Angeles County Board of Supervisors of the first budget for the LAC-USC Cancer Hospital. In July 1971 six permanent professional staff level positions and two secretarial positions were established.

- Selection and appointment of Mr. William Weitekamp as Administrator of the LAC-USC Cancer Hospital.

- Submission of a grant application to the National Cancer Institute to provide funds for scientific program planning for the Cancer Center and development of plans for the Cancer Hospital and Research Institute. The application was approved and awarded $150,000.
• Preparation and submission of a grant application to the NCI for operational funding of the Cancer Center administrative and core support and a multidisciplinary program of cancer research. This emphasized new interdepartmental cancer research projects proposed by the faculty which could be done without depending upon new construction.

• Establishment by the County of additional full-time faculty level positions for the Cancer Hospital professional staff.

• Budgeting by the County of $530,000 for architectural fees to produce schematics and preliminary drawings for the Cancer Hospital and Research Institute.

• Recommendation by the National Cancer Advisory Board of an award of $8.3 million for the initial three years of operational support for the multidisciplinary Cancer Research Center. This included $2 million for renovation of County buildings to create the initial laboratories and offices for the Cancer Center.

• Recruitment of Dr. Thomas C. Hall, as Professor of Medicine and Biochemistry, and Associate Director for Clinical Investigation.

• Decision by the County to purchase the California College of Medicine property, and provide three buildings to house the initial Cancer Center offices and laboratories.

• Allocation by the Medical Center of hospital space for development of the initial cancer hospital beds; a 20-bed ward for clinical research.

• The L.A. County Board of Supervisors, with concurrence of the University, named the architectural team for the Cancer Hospital and Research Institute.

  Arthur Froehlich & Associates; Principal Architects
  Roy Seeley & Co.; Site Architects
  Enviro-Med, Inc.: Scientific and Program Consultants
  Brandow and Johnston: Structural Consultants

• The Board of Supervisors, with University concurrence, authorized submission of a grant application to the National Cancer Institute for Federal participation in construction of the research elements of the Cancer Hospital and Research Institute.

• Involvement of over 100 members of the faculty and staff in meetings, interviews and questionnaires to obtain their expertise in development
of an Architectural Program for the proposed Cancer Hospital and Research Institute. The final draft document was submitted in December 1972 for review by appropriate officers of the County and University.

- Development of Conceptual Design Drawings of the proposed Cancer Hospital and Research Institute. Submitted for review in December 1972 as a companion document to the Architectural Program.
- Award of American Cancer Society Research Professorship to Dr. Thomas C. Hall for career research support.

1973

- Appointment of Dr. Robert J. Hasterlik, as Professor of Medicine and Associate Director for Regional Activities.

- Conduct of a two day site visit by a team of 18 consultants for review and evaluation of the Construction Grant application for the Cancer Hospital and Research Institute.

- The National Cancer Advisory Board recommended award of $11,880,000 for construction of the eligible research areas of the Cancer Hospital and Research Institute.

- Notification by the National Cancer Institute that they will promptly negotiate award of the grants for operational funding of the Cancer Research Center Program, and funds to renovate available space for the initial laboratories, research beds and administrative offices.
The cancer activities conducted by the USC faculty probably comprise the major cancer research and treatment effort in the West and one of the largest in the country, as illustrated by the following:

- **Clinical Care**
  On an average day, faculty of the School of Medicine supervise the management of over 225 bed patients with cancer at the Medical Center, the John Wesley Hospital, and the Childrens Hospital of Los Angeles.

- **Clinical Investigation**
  Formal studies of new and advanced diagnosis and treatment of cancer patients are in progress in almost all clinical departments of the School of Medicine and in the Schools of Dentistry and Pharmacy. USC faculty members in various departments are participants in national studies of breast, renal, prostate, bladder and gynecologic cancer and in cancer radiation therapy.

The Chairmen and Headquarters Office of two national cooperative groups conducting controlled clinical investigation of new treatments for cancer are located at the USC School of Medicine. These are: the **Childrens Cancer Study Group** consisting of investigators of 23 major pediatric medical centers of the United States and Canada, and, the **Western Cancer Study Group** which includes the major university hospital and medical centers of the Pacific Coast.

- **Basic Research**
  Approximately 90 USC faculty members devote a major part of their activities to basic laboratory research related to cancer. Over 70 principal investigations in the Schools of Medicine, Dentistry and Pharmacy are recipients of contracts and grants for research and training related to cancer totalling over $7 million per annum. There are over 1000 outpatient visits per week at the LAC-USC Medical Center.

- **Education**
  Within the Schools of Medicine, Pharmacy, and Dentistry and USC affiliated hospitals are nine NIH supported postdoctoral programs providing training in clinical and research aspects of cancer.

The immediate proximity of the Cancer Center to a medical school and graduate medical programs will allow ready access of students, house officers and faculty both to the beds and to the laboratories of the Cancer Center.

The USC School of Medicine has a distinguished program of continuing graduate medical education which offers a broad interface with practicing physicians throughout Southern California. This provides not only a strong basis for patient referral but important contacts in continuing medical education for physicians for the area.
NUMBER OF CURRENT FULL-TIME USC FACULTY WITH SIGNIFICANT INVOLVEMENT IN CANCER RESEARCH, EDUCATION, AND TREATMENT

SCHOOL OF MEDICINE .................. 118

Departments

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SCHOOL OF PHARMACY ............... 11

SCHOOL OF DENTISTRY ............... 11

SCHOOL OF ENGINEERING ............. 4

DIVISION OF BIOLOGICAL SCIENCES ... 3

TOTAL 147

RANK OF CURRENT FACULTY INVOLVED IN CANCER ACTIVITIES

<table>
<thead>
<tr>
<th>Rank</th>
<th>Faculty</th>
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</thead>
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<tr>
<td>Professor</td>
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<tr>
<td>Associate Professor</td>
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</tr>
<tr>
<td>Assistant Professor and Instructor</td>
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</table>

147
### Present Sources and Amounts of Support to USC Faculty for Cancer Research and Training

(As of January 1973)

<table>
<thead>
<tr>
<th>Source</th>
<th>No. of Projects</th>
<th>Annual Funding</th>
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<tr>
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</tr>
<tr>
<td>NIH Research Grants</td>
<td>34</td>
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<tr>
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<tr>
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<tr>
<td>Atomic Energy Commission</td>
<td>1</td>
<td>$24,000</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>62</td>
<td>$6,370,115</td>
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<tr>
<td><strong>Private</strong></td>
<td></td>
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</tr>
<tr>
<td>American Cancer Society Research Grants</td>
<td>7</td>
<td>$229,843</td>
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<td>Council for Tobacco Research</td>
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<tr>
<td>All Other Private Sources</td>
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<td>$233,891</td>
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<tr>
<td><strong>Subtotal</strong></td>
<td>25</td>
<td>$666,363</td>
</tr>
<tr>
<td><strong>TOTAL:</strong></td>
<td>87</td>
<td>$7,036,478</td>
</tr>
</tbody>
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### Site of Performance of Above Projects

- Medical Center: $889,298
- Medical School: $4,196,498
- Dental School: $469,457
- Pharmacy School: $141,813
- Children's Hospital of Los Angeles: $977,347
- John Wesley Hospital: $362,965

**Total: $7,036,478**
The Alternatives Study (Enviro-Med, Task I) went through several drafts as many members of the faculty provided advice and critique. Based upon final deliberations of the Cancer Planning Committee and approval by the responsible officers of the Medical School, the Medical Center and the County Department of Hospitals, the following facility is proposed:

**Cancer Hospital:**
- 24 intensive care beds for sophisticated clinical investigation
- 50 acute care beds for advanced study patients
- 50 minimal or self-care beds for patients who are ambulatory but require complex treatment or frequent observation

**Research Laboratories:**
- approximately 75,000 net square feet, designed for maximum flexibility

**Multidisciplinary Cancer Clinics:**
- for 200 visits per day

**Radiation Therapy Facilities:**
- for 100 treatments per day and advanced therapeutic studies
The LAC-USC Cancer Hospital and Research Institute is envisioned as a sophisticated facility with special characteristics.

It is not only a hospital but a special environment including facilities for basic research, advanced patient care, clinical investigation and education.

It will be a referral center for investigation of advances in diagnosis, treatment and rehabilitation which will be available to selected cancer patients from a region extending beyond Los Angeles County.

Acceptance of patients will be on the basis of medical criteria and suitability for benefitting from the special programs of the Cancer Center. It will accept private patients on the same basis as public patients.

It will be the focal point for a regional program which will coordinate cancer activities in affiliated hospitals throughout the community in order to exert a maximal beneficial effect on cancer care in the region.

Its programs will be task-oriented, interdepartmental and multidisciplinary rather than organized according to traditional medical departments.

To attract a base of private support from the community it will be identified as a university center of excellence serving the special needs of cancer patients of the region which are not usually obtainable in their community hospitals.

It will integrate its efforts with those of other centers in a nationwide system for advancing cancer prevention, diagnosis and treatment.

It will have maximum administrative identity and independence at the Medical Center with independent budget and operational control.

Assignment of space and use of its facilities will be determined on the basis of scientific merit of the programs to be conducted and the likelihood that they will lead to new information of value in advances in cancer prevention, diagnosis, treatment, rehabilitation and education.
## Present Sources and Amounts of Support to USC Faculty for Cancer Research and Training

(As of January 1973)

<table>
<thead>
<tr>
<th>Source</th>
<th>No. of Projects</th>
<th>Annual Funding</th>
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<tr>
<td><strong>Federal</strong></td>
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</table>

### Site of Performance of Above Projects

<table>
<thead>
<tr>
<th>Site</th>
<th>Amount</th>
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<tbody>
<tr>
<td>Medical Center</td>
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<tr>
<td>Medical School</td>
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<tr>
<td>Dental School</td>
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<td>Pharmacy School</td>
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<tr>
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<td>John Wesley Hospital</td>
<td>362,065</td>
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<tr>
<td><strong>Total</strong></td>
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<td>AGENCY AND GRANT</td>
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<tr>
<td>DE 20486-01</td>
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<tr>
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<td>Clinical &amp; Molecular Pharmacology</td>
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<tr>
<td>CA 13075-01</td>
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<tr>
<td>HL 10830</td>
<td>Purification of Human Erythropoietin for Research use</td>
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<td>AM 08273-01</td>
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<td>HL 06120-12</td>
<td>Relationships between Coagulability and Thrombosis</td>
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<tr>
<td>CA 02373-02</td>
<td>Nucleoside and Nucleotide Derivatives</td>
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<tr>
<td>DE 03415-01</td>
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<td>AP 01055-03</td>
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<tr>
<td>R-8003801</td>
<td>Biological Indicators for Air Pollution</td>
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<tr>
<td>CA-0764</td>
<td>Evaluation of Anti-Leukemic Compounds in Children</td>
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<td>CA-11059</td>
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<tr>
<td>DE 03318-01</td>
<td>Biochemistry of Surgically Wounded Alveolar Mucosa</td>
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AGENCY AND GRANT

CA 10051-02

Planning Cancer Hospital and Cancer Research Institute

Denman Hammond, M.D.

12/67-3/73

$150,000

CA 14087-01

Multidisciplinary Cancer Research Program (Cancer Research Center Grant)

Denman Hammond, M.D.

9/72-9/75

$3,413,918

A & R ($1,625,000)

TOTAL PROJECT PERIOD

CURRENT AMOUNT

NCI RESEARCH CANCER CENTER GRANTS
<table>
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<tr>
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<td>CA 0573-03</td>
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<td>Myron Koron, M.D.</td>
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<td>Daniel Hays, M.D.</td>
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<td>CA 05905</td>
<td>Hematopathology Training in Lymphomas and Leukemia</td>
<td>Robert J. Lukes, M.D.</td>
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<td>Samuel I. Rapaport, M.D.</td>
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<td>Specialists in Radiopharmaceuticals (Radiopharmaceuticals)</td>
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<td>Training of Pharmacists as Technician Supervisor</td>
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**TOTAL:** $594,737
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<td>GM 19995-01</td>
<td>Protein Synthesis Activation in Sea Urchin Eggs</td>
<td>Paul Denny, Ph.D.</td>
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<td>GM 10358-07</td>
<td>Effects of Penicillamine on Collagen</td>
<td>Marcel Nimni, Ph.D.</td>
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<td>HD 07359-01</td>
<td>Gene Function during Natal Development &amp; Aging</td>
<td>Caleb Finch, Ph.D.</td>
<td>6/72-5/75</td>
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<td>GB 35236</td>
<td>Brain Catecholamines &amp; Aging</td>
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<td>AI-10112-02</td>
<td>Immuno Competent Cells &amp; Homogeneous Antigens</td>
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<td>RNA from the Surface of Normal &amp; Transformed Cells</td>
<td>John W. Beierle, Ph.D.</td>
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<td>Morphology &amp; Rheology of Cycle Cells</td>
<td>Richard F. Baker, Ph.D.</td>
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<td>NIH</td>
<td>Periodate Transformation of Human Lymphocytes</td>
<td>Richard O'Brien, M.D. &amp; John Parker, M.D.</td>
<td>6/73-6/76</td>
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<td>NIH</td>
<td>Malignant Transformation of DNA Inhibitors &amp; Cell Cycle Specificity</td>
<td>William Benedict, M.D.</td>
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<td>NIRD</td>
<td>Role of Cyclic AMP in Salivary Gland Tumors</td>
<td>L. Daniel Schaeffer, Ph.D.</td>
<td>9/73-8/76</td>
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<td>Role of Bone Cell Response in Periodontal Disease</td>
<td>Barbara Mills Ph.D.</td>
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<td>NIH</td>
<td>Interdisciplinary Cancer Research Training Program</td>
<td>Thomas C. Hall, M.D.</td>
<td>7/73-6/74</td>
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<td>NIDR</td>
<td>Biochemistry (Developmental Biology)</td>
<td>Harold C. Slavkin, D.D.S.</td>
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<td>CA  05136-13</td>
<td>Western Cancer Study Group</td>
<td>Joseph R. Bateman, M.D.</td>
<td>1/60-12/73</td>
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<td>Childrens Cancer Study Group A (Childrens Hospital)</td>
<td>Myron Karon, M.D.</td>
<td>9/71-8/74</td>
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<td>CA  13539-01</td>
<td>Childrens Cancer Study Group A Operations Office</td>
<td>Denman Hammond, M.D.</td>
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<td>NIH  8-333-9-0</td>
<td>Gynecologic Oncology Group</td>
<td>Philip DiSaia, M.D.</td>
<td>1/72-12/76</td>
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### CAREER DEVELOPMENT AWARDS, SCHOLARSHIPS, FELLOWSHIPS

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<td>LSA</td>
<td>Fellowship, Leukemia Society of America</td>
<td>Peter K. Vogt, Ph.D.</td>
<td>10/71-11/72</td>
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<td>ACS-47</td>
<td>ACS Research Professorship</td>
<td>Thomas C. Hall, M.D.</td>
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<td>DE 47037-05</td>
<td>Epithelio-mesenchymal Interactions during Odontogenesis</td>
<td>Harold S. Slavkin, D.D.S.</td>
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<td>Cell Exudates - Effects on Oral and other Tumors</td>
<td>John W. Beierle, Ph.D.</td>
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<td>Tumors in a Protected Environment</td>
<td>Stuart Siegal, M.D.</td>
<td>6/73-5/76</td>
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<tr>
<td>PH 43-68-1030</td>
<td>Comprehensive Field and Laboratory Research Program on the Etiology and Epidemiology of Human Cancer (Project A)</td>
<td>Murray B. Gardner, M.D.</td>
<td>6/68-7/78</td>
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<td>Comprehensive Field and Laboratory Research Program on the Etiology and Epidemiology of Human Cancer (Project B)</td>
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<td>CA 72-2042</td>
<td>Conditional Lethal Mutants of RNA Tumor Viruses Studies</td>
<td>Peter K. Vogt, Ph.D.</td>
<td>10/71-10/72</td>
<td>$256,000</td>
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<td>NCI-C-72-3241</td>
<td>Pharmacologic Disposition of Guanazole and Adriamycin</td>
<td>Phillip Harris, Ph.D.</td>
<td>7/72-6/73</td>
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<td>NCI-C-723260</td>
<td>Documentation of Human Breast Cancer in Tissue Culture</td>
<td>Russell P. Sherwin, M.D.</td>
<td>7/72-6/75</td>
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<td>NCI-CC-73-1</td>
<td>Prototype Clinical Chemotherapy Program for Treatment of Acute Leukemia</td>
<td>Myron Karon, M.D.</td>
<td>6/73-5/76</td>
<td>$114,743</td>
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<td>IN-21L</td>
<td>Institutional Research Grant</td>
<td>Lewis Guiss, M.D.</td>
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<td>ET-36</td>
<td>Characterization of Human Cancer Cell Lymphocyte Interaction</td>
<td>Arnis Richters, Ph.D.</td>
<td>1/72-12/73</td>
<td>$33,991</td>
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<td>CI-57</td>
<td>Pathobiologic Responses of Lymphocytes in Human Breast Cancer Tissue</td>
<td>Russell Sherwin, M.D.</td>
<td>7/71-6/76</td>
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<td>ACS</td>
<td>Tumor Registry</td>
<td>Weldon K. Bullock, M.D.</td>
<td>7/71-6/73</td>
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<td>ACS</td>
<td>Cervical Cancer Screening Project</td>
<td>Duane Townsend, M.D.</td>
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<td>IC-15B</td>
<td>Cellular Biology and Biochemistry of Selected Antitumor Agents</td>
<td>Myron Karon, M.D.</td>
<td>7/72-6/73</td>
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<td>BC-42B</td>
<td>Studies on the Mechanism of Insulin Action-Covalent Labelling of Receptor Sites</td>
<td>Daniel Levy, Ph.D.</td>
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<td><strong>$229,843</strong></td>
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## ALL OTHER FEDERAL, FOUNDATION, AND PRIVATE SOURCES

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<th>AGENCY AND GRANT</th>
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<tr>
<td>Council for Tobacco Research, USA, Inc.</td>
<td>Mechanisms of Suppression of Cellular Immunity by Carcinogens</td>
<td>John Parker, M.D.</td>
<td>7/70-6/73</td>
<td>$29,800</td>
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<td>Health Research, Inc.</td>
<td>Cancer/Breast Adjuvant</td>
<td>Lewis W. Guiss, M.D.</td>
<td>7/71-6/72</td>
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<td>L.A. County Health Department</td>
<td>Screening Carcinoma/Cervix Program</td>
<td>C.P. Schwinn, M.D.</td>
<td>7/71-6/72</td>
<td>$88,000</td>
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<td>AEC</td>
<td>ESR Studies of Thiyl Free Radicals in relation to Biological Effects of Radiation</td>
<td>Walter Wolf, Ph.D.</td>
<td>6/68-3/73</td>
<td>$24,000</td>
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<td>VARIAN ASSOCIATES</td>
<td>Radiation Therapy Training Fund</td>
<td>Frederick W. George, III, M.D.</td>
<td>10/72-9/73</td>
<td>$8,400</td>
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<td>NS 00526-05</td>
<td>Brain Metabolism and Systemic Disease</td>
<td>Samuel Bessman, M.D.</td>
<td>8/69-7/74</td>
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<td>NSF-GB 32351 X</td>
<td>Photocatalyzed Reaction involving Active Sites of Bioenergetic Enzymes</td>
<td>Arnold Brodie, Ph.D.</td>
<td>5/72-4/73</td>
<td>$37,100</td>
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<td>Initial Training and Research Grant</td>
<td>John F. Brown, M.D.</td>
<td>7/72-6/73</td>
<td>$27,500</td>
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<td>PROFESSIONAL STAFF ASSOCIATION</td>
<td>Electromyographic Studies of Human Urinary Bladder</td>
<td>Malcolm Cosgrove, M.D.</td>
<td>10/71-6/73</td>
<td>$750</td>
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<td>PROFESSIONAL STAFF ASSOCIATION</td>
<td>Isotopes in the Detection of Cancer of the Prostate</td>
<td>Malcolm Cosgrove, M.D.</td>
<td>3/72-3/73</td>
<td>$1,000</td>
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<td>DE WRIGHT FOUNDATION</td>
<td>Complete Studies of possible Tumor Specific Antigens in Cervical and Ovarian Cancer</td>
<td>Philip DiSaia</td>
<td>9/71-9/73</td>
<td>$19,500</td>
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<td>CHILDREN'S BUREAU 911</td>
<td>Training Grant in Cytogenetics</td>
<td>George N. Donnell, M.D.</td>
<td>7/71-6/73</td>
<td>$152,794</td>
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<td>BAXTER FUND</td>
<td>Surgical Research</td>
<td>Arthur Donovan, M.D.</td>
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<td>NSF GB 31537</td>
<td>Biosynthetic and Transfer Reaction</td>
<td>Mary Ellen Jones, Ph.D.</td>
<td>11/72-5/73</td>
<td>$41,700</td>
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<td>INTRA-SCIENCE</td>
<td>SUPPORT FOR PROSTATE ANTIGEN RESEARCH</td>
<td>Norman Kharasch, Ph.D.</td>
<td>1/71-6/73</td>
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<tr>
<td>Council for Tobacco</td>
<td>Effects of Inhalation of Whole Smoke, Synthetic Smog, Ambient Air, Alone and in Combination on the Respiratory Tract &amp; other Organs of Pathogen-Free Male &amp; Female Mice</td>
<td>Clayton Loosli, M.D.</td>
<td>10/70-9/74</td>
<td>$105,989</td>
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<td>NSF GP-29478 X</td>
<td>Regulation of expression of Tryptophan Operoni Simultaneous and Sequential Depression</td>
<td>Raymond Mosteller, Ph.D.</td>
<td>5/72-5/73</td>
<td>$25,000</td>
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<td>International Union Against Cancer</td>
<td>Fellowship - Sabbatical Leave Support - Travel</td>
<td>John Parker, M.D.</td>
<td>9/72-8/73</td>
<td>$6,000</td>
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<td>Los Angeles County Health Association</td>
<td>A Quantitative Histochemistry Routine for Mucopolysaccharides</td>
<td>Thomas H. Rosenquist, Ph.D.</td>
<td>9/71-8/72</td>
<td>$4,300</td>
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<tr>
<td>AMA</td>
<td>Intracellular K, Sodium, and pH in Lung Disease</td>
<td>Nancy Telfer, M.D.</td>
<td>12/71-12/73</td>
<td>$20,000</td>
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<tr>
<td>Eckstrom Foundation</td>
<td>Portable Pap Clinic</td>
<td>Dwane Townsend, M.D.</td>
<td>6/72-7/75</td>
<td>$19,300</td>
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<td>Pending</td>
<td>Cell Surfaces, RNA, &amp; Contact Inhibition</td>
<td>John W. Beierle, Ph.D.</td>
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<td>Diamond Fund</td>
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## ALL OTHER FEDERAL, FOUNDATION, AND PRIVATE SOURCES (CONTINUED)

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<td>Avalanche Devices for the Detection of Positrons in Biological Systems</td>
<td>Carol Marcus, Ph.D.</td>
<td>6/73-5/74</td>
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<td>AEC</td>
<td>Semiconductor Detectors for Monitoring Carbon-14: Development of an Advanced Biomedical Capability</td>
<td>Carol Marcus, Ph.D.</td>
<td>6/73-5/74</td>
<td>$35,000</td>
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<td>Petroleum Research Fund (American Chemical Society)</td>
<td>Photochemical Studies</td>
<td>Norman Kharasch, Ph.D.</td>
<td>9/72-8/75</td>
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<td>NSF</td>
<td>Regulation of Transcription in Dinolagellate</td>
<td>Timothy O'Brien, Ph.D.</td>
<td>4/72-3/74</td>
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</table>
G. Denman Hammond, M.D.  

**Associate Dean, Professor of Pediatrics**

**PLACE OF BIRTH (City, State, Country)**

**PRESENT NATIONALITY (If non-U.S. citizen, indicate kind of visa and expiration date)**

**EDUCATION** (Begin with baccalaureate training and include postdoctoral)

<table>
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<th>INSTITUTION AND LOCATION</th>
<th>DEGREE</th>
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<tr>
<td>University of North Carolina</td>
<td>B.A.</td>
<td>1944</td>
<td>Chemistry</td>
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<tr>
<td>Univ. of Pennsylvania Sch. of Medicine</td>
<td>M.D.</td>
<td>1948</td>
<td>Medicine</td>
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<tr>
<td>The Pennsylvania Hospital, Philadelphia</td>
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<td>1948-1950</td>
<td>Rotating Intern</td>
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<tr>
<td>Childrens Hospital of Philadelphia</td>
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<td>1952-1953</td>
<td>Resident, Pediatrics</td>
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**HONORS**

- University of North Carolina: Parker Medal; Patterson Award 1944
- Fellow of the Giannini Foundation 1954 & 1955
- American Cancer Society, Scholar in Cancer Research 1964 - 1965

**RESEARCH SUPPORT (See instructions)**

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<td>CA 10051</td>
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**MAJOR RESEARCH INTEREST**

- Oncology, Hematology, Cellular Differentiation

**ROLE IN PROPOSED PROJECT**

- Director, LAC-USC Cancer Hospital and Research Institute

**ROLE IN PROPOSED PROJECT**

**RESEARCH SUPPORT (See instructions)**

- CA 02649-16
- CCSGA Headquarters
- AM 04048-12
- HD 00048-12
- CA 10051

**RESEARCH AND/OR PROFESSIONAL EXPERIENCE**

1971 - Associate Dean, USC School of Medicine
1971 - Director, LAC-USC Cancer Hospital and Research Institute
1970-1971 - Deputy Chairman, Department of Pediatrics, USC School of Medicine
1965 - Visiting Investigator, Institute of Medical Genetics, University of Turin, Italy (Leukocyte antigens, histocompatibility; Professor Ruggero Ceppellini, Director)
1960-1965 - Associate Professor of Pediatrics, USC School of Medicine
1957-1960 - Assistant Professor of Pediatrics, USC School of Medicine
1956-1957 - Assistant Professor of Pediatrics, University of California School of Medicine, San Francisco
1955-1957 - Lecturer, School of Nursing, University of California, San Francisco
1954-1956 - Research Fellow, Research Associate, Instructor of Pediatrics, University of California Medical Center, San Francisco

**HOSPITAL APPOINTMENTS**

- 1954-1957 - Attending Physician, University of California Hospital, San Francisco
- 1955-1957 - Attending Physician, San Francisco General Hospital
- 1956-1957 - Director, Hematology and Microchemistry Research Laboratories, Department of Pediatrics, University of California, San Francisco
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<th>Year(s)</th>
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<tr>
<td>1957-1960</td>
<td>Assistant Attending Physician, Childrens Hospital of Los Angeles</td>
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<td>1957-1960</td>
<td>Associate Hematologist, Childrens Hospital of Los Angeles</td>
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<tr>
<td>1960-</td>
<td>Senior Attending Physician, Childrens Hospital of Los Angeles</td>
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<tr>
<td>1960-1964</td>
<td>Consulting Hematologist, California State Health Department</td>
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<tr>
<td>1960-1971</td>
<td>Head, Division of Hematology and Director, Hematology Research Laboratories, Childrens Hospital of Los Angeles</td>
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<tr>
<td>1970-1971</td>
<td>Deputy Physician-in-Chief, Childrens Hospital of Los Angeles</td>
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<tr>
<td>1971-</td>
<td>Senior Attending Physician, LAC-USC Medical Center</td>
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<td>1971-</td>
<td>Director, LAC-USC Cancer Hospital and Research Institute</td>
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**Consultantships, Appointive and Elective Positions**

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<tr>
<td>1957-</td>
<td>Member, Acute Leukemia Cooperative Chemotherapy Group A</td>
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<td>Childrens Cancer Study Group A</td>
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<td>1962-1967</td>
<td>Acute Leukemia Task Force, National Cancer Institute</td>
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<td>1963-1965</td>
<td>Platelet Study Group, National Cancer Institute</td>
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<td>1964-</td>
<td>National Medical Advisory Board, Cooleys Anemia Foundation</td>
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<td>1965-1969</td>
<td>Hematology Study Section, National Institutes of Health</td>
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<td>1966-1970</td>
<td>Erythropoietin Committee, National Heart and Lung Institute</td>
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<tr>
<td>1967-</td>
<td>Consultant, Research and Training Awards, National Cancer Institute</td>
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<td>1967-1969</td>
<td>Professional Education Committee, American Cancer Society, Los Angeles</td>
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<td>1967-</td>
<td>Medical Board, Leukemia Society of America, Inc., Los Angeles</td>
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<td>1968-</td>
<td>Chairman, Childrens Cancer Study Group A</td>
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<td>1968-</td>
<td>Chairmans Committee, Clinical Investigations Branch, NCI</td>
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<td>1969-1970</td>
<td>Chairman, Section on Erythropoietin, American Society of Hematology</td>
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<tr>
<td>1970-</td>
<td>Chairman, Pediatric Tumor National Liaison Committee</td>
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<td>1971-</td>
<td>Consultant, California Division, American Cancer Society</td>
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<td>1971-</td>
<td>Board of Directors, Los Angeles Unit, American Cancer Society</td>
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<td>1972-</td>
<td>Member, NCI Cancer Research Center Review Committee</td>
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**Professional Societies**

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<td>Northern California Pediatric Society</td>
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<td>Diplomate, American Board of Pediatrics</td>
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<td>1958</td>
<td>Fellow, American Board of Pediatrics</td>
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<td>1958</td>
<td>American Federation for Clinical Research</td>
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<td>1960</td>
<td>Society for Pediatric Research</td>
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<td>1960</td>
<td>International Society of Hematology</td>
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<td>1961</td>
<td>Los Angeles Pediatric Society</td>
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<tr>
<td>1961</td>
<td>Western Society for Clinical Research</td>
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<td>1961</td>
<td>American Society of Hematology</td>
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<tr>
<td>1963</td>
<td>Society for Experimental Biology and Medicine</td>
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<td>1963</td>
<td>International Society of Blood Transfusion</td>
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<td>1964</td>
<td>American Association for Cancer Research</td>
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<td>1964</td>
<td>Southwestern Pediatric Society</td>
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<td>1966</td>
<td>American Pediatric Society</td>
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<tr>
<td>1971</td>
<td>American Association for Cancer Education</td>
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<tr>
<td>1972</td>
<td>Los Angeles Academy of Medicine</td>
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</table>


NAME

Thomas C. Hall, M.D.

TITLe

Professor of Medicine and Biochemistry

PLACE OF BIRTH (City, State, Country)


PRESENT NATIONALITY (If non-U.S. citizen, indicate kind of visa and expiration date)

SEX

☐ Male ☐ Female

EDUCATION (Begin with baccalaureate training and include postdoctoral)

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<td>Harvard College</td>
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<td>Harvard Medical School</td>
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<td>1944</td>
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<td>1949</td>
<td>Medicine</td>
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HONORS

Medical School (Magna Cum Laude)

MAJOR RESEARCH INTEREST

Oncology, Pharmacology, Medicine

ROLE IN PROPOSED PROJECT

Associate Director, Clinical Investigation

RESEARCH AND/OR PROFESSIONAL EXPERIENCE (Starting with present position, list training and experience relevant to area of project. List all or most representative publications. Do not exceed 3 pages for each individual.)

1972    Associate Director, LAC-USC Cancer Center
1972    Professor of Medicine and Biochemistry, USC School of Medicine
1968-72 Director, Division of Oncology, University of Rochester
1968-72 Professor of Medicine and Pharmacology, University of Rochester
1967    Physician, Active Medical Staff, Boston Hospital for Women
1965    Sr. Associate, Medicine, Peter Bent Brigham Hospital
1965    Assistant Clinical Professor, Medicine, Harvard Medical School
1964    Chief, Clinical and Biochemical Pharmacology, Children's Cancer Research Foundation
1963    Senior Associate, Medicine, Children's Hospital Medical Center, and Children's Cancer Research Foundation
1961    Cochairman, ECOG, Solid Tumor Chemotherapy, National Institutes of Health
1961    Adjunct Associate Professor, Biochemistry, Brandeis University
1957-62 Director, Oncology Division, Medical Services, Emmanuel Shattuck Hospital
Selected Bibliography of Thomas C. Hall, M.D.


<table>
<thead>
<tr>
<th>NAME</th>
<th>TITLE</th>
<th>BIRTHDATE (Mo., Day, Yr.)</th>
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<tr>
<td>Robert J. Hasterlik, M.D.</td>
<td>Professor of Medicine</td>
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**PLACE OF BIRTH (City, State, Country)**

**PRESENT NATIONALITY (If non-U.S. citizen, sex)***

**EDUCATION (Begin with baccalaureate training and include postdoctoral)**

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<tr>
<td>University of Chicago</td>
<td>S.B.</td>
<td>1934</td>
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<tr>
<td>Rush Medical College, U. of Chicago</td>
<td>M.D.</td>
<td>1938</td>
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<tr>
<td>American Board of Internal Medicine</td>
<td>Licensure</td>
<td>1947</td>
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**HONORS**

Phi Beta Kappa, 1934
Alpha Omega Alpha, 1938

**MAJOR RESEARCH INTEREST**

Radiation Oncogenesis

**ROLE IN PROPOSED PROJECT**

Associate Director, Regional Activities

**RESEARCH SUPPORT (See instructions)**

**RESEARCH AND/OR PROFESSIONAL EXPERIENCE (Starting with present position, list training and experience relevant to area of project. List all or most representative publications. Do not exceed 3 pages for each individual.)**

1973 Professor of Medicine, University of Southern California School of Medicine
1973 Associate Director, Regional Activities, LAC-USC Cancer Center
1970-1973 Clinical Professor of Medicine, University of California at San Diego
1965-1970 Fellow, Center for Policy Study, University of Chicago
1960-1970 Professor
1957-1960 Director, Health Physics Service, University of Chicago
1953-1960 Associate Professor
1952-1963 Associate Director, Argonne Cancer Research Hospital, University of Chicago
1948-1953 Senior Scientist, Division of Biological and Medical Research, Argonne National Laboratory
1948-1953 Director, Health Division, Argonne National Laboratory
1948-1953 Assistant Professor, Department of Medicine, University of Chicago
Selected Bibliography

Robert J. Hasterlik, MD


INSTITUTION:

Name: Naylor Dana Institute for Disease Prevention
Address: American Health Foundation, 2 East End Avenue
         New York, New York 10021

Is the institution affiliated with a University, Hospital, or other organization? Yes If so, please specify: New York College of Medicine

Brief description of purpose of institution, including whether clinical or nonclinical: Preventive Medicine through Health Research, Health Education and Health Care. Institute efforts are mainly nonclinical, oriented towards studies on etiology of cancers and mechanisms of carcinogenesis.

If clinical, how many beds? ______ Member of NCI cooperative group? No

Research (list main areas): Mainly research in Cancer, Heart Disease - Environmental Carcinogenesis, Experimental Pathology, Epidemiology, Molecular & Cell Biology, Lipid Metabolism, Nutritional Biochemistry and Behavioral Sciences (e.g. Smoking Withdrawal).

BUDGET:

Approximate annual budget: $2,500,000

Please specify sources and amount of support (e.g. Federal, State, private, etc.): Research grants and contracts, 90% from Federal sources, the remainder from private sources.

PERSONNEL AND PUBLICATIONS: see attached sheet.

Date of Application: 11/26/1973 Signed

Title: Vice President for Research

Application should be submitted to Dr. Harold P. Rusch, President, AAVI, Wisconsin Clinical Cancer Center, 93 University Hospital
McArdle-Laboratory for Cancer Research, University of Wisconsin, Madison, Wisconsin 53706.
PERSONNEL:

Names and titles of senior personnel, including brief curricula vitae.

List on separate pages. E.L. Wynder, M.D. D. Hoffmann, Ph.D.
J.H. Weisburger, Ph.D. P.C. Chan, Ph.D.
P. Peacock, M.D. P. Hill, Ph.D.
K. Mabuchi, M.D. B.S. Reddy, D.V.M., Ph.D.

Total number of employees, grouped by categories (e.g., professional, technicians, office, etc.):

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<td><strong>Total</strong></td>
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</table>

Do you have a training program? No, except 1) Postdoctorates now, 2) more
If so, what level of training? General planned for 1975 and later.
For how many people? Now 2-3 Postdoctorates

PUBLICATIONS:

Please list relevant publications during the past 3 years.

Please see attached list of publications.
DR. ERNEST L. WYNDER'S PUBLICATIONS

FOR THE LAST THREE YEARS
132. Bioassays in Tobacco Carcinogenesis
Wynder, E.L. and Hoffmann, D.
In Prog. Experimental Tumor Research 11: 163-193, (Ed. F. Homburger) S. Karger AG, Basle, Switzerland (Jan.) 1969

133. Alpha-naphthylamine and beta-naphthylamine in cigarette smoke
Hoffmann, D., Masuda, Y. and Wynder, E.L.

134. Epidemiology of cancer of the ovary
Wynder, E.L., Dodo, H. and Barber, H.R.K.

135. Riboflavin and mouse hepatic cell structure and function. II. Division of mitochondria during recovery from simple deficiency. Tandler, B., Erlandson, R.A., Smith A.L. and Wynder, E.L.

136. Environmental factors of cancer of the colon and rectum. II. Japanese epidemiological data.

137. Epidemiology of carcinoma in situ of the cervix.
Wynder, E.L.

138. A study of tobacco carcinogenesis. X. Tumor promoting activity.
Wynder, E.L. and Hoffmann, D.

139. Krebserkrankungen
Wynder, E.L.
In Lehrbuch der Hygiene; Praventive Medizin; (Eds. H. Gartner and H. Reploch) Gustav Fischer Verlag, Stuttgart, 1969, p. 639

140. Effect of 3,4-benzo(a)pyrene on mouse lung Primordia in vitro
Chan, P.C., Sanders, F.K., and Wynder, E.L.

141. Epidemiologic investigation of multiple primary cancer of the upper alimentary and respiratory tracts. I. A retrospective study.
Wynder, E.L., Dodo, H., Bloch, D.A., Gantt, R.C., and Moore, O.S.

142. A standard medical history form.
Wynder, E.L. and Schottenfeld, D.

143. Current studies on etiology and prevention.
Wynder, E.L. and Hoffmann, D.

144. Identification of women at high risk for breast cancer.
Wynder, E.L.

Chan, P.C., Goldman, A. and Wynder, E.L.

146. Chemical Studies on tobacco smoke. IX. Quantitative Analysis of Chlorinated Hydrocarbon Insecticides
Hoffmann, D., Rathkamp, G. and Wynder, E.L.
147. Modern aspects of preventive medicine.
   Wynder, E.L.

   Wynder, E.L., Mabuchi, K., and Beattie, E.J., Jr.

149. Chamber development and aerosol dispersion.
   Hoffmann, D. and Wynder, E.L.
   In Inhalation Carcinogenesis (Eds., M.G. Hanna, Jr., et al),

150. The epidermis and the respiratory tract as bioassay
     systems in tobacco carcinogenesis.
   Wynder, E.L. and Hoffmann, D.

151. The possible role of riboflavin deficiency in epithelial
     neoplasia. II. Effect on skin tumor development
   Wynder, E.L., and Chan, P.C.

152. Etiological aspects of squamous cancers of the head and neck.
   Wynder, E.L.

153. A study of tobacco carcinogenesis. XI. Tumor initiators,
     tumor accelerators, and tumor promoting activity of
     condensate fractions.
   Hoffmann, D. and Wynder, E.L.

154. Epidemiology of cancer of the prostate
   Wynder, E.L., Mabuchi, K. and Whitmore, W.F., Jr.

155. Bösartige Tumoren des Uterus: Die Epidemiologie des Korpus -
     (Endometrium) - und Zervixkarzinoms.
   Wynder, E.L.
   In Gynäkologie und Geburtshilfe. Eds. O. Käser, V.
   Friedberg, K.G. Ober, K. Thomsen, and J. Zander.

156. Chemical composition and tumorigenicity of tobacco smoke.
   Hoffmann, D. and Wynder, E.L.
   In Chemistry of Tobacco and Tobacco Smoke
157. Respiratory carcinogens: their nature and precursors.
Hoffmann, D. and Wynder, E.L.
In Int. Sym. on Identification and Measurement
of Environmental Pollutants, p. 9-16; ed.
B. Westley, 1972, Nat. Res. Council of Canada,
Ohawa, 451 pp.

158. Blood lipids: how normal is Normal?
Wynder, E.L. and Hill, P.

159. Possible Role of Riboflavin Deficiency in Epithelial
Neoplasia. III. Induction of Microsomal Aryl
Hydrocarbon Hydroxylase.
Chan, P.C., Okamoto, T. and Wynder, E.L.

160. Induction of Hamster Tumors of the Urinary Bladder by
3,2'-Dimethyl-4-Aminobiphenyl.
So, B.T. and Wynder, E.L.

161. Less Harmful Ways of Smoking. Proc. of A Workshop
of the Second World Conference on Smoking and Health,
Eds. Wynder, E.L., Hoffmann, D. and Ashwanden, P.

162. Less Harmful Ways of Smoking.
Wynder, E.L. and Hoffmann, D.

163. Selective Reduction of Tumorigenicity of Tobacco Smoke.
II. Experimental Approaches.
Hoffmann, D. and Wynder, E.L.

164. Etiology of lung cancer. Reflections on two decades
of research.
Wynder, E.L.
DR. JOHN H. WEISBURGER'S PUBLICATIONS

FOR THE LAST THREE YEARS


DR. DIETRICH HOFFMANN’S PUBLICATIONS

FOR THE LAST THREE YEARS
51. Wynder, E.L. and Hoffmann, D.
Current Studies in Etiology and Prevention. In
"Lung Cancer: A Study of 5,000 Memorial Hospital
Cases". Ed. W.L. Watson, C.V. Mosby Comp. St.

52. Hoffmann, D., Rathkamp, G. and Nesnow, S.
Chemical Studies on Tobacco Smoke. VIII. Quantitative
Determination of 9-Methylcarbazoles in Cigarette Smoke.

53. Wynder, E.L. and Hoffmann, D.
A Study of Tobacco Carcinogenesis. X. Tumor Promoting

54. Hoffmann, D., Rathkamp, G. and Wynder, E.L.
Chemical Studies on Tobacco Smoke. IX. Quantitative
Analysis of Chlorinated Hydrocarbon Insecticides.

55. Masuda, Y. and Hoffmann, D.
A Method for the Determination of Primary Amines of

56. Hoffmann, D. and Rathkamp, G.
Chemical Studies on Tobacco Smoke. X. Quantitative
Determination of 1-Alkylindoles in Cigarette Smoke.

57. Hoffmann, D. and Wynder, E.L.
Chamber Development and Dispersion. U.S. At. Energ.

58. Hoffmann, D. and Mazzola, V.
Chemical Studies on Tobacco Smoke. XI. Dibenzofurans
in Cigarette Smoke. Beitr. Tabakforsch. 5:183-188, 1970

59. Hoffmann, D. and Rathkamp, G.
Chemical Studies on Tobacco Smoke. XII. Quantitative
Determination of Nitrobenzenes in Cigarette Smoke.

60. Wynder, E.L. and Hoffmann, D.
The Epidermis and the Respiratory Tract as Bioassay
24: 574-587, 1970

61. Hoffmann, D. and Wynder, E.L.
A Study of Tobacco Carcinogenesis. XI. Tumor
Initiators...Cancer 27: 849-864, 1971

62. Rathkamp, G. and Hoffmann, D.
Chemical Studies on Tobacco Smoke. XIII. Inhibition of
the Pyrosynthesis of Several Selective Smoke
63. Marquardt, H., Bendich, A., Philips, F. and Hoffmann, D.
Binding of [G-3H]-7,12-Dimethylbenz(a)anthracene to DNA
of Normal and of Rapidly Dividing Hepatic Cells in Rats.

64. Hoffmann, D. and Wynder, E.L.
Respiratory Carcinogens: Their Nature and Precursors.
In: "Proc. Intern. Symp. on Identification and Measurements
of Environ. Pollutants" (I. Hoffman, ed.) 9-16, Campbell
Printing, Ottawa, Canada, 1972

65. Wynder, E.L. and Hoffmann, D.
Carcinogens in the air. Proc. 24th Annual Symp. on Fundamen-
tal Cancer Research, Houston, Texas

66. Hoffmann, D. and Rathkamp, G.
Chemical Studies on Tobacco Smoke. XIV. Quantitative Deter-
nination of Fluorenes in Cigarette Smoke and their Formation

67. Hoffmann, D. and Wynder, E.L.
Chemical Studies on Tobacco Smoke. XV. Chemical Composition
and Tumorigenicity of Tobacco Smoke. In: "The Chemistry of
Tobacco and Tobacco Smoke" (I. Schmeltz, ed.), 123-147,

68. Wynder, E.L. and Hoffmann, D.
1749-1758, 1972

69. Hoffmann, D. and Wynder, E.L.
Selective Reduction of the Tumorigenicity of Tobacco Smoke.
Experimental Approaches. II. J. Nat. Cancer Inst., 48:
1855-1868, 1972

70. Hoffmann, D., Rathkamp, G., Nesnow, S., and Wynder, E.L.
Fluoranthenes: Quantitative Determination in Cigarette Smoke;
Formation by Pyrosynthesis and Tumor Initiating Activity.

71. Hoffmann, D. and Vais, J.
Chemical Studies on Tobacco Smoke. XVII. Quantitative De-
termination of Carcinogenic Volatile N-Nitrosamines in Un-
aged Cigarette Smoke. subm.

72. Hoffmann, D. and Wynder, E.L.
Chemical Studies on Tobacco Smoke. XVIII. Smoke of Cigaretts
and Little Cigars. An Analytical Comparison. Science, 178:
1197 - 1199, 1972
Chemical studies on tobacco smoke. XXI. Smoke analysis of cigarettes made from Bright tobaccos differing in variety and stalk positions. Beitr. Tabakforsch.

74. Tso, T.C., Rathkamp, G., Hoffmann, D.
Chemical studies on tobacco smoke. XXI. Correlation and multiple regression among selected cigarette smoke constituents and leaf characteristics of Bright tobacco. Beitr. Tabakforsch.
DR. PO-CHUEN CHAN'S PUBLICATIONS

FOR THE LAST THREE YEARS


DR. PETER PEACOCK'S PUBLICATIONS

FOR THE LAST THREE YEARS
(With Schlichter, F., Little, S.) The epidemiology of multiple sclerosis with particular reference to Alabama. 

(With Halsey, J., Lampton, T., Raffel, S., Little, S.) Prospective study of stroke epidemiology by health questionnaire. Trans. of the Sixth Princeton Conference on Cerebral Vascular Diseases. 


DR. KIYOHIKO MABUCHI'S PUBLICATIONS

FOR THE LAST THREE YEARS
Kiyohiko Mabuchi, M.D.

   Wynder, E.L., Mabuchi, K., and Beattie, E.J., Jr. 

2. The epidemiology of cancer of the prostate. 
   Wynder, E.L., Mabuchi, K., and Whitmore, W.F., Jr. 

   Wynder, E.L., and Mabuchi, K. 

4. Lung cancer among cigar and pipe smokers. 
   Wynder, E.L., and Mabuchi, K. 

   Wynder, E.L., and Mabuchi, K. 

6. A case control study of cancer of the pancreas. 
   Wynder, E.L., Mabuchi, K., Maruchi, N., and Fortner, J.G. 
   Cancer, In Press.

7. Epidemiology of cancer of the pancreas. 
   Wynder, E.L., Mabuchi, K., Maruchi, N., and 
   Fortner, J.G. 
DR. BANDARU REDDY'S PUBLICATIONS

FOR THE LAST THREE YEARS
33. Experience with colony rearing of germfree guinea pigs and rabbits.

34. Qualitative adequacy of defined chemical diet for successive generations of germfree mice.

35. Protein metabolism in germfree rats fed amino acid and casein diets.

36. Protein metabolism in germfree rats fed chemically defined, water-soluble diet and semisynthetic diet.

37. Sudden death in germfree mice fed through successive generations on chemically defined liquid diet.

38. Pancreatic enzymes in the germfree and conventional rats fed chemically defined, water-soluble diet free from natural substrates.


40. Intermediary metabolism in germfree rats: pancreatic, intestinal and liver enzymes.
Reddy, B.S.

41. Brain amino acids in baby rats as affected by restricted calorie intake.


DR. PETER HILL'S PUBLICATIONS

FOR THE LAST THREE YEARS

2. Oestrogen Induced Hypertriglyceridemia in Female Rats, P. Hill and D. Dvornik, CIRCULATION XL, Suppl. III (1969).


10. Dietary Regulation of Serum Lipids in Young Healthy Adults., P. Hill & E. Wynder (submitted for publication).

INSTITUTION:
Name: Tufts Cancer Research Center

Address:

Is the institution affiliated with a University, Hospital, or other organization? Yes if so, please specify: Tufts University School of Medicine and the New England Medical Center Hospital

Brief description of purpose of institution, including whether clinical or non-clinical: Tufts Cancer Research Center is an intellectual, scientific and organizational resource for both clinical and non-clinical cancer research in the Medical School and the Hospital.

If clinical, how many beds? 8 bed study unit

Member of a cooperative group? Yes

Research (list main areas): Enzymology, Cancer Cell Phenotypes, Cell Biology, Chemotherapy, Viral Oncology, Radiotherapy.

BUDGET:
Approximate annual budget: $1,742,238.

Please specify sources and amount of support (e.g. Federal, State, private, etc.): Federal, approximately 75%

Private, 25%

PERSONNEL AND PUBLICATIONS: see attached sheet.

Date of Application: Feb. 27
Signed William H. Puckman
Title: Director, Tufts Cancer Research Center

Application should be submitted to Dr. Harold P. Rusch, President, AACL, Director, University of Wisconsin Clinical Cancer Center, 701C Hospital, 1300 University Avenue, Madison, Wisconsin 53706.
PERSONNEL:

Names and titles of senior personnel, including brief curricula vitae.
List on separate pages.

Total number of employees, grouped by categories (e.g., professional, technicians, office, etc.):

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<td>Other</td>
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Do you have a training program?  No
If so, what level of training?
For how many people?

PUBLICATIONS:

Please list relevant publications during the past 3 years.

See Curriculum Vitae, Dr. W. H. Fishman
## SENIOR PERSONNEL

<table>
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<tr>
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<tbody>
<tr>
<td>W. H. Fishman, Ph.D.</td>
<td>Professor, Pathology, Director, Tufts Cancer Research Center</td>
</tr>
<tr>
<td>S. S. Tevethia, Ph.D.</td>
<td>Associate Professor, Pathology</td>
</tr>
<tr>
<td>M. J. Tevethia, Ph.D.</td>
<td>Assistant Professor, Pathology</td>
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<tr>
<td>C. Sonnenschein, M.D.</td>
<td>Associate Professor, Anatomy</td>
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<td>L. Nathanson, M.D.</td>
<td>Associate Professor, Medicine</td>
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<tr>
<td>R. S. Schwartz, M.D.</td>
<td>Professor, Medicine, Chief of Hematology</td>
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<tr>
<td>F. G. Bloedorn, M.D.</td>
<td>Professor, Chairman, Therapeutic Radiology</td>
</tr>
<tr>
<td>G. Brawerman, Ph.D.</td>
<td>Professor, Biochemistry - Pharmacology</td>
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<td>NAME</td>
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<tr>
<td>William H. Fishman, Ph.D.</td>
<td>Director, Cancer Research Center</td>
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**PLACE OF BIRTH (City, State, Country)**

- University of Saskatchewan, Canada
- University of Toronto, Canada
- University of Edinburgh
- Cornell University Medical School

**PRESENT NATIONALITY**

- B.S. 1935  Chemistry
- Ph.D. 1939  Biochemistry
- Post-doctoral 1940

**SEX**

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**EDUCATION**

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<th>SCIENTIFIC FIELD</th>
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<tr>
<td>University of Saskatchewan, Canada</td>
<td>B.S.</td>
<td>1935</td>
<td>Chemistry</td>
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<tr>
<td>University of Toronto, Canada</td>
<td>Ph.D.</td>
<td>1939</td>
<td>Biochemistry</td>
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<td>University of Edinburgh</td>
<td>Post-doctoral</td>
<td>1940</td>
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<tr>
<td>Cornell University Medical School</td>
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**HONORS**

- Royal Society of Canada Research Fellow, 1939-41
- Federation Fellow, 17th Internatl. Physiological Congress, Oxford, 1947
- National Science Foundation Travel Award to Japan, 1959
- NIH Research Career Award, 1962
- Regional Editor (USA, Canada) for Enzymologia, 1966

**MAJOR RESEARCH INTEREST**

- Oncology and Enzymology

**ROLE IN PROPOSED PROJECT**

- C-Principal Investigator

**RESEARCH SUPPORT**

- Assistant Professor of Biochemistry, 1943-53; Instructor of Biochemistry, Bowman Gray School of Medicine, Winston-Salem, N.C., 1944-48; Some 8 publications appeared, most of them in the Journal of Biological Chemistry concerning the biochemistry of phospholipids, and the nature and action of Dl-sphingosine. At were done in collaboration with Dr. C. Aron. Royal Society of Canada Research Fellowship 1961 - This was held under the direction of Dr. Vincent. Director, Nobel Laureate, in the field of acetylation of amino compounds. 1939-43 - Dr. C. P. Jennings supervised the post-doctoral work in the field of estrogens and 3-glucuronidase response.**


NAME: Satvir S. Tevethia

TITLE: Associate Professor of Pathology

PLACE OF BIRTH: Agra, India

PRESENT NATIONALITY: Indian

SEX: Male

EDUCATION:

<table>
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<tr>
<td>Agra University, Agra, India</td>
<td>B.Sc.</td>
<td>1954</td>
<td>Chemistry</td>
</tr>
<tr>
<td>Agra University, Agra, India</td>
<td>B.V.Sc.</td>
<td>1958</td>
<td>Veterinary Medicine</td>
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HONORS:
Recipients of Research Career Development Award CA 38,614 from the National Cancer Institute, NIH, 1968-72.

MAJOR RESEARCH INTERESTS:
Oncogenic viruses

ROLE IN PROPOSED PROJECT:
Principal Investigator

RESEARCH SUPPORT (See instructions):
None

RESEARCH AND/OR PROFESSIONAL EXPERIENCE (Starting with present position; list relevant and significant contributions to area of project. List all or most representative publications. Do not exceed 3 pages for each individual.)

1973-1973: Associate Professor of Pathology, Tufts University School of Medicine, Boston, Mass.

1973-1973: Viral Oncologist, Cancer Research Center, Tufts University School of Medicine, Boston, Mass.

1970-1972: Associate Professor of Virology, Dept. of Virology & Epidemiology, Baylor College of Medicine, Houston, Texas

1967-1969: Assistant Professor of Virology, Dept. of Virology & Epidemiology, Baylor College of Medicine, Houston, Texas

1965-1966: Postdoctoral Fellow, Dept. of Virology & Epidemiology, Baylor College of Medicine, Houston, Texas

1964-1965: Research Fellow, Dept. of Virology & Epidemiology, Baylor College of Medicine, Houston, Texas

Membership in Professional Societies:

Society of Sigma Xi
American Society for Microbiology
American Association for the Advancement of Science
American Society for Cell Biology
American Association of Immunologists

The Transplantation Society
The American Physiological Society
The New York Academy of Sciences
American Association of Cancer Research
NAME
Mary Judith Tevethia

TITLE
Assistant Professor of Pathology

BIRTH DATE (Mo., Day, Yr.)

PLACE OF BIRTH (City, State, Country)

PRESENT NATIONALITY (If non-U.S. citizen, indicate kind of visa and expiration date)

SEX
Female

EDUCATION (Begin with baccalaureate training and include postdoctoral)

<table>
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<th>INSTITUTION AND LOCATION</th>
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<tr>
<td>Michigan State Univ., E. Lansing, Mich.</td>
<td>B.S.</td>
<td>1960</td>
<td>Microbiology</td>
</tr>
</tbody>
</table>

HONORS
National Science Foundation Undergraduate Research Fellow, 1959-60; Phi Kappa Phi; Mortar Board; Sawyer Award, 1960; Beta Beta Beta; Delta Tau Alpha; Tau Sigma

MAJOR RESEARCH INTEREST
Microbial and viral genetics

ROLE IN PROPOSED PROJECT
Geneticist

RESEARCH SUPPORT (See instructions)
None

RESEARCH AND/OR PROFESSIONAL EXPERIENCE (Starting with present position, list (excepted) experience relevant to area of project. List all or most representative publications. Do not exceed 3 pages for each individual)

1973  Assistant Professor of Pathology, Tufts University School of Medicine, Boston, Mass.
1973  Viral Geneticist, Cancer Research Center, Tufts University School of Medicine, Boston, Mass.
1971-72 Assistant Professor of Biology, The University of Texas Graduate School of Biomedical Sciences at Houston, Houston, Texas
1969-72 Adjunct Assistant Professor of Molecular Genetics, Baylor College of Medicine, Houston, Texas
1967-72 Assistant Biologist, The Univ. of Texas at Houston M.D. Anderson Hospital and Tumor Inst., Houston
1966-67 Postdoctoral Research Fellow (NIH) The Univ. of Texas M.D. Anderson Hospital and Tumor Inst., Houston
1965-66 Postdoctoral Research Fellow (NCI) The Univ. of Texas M.D. Anderson Hospital and Tumor Inst., Houston
1964-65 Postdoctoral Research Fellow (NIH) Emory Univ., Atlanta, Georgia
1961-64 Graduate Teaching Assistant, Department of Microbiology and Public Health, Michigan State University, East Lansing, Michigan
BIOGRAPHICAL SKETCH

(Give the following information for all professional personnel listed on page 3, beginning with the Principal Investigator. Use continuation pages and follow the same general format for each person.)

NAME
Sonnenschein, Carlos

TITLE
Associate Professor
Principal Investigator

BIRTHDATE (Mo., Day, Yr.)

PLACE OF BIRTH (City, State, Country)

PRESENT NATIONALITY (If non-U.S. citizen,)

SEX

NAME TITLE BIRTHDATE
Associate Professor
Principal Investigator

PLACE OF BIRTH (City, State, Country)

PRESENT NATIONALITY (If non-U.S. citizen,

EDUCATION (Begin with baccalaureate training and include postdoctoral)

INSTITUTION AND LOCATION DEGREE YEAR SCIENTIFIC FIELD
Col. Nacional N. Avellaneda, Buenos Aires, Argentina B.S. 1951 Biology
Universidad de Buenos Aires, Argentina M.D. 1958
Universidad de Buenos Aires, Argentina Doctor in Med 1965

HONORS
Prize: Mariano R. Castex from Acad. Nac. de Medicina, Buenos Aires, Argentina (1965)
Prize: Manuel Arrillaga from Universidad Nacional de Buenos Aires, Argentina (1965)
Honorary member of Asociacion Venezolana de Cultivo de Tejidos. Caracas, Venezuela (1968)

MAJOR RESEARCH INTEREST

Somatic cell genetics - Endocrinology

ROLE IN PROPOSED PROJECT

Principal Investigator

RESEARCH SUPPORT (See instructions)

RESEARCH AND/OR PROFESSIONAL EXPERIENCE (Start with present position. List training and experience relevant to area of project. List 3 or most representative publications. Do not exceed 3 pages for each individual.)
1971 Research Fellow, The Population Council, INSERM, Lab Hormones, 94 Bicetre, France.
1970 Associate Professor, Department of Anatomy, Tufts University School of Medicine, Boston, Mass.
1969-70 Assistant Professor, Department of Anatomy, Tufts University School of Medicine, Boston, Mass.
1964-65 Research Fellowship from the Argentine Council of Scientific and Technological Research under the supervision of Prof. Juan I. Valencia.
1961-64 Research Associate at the Laboratory of Genetics, School of Exact and Natural Sciences, National University of Buenos Aires, Prof. Dr. J. P. Garrahan.
1959-61 Instructor, Institute of Pediatrics, Hospital Nacional de Clinicas, School of Medical Sciences, National University of Buenos Aires, Prof. Dr. J. P. Garrahan.
1958-61 Member of the Staff of the Institute of Pediatrics. Hospital Nacional de Clinicas, belonging to the School of Medical Sciences, Buenos Aires National University. Prof. Dr. J. P. Garrahan.
### NAME
Larry Nathanson, M.D.

### TITLE
Associate Professor

### PLACE OF BIRTH (City, State, Country)

### PRESENT NATIONALITY (If non-U.S. citizen, indicate kind of visa and expiration date)

### SEX

### EDUCATION (Begin with baccalaureate training and include postdoctoral)

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<th>INSTITUTION AND LOCATION</th>
<th>DEGREE</th>
<th>YEAR CONFERRED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harvard University, Cambridge, Mass. University of Chicago School of Medicine</td>
<td>A.B.</td>
<td>1950</td>
</tr>
<tr>
<td></td>
<td>M.D.</td>
<td>1955</td>
</tr>
</tbody>
</table>

### HONORS
- Fellow, American College of Physicians
- Fellowship, Division of Endocrinology Metabolic Disease, NIH (1960-1962)
- Certified American Board of Internal Medicine

### MAJOR RESEARCH INTEREST
- Tumor Immunology and Immunotherapy
- Clinical Pharmacology of Antitumor Drugs

### ROLE IN PROPOSED PROJECT
- Associate Director

### RESEARCH SUPPORT (See instructions)

<table>
<thead>
<tr>
<th>PROJECT</th>
<th>INSTITUTION</th>
<th>FUNDING AGENCY</th>
<th>FISCAL YEAR</th>
<th>TOTAL SUPPORT</th>
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<tbody>
<tr>
<td>NCI</td>
<td>Clinical Cancer Training</td>
<td>#CA 08039-07</td>
<td>7/1/71 - 6/30/72</td>
<td>$84,435</td>
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<tr>
<td>RMP</td>
<td>Regional Cancer Training</td>
<td>#CA 08037-07</td>
<td>10/1/71 - 9/30/72</td>
<td>$60,600</td>
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<tr>
<td>NCI</td>
<td>Eastern Cooperative Oncology Group</td>
<td>#CA 08038-07</td>
<td>4/1/72 - 3/30/73</td>
<td>$60,000</td>
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<tr>
<td>NCI</td>
<td>Carcinoembryonic Antigens</td>
<td>#NIH-71-2337</td>
<td>7/1/71 - 6/30/74</td>
<td>$150,000</td>
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</table>

### RESEARCH AND/OR PROFESSIONAL EXPERIENCE (Starting with present position, publications and experience relevant to area of project. List all or most representative publications. Do not exceed 3 pages for each individual)
- **1971-** Associate Professor, Tufts University School of Medicine
- **1969-** Chief, Medical Oncology Service, New England Medical Center Hospital
- **1967-70** Assistant Professor in Medicine, Tufts University School of Medicine
- **1967-69** Assistant Physician, New England Medical Center Hospital
- **1966-68** Instructor in Medicine, Harvard Medical School; Junior Associate in Medicine, Peter Bent Brigham Hospital
- **1965-70** Fellow in Oncology, Free Hospital for Women, Brookline, Massachusetts
- **1965-66** Assistant in Medicine, Harvard Medical School; Assistant in Medicine, Peter Bent Brigham Hospital
- **1964-68** Research Associate in Medicine, Children's Hospital Medical Center
- **1963-** Consultant in Tumor Clinic and Isotope Committee, Pondville Hospital, Walpole, Massachusetts
- **1963-67** Consultant in Medicine, U.S.P.H.S. Hospital, Brighton, Massachusetts
- **1963-67** Clinical Research Associate, Children's Cancer Research Foundation
- **1962-63** Instructor in Medicine, Stanford University School of Medicine; Chief Resident in Medicine, Stanford University Hospital
Robert S. Schwartz, M.D.
Soc. Sec. #083-18-2903

TITLE Chief, Hematology
Professor of Medicine

PLACE OF BIRTH (City, State, Country)

PRESENT NATIONALITY (If non-U.S. citizen, expiration date)

SEX Male 
Female

EDUCATION (Begin with baccalaureate training and include postdoctoral)

<table>
<thead>
<tr>
<th>INSTITUTION AND LOCATION</th>
<th>DEGREE</th>
<th>YEAR CONFERRED</th>
<th>SCIENTIFIC FIELD</th>
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</thead>
<tbody>
<tr>
<td>Seton Hall (summa cum laude) S. Orange, N.J.</td>
<td>B.S.</td>
<td>1950</td>
<td>Biology</td>
</tr>
<tr>
<td>New York Univ. Medical School New York, New York</td>
<td>M.D.</td>
<td>1954</td>
<td>Medicine</td>
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</tbody>
</table>

HONORS

MAJOR RESEARCH INTEREST

Tumor Immunology

ROLE IN PROPOSED PROJECT

Principal Investigator.

RESEARCH SUPPORT (See instructions)

1) Immunosuppression, AM 07937, 6/1/71-5/31/72, $65,000.
2) Canine Systemic Lupus Erythematosus, AM 09351, 7/1/72-6/30/73, $115,000.
3) Transplantation Disease and Leukemia, CA 10018, 9/1/72-8/31/73, $72,663.

RESEARCH AND/OR PROFESSIONAL EXPERIENCE (Starting with present position, list training and experience relevant to area of project. List all or most representative publications. Do not exceed 3 pages for each individual.)

Currently: Professor of Medicine, Tufts University School of Medicine; Chief, Hematology Service, New England Medical Center Hosp.


1966-1970: Assoc. Professor of Medicine, Tufts Univ. Sch. of Medicine

1963-1965: Assistant Professor of Medicine, Tufts Univ. Sch. Medicine Assistant Hematologist, New England Medical Center Hosp.

1960-1963: Instructor of Medicine, Tufts Univ. School of Medicine; Assistant Hematologist, New England Medical Ctr. Hosp.


1956-1957: Resident in Medicine, Grace-New Haven Hospital, Conn.

1954-1956: Intern and Resident in Medicine, Montefiore Hospital, N.Y.
NAME: Fernando G. Bloedorn

TITLE: Radiotherapist

PLACE OF BIRTH: Rosario, Argentina

PRESENT NATIONALITY: Argentina

SEX: Male

BIRTHDATE: 12/28/1930

EDUCATION:

<table>
<thead>
<tr>
<th>INSTITUTION AND LOCATION</th>
<th>DEGREE</th>
<th>YEAR CONFERRED</th>
</tr>
</thead>
<tbody>
<tr>
<td>National #2, Rosario, Argentina</td>
<td>M. D.</td>
<td>1930</td>
</tr>
<tr>
<td>University del Litoral, Rosario, Argentina</td>
<td>M. D.</td>
<td>1936</td>
</tr>
</tbody>
</table>

HONORS:

- Honorary Professor of Radiology, Universidad de la Republica, Uruguay.
- Senior Lecturer, Harvard Medical School.
- Lecturer on Radiation Therapy, Harvard College.

MAJOR RESEARCH INTEREST:

- Radiotherapy

ROLE IN PROPOSED PROJECT:

RESEARCH AND/OR PROFESSIONAL EXPERIENCE:

- 1966 - Present: Professor and Chairman of the Department of Therapeutic Radiology, Tufts-New England Medical Center, Boston, Massachusetts. Chief, Department of Radiotherapy, Leman Shattuck Hospital, Jamaica Plain, Massachusetts.
- 1966 - Present: Professor of Radiology, University of Maryland School of Medicine.
- 1966 - Present: Assistant Professor of Radiology, Johns Hopkins University School of Medicine, Baltimore, Maryland.
- 1955 - 1966: Head, Division of Radiotherapy, Department of Radiology, University of Maryland Hospital, Baltimore, Maryland. Associate Professor of Radiology, Postgraduate School of Medicine, University of Texas.
- 1955 - 1960: Associate Professor of Radiology, University of Maryland School of Medicine, Baltimore, Maryland. Associate Professor of Radiology, University of Texas.
- 1952: Three-month trip to Europe to study super voltages in the treatment of cancer (England, Germany, and Switzerland).
George Browerman

Title: Professor

Birthdate: June 12, 1927

Place of Birth: City, State, Country

Present Nationality (if non-U.S. citizen, indicate kind of visa and expiration date)

Sex: Male

Education

<table>
<thead>
<tr>
<th>Institution and Location</th>
<th>Degree</th>
<th>Year Conferred</th>
<th>Scientific Field</th>
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<tbody>
<tr>
<td>University of Brussels, Belgium</td>
<td>B.S.</td>
<td>1948</td>
<td>Chemistry</td>
</tr>
<tr>
<td>Columbia University</td>
<td>Ph.D.</td>
<td>1953</td>
<td>Biochemistry</td>
</tr>
</tbody>
</table>

Honors

USPHS Career Development Award 1/1/63 - 8/31/70

Major Research Interest

Biochemistry of nucleic acids, protein biosynthesis

Role in Proposed Project

GM 17973 The Role of Nucleic Acids in Cell Differentiation; current year $38,312 (direct costs only) total $199,346 (6/1/72-8/31/76), 30% effort, National Institute of General Medical Sciences.

GB-35436 The Role of Polyadenylic Acid in Messenger RNA Function in Mammalian Cells, $70,000 (9/1/72-2/28/75) 15% effort, National Science Foundation

Research and/or Professional Experience

Tufts University, Department of Biochemistry and Pharmacology, 1970 - Messenger RNA and Control of Protein Synthesis in Mammalian Cells

Yale University, Dept. of Biochemistry, 1961-1970
Nucleic acids and protein synthesis in chloroplasts
Messenger and ribosomal RNA in mammalian tissues
Initiation of protein synthesis in Escherichia coli

Columbia University, Dept. of Biochemistry
1956-1959 Nucleic acids and chloroplast development
1959-1954 Enzymology of nucleic acids

Quartermaster Research and Development Center, Natick, Mass.
1955-1956 RNA and protein synthesis in Microorganisms

Major Publications

ASSOCIATION OF AMERICAN CANCER INSTITUTES

INSTITUTION:

Name: ____________________________

MOUNTAIN STATES TUMOR INSTITUTE

Address: ____________________________

151 E. Bannock Street

Boise, Idaho 83702

is the institution affiliated with a University, Hospital, or other organization? _NO_ if so, please specify: ____________________________

Brief description of purpose of institution, including whether clinical or nonclinical: __________

Purpose is to provide high-quality cancer care to a sparsely-populated area which is otherwise 300 miles away from similar facilities. To provide quality care, the Institute must be involved in education, training, and research with clinical application.

If clinical, how many beds? 20 __________

Member of NCI cooperative group? _Yes_ __________

Research (list main areas): __________

Cooperative chemotherapy and radiotherapy studies and collaborative studies with clinical applications.

BUDGET:

Approximate annual budget: $575,000

Please specify sources and amount of support (e.g. Federal, State, private, etc.): $550,000 patient fees; $200,000 State; $30,000 private; (federal support, core grant request pending)

PERSONNEL AND PUBLICATIONS: see attached sheet.

Date of Application: 5/22/73

Signed ____________________________

C. Ronald Koons, M.D.

Title: Associate Medical Director

Application should be sent to: Harold P. Furth, President, NCI;
National Cancer Institute, Bethesda, Maryland, 20014.
PERSONNEL:

Names and titles of senior personnel, including brief curricula vitae.
List on separate pages. (ATTACHED)

Total number of employees, grouped by categories (e.g., professional, technicians, office, etc.):

Physicians 3; Nursing personnel - 4 1/2
Therapy Technologists - 3 1/2; Physicist - 1; Laboratory - 1;
Office - 10

Do you have a training program? Yes
If so, what level of training? Medical Oncology Fellowship and Radiotherapy Technologist training
For how many people? 1 medical oncology fellow and 2 technologists

PUBLICATIONS:

Please list relevant publications during the past 3 years.
Publications for physicians attached

The Mountain States Tumor Institute began in concept in 1969. It entered its present physical facility in May, 1971. It has applied for a cancer core support grant. The Tumor Institute is interested in providing high-quality cancer care, but because of geographical locations and absence of an academic center, it must relate to other cancer-oriented centers for interaction and growth.
NAMES AND TITLES OF SENIOR PERSONNEL
(Curriculum Vitae attached for each)

JAMES K. LUCE, M.D., Medical Director (Chemotherapist)

C. RONALD KOONS, M.D., F.A.C.P., Associate Medical Director
(Radiation Therapist & Chemotherapist)

CHARLES D. STEUART, M.D., Ph.D., Director of Research
(Chemotherapist)

SHIRLEE B. KOONS, B.S., R.N., Coordinator of Nursing

JOHN J. DAWSON, M.Div., Patient Counselor
CURRICULUM VITAE

JAMES K. LUCE

Date of Birth: [Redacted]
Place of Birth: [Redacted]

Education:
1939-1943 San Diego State College, San Diego, Cal.
1946-1948 University of California, Berkeley, Cal.
   (A.B.)
1948-1952 Yale University School of Medicine, New Haven, Conn. (M.D.)

Certification: Medical Doctor

Brief Chronology of Employment:
1952-1953 Internship, United States Air Force, Tripler Army Hospital
1953-1954 General Med. Officer, United States Air Force, Ashiya Air Force Base, Japan
1954-1955 General Practice, El Cajon, Cal.
1955-1956 Asst. Resident in Surgery, San Diego County Hospital, San Diego, Cal.
1956-1958 General Practice and Plantation Physician, Kamuela, Hawaii
1958-1960 Asst. Resident in Medicine, Veteran's Administration Hospital, Iowa City, Iowa
1960-1961 Medico, Inc.: Tuberculosis & General Medicine, Kaula Lipis, Malaya and Kratie, Cambodia
1961-1963 Captain, Medical Team, Internal Medicine and Pediatrics, Tuberculosis and Public Health, Quang Ngai, Viet Nam
1963-1964 Resident in Medicine, Cancer Research Institute, University of California School of Medicine, San Francisco, Cal.
1964-1966 Research Assoc. and Clin. Inst. in Medicine, Cancer Research Institute, University of California School of Medicine, San Francisco, Cal.
1966-1971 Assistant Professor of Medicine, The University of Texas M.D. Anderson Hospital and Tumor Institute at Houston, Texas
1971-1972 Director of Clinical Research, Mountain States Tumor Institute, Boise, Idaho
1973--- Medical Director, Mountain States Tumor Institute, Boise, Idaho
Societies:
American Society of Clinical Oncology
American Association for Cancer Research
Board of Directors, Thomas A. Dooley Foundation
Southwest Cancer Chemotherapy Study Group
Western Cancer Study Group

Research Interests:
Clinical Chemotherapy of Solid Tumors and Lymphomas
New Agent Studies

Present Business Address:
Mountain States Tumor Institute
151 E. Bannock
Boise, Idaho 83702
PERSONAL AND FAMILY

Date of Birth:
Place of Birth:

Social Security No.:
Home Address:
Business Address: 151 E. Bannock Street, Boise, Idaho 83702

EDUCATION AND MILITARY EXPERIENCE

1943-47 C. J. Scott High School, East Orange, New Jersey
1947-51 Purdue University, W. Lafayette, Indiana (B.S. 1951)
1951-55 University of Maryland School of Medicine (M.D. 1955)
1955-56 Rotating Intern, University Hospital, Columbus, Ohio
1956-57 M.M.Sc., Ohio State University, Assistant Medical Resident, University Hospital, Columbus, Ohio
1957-59 Lt. U.S. Navy, National Naval Medical Center, Bethesda, Maryland
   Assistant Director, Radioisotope Laboratory, Department of Nuclear Medicine, National Naval Medical Center
1959-61 Assistant Medical Resident, University Hospital, Baltimore, Maryland
1961-62 Chief Medical Resident, University Hospital, Baltimore, Maryland
   Assistant in Medicine, University of Maryland School of Medicine
1962-67 Instructor in Medicine and Radiology, Johns Hopkins University School of Medicine
   Physician, Johns Hopkins Hospital
   Visiting Physician, Outpatient Department, Johns Hopkins Hospital
1967-68 Assistant Professor in Medicine and Radiology, Johns Hopkins University School of Medicine
   (On leave of absence September 1, 1967-August 31, 1968)
   Fellow in Radiotherapy, M.D. Anderson Hospital and Tumor Institute, University of Texas, Houston, Texas
1971-- Clinical Assistant, Professor of Radiology, School of Medicine, University of Washington, Seattle, Washington
ONCOLOGY TRAINING EXPERIENCE

1962-67 Johns Hopkins University School of Medicine. Medical liaison officer between the medical oncologist and radiotherapist. Participated in pathology, radiation physics, radiation biology, planning clinics, follow-up clinics, medical oncology clinics and patient treatments. Member of Eastern Cooperative Oncology Group for clinical research in drug trials. These activities were under the direction of J. Stewart Lott, M.D. of the Division of Radiotherapy, and Albert H. Owens, Jr., M.D. of the Department of Medicine.

1967-68 Special fellow in Radiotherapy at M.D. Anderson Hospital and Tumor Institute, Houston, Texas, under the direction of Gilbert H. Fletcher, M.D.

CERTIFICATION

1955 License to Practice Medicine - Maryland
1958 License to Practice Medicine - Idaho
1968 American Board of Radiology - Therapeutic Radiology
1968 American College of Physicians - Internal Medicine
1971 Fellow, American College of Physicians - Internal Medicine

MEMBERSHIP IN PROFESSIONAL SOCIETIES

1957 Sigma XI
1958 Society of Nuclear Medicine
1959 Ada County Medical Society
1959 American College of Radiology
1959 American Medical Association
1959 Idaho Medical Association
1970 American Society of Clinical Oncology
1970 American Society of Therapeutic Radiologists
1972 President, Idaho Cancer Coordinating Committee
CURRICULUM VITAE
Charles D. Steuart

Date of Birth: 
Place of Birth: 
Social Security: 

Education and Military Experience

1952 - 1956 A.B., Harvard College, Cambridge, Massachusetts
1955 - 1960 M.D., Johns Hopkins University School of Medicine, Baltimore, Maryland
1960 - 1961 Intern, Osler Medical Service, Johns Hopkins Hospital
1961 - 1962 Assistant Resident, Osler Medical Service, Johns Hopkins Hospital
1962 - 1964 U.S. Army, 101st Division, Fort Campbell, Kentucky, Group Surgeon, 502nd Airborne Battle Group
1964 - 1968 Fellow, Department of Medicine, Johns Hopkins University
1964 - 1968 Fellow, McCollum-Pratt Institute, Johns Hopkins University
1967 Ph.D., Johns Hopkins University, Department of Biology and the McCollum-Pratt Institute
1967 - 1968 Assistant Resident, Osler Medical Service, Johns Hopkins Hospital, Baltimore, Maryland
1968 - 1971 Assistant Professor of Medicine, Johns Hopkins University School of Medicine
1968 - 1971 Physician, Outpatient Department, Johns Hopkins Hospital
1968 - 1971 Assistant Chief of Medicine, Baltimore City Hospitals
1970 - 1971 Assistant Professor of Microbiology
1971 - 1971 Scholar of the Leukemia Society of America
1971 - present Associate Professor of Pharmacology and Medicine, University of Miami
1972 Director, Clinical Pharmacology Clinic, University of Miami

Certification

1960 License to practice Medicine - Maryland
1961 Certification - National Board of Medical Examiners
1971 Licensure (#18554 - 27 August, 1971) Florida

Appointments

University Hospital
Associate Professor of Pharmacology and Medicine
Attending Physician, Jackson Memorial Hospital;
Assistant Chief of Medicine, Veterans Administration Hospital, Miami, Florida
### Membership in Professional Societies

<table>
<thead>
<tr>
<th>Year</th>
<th>Society</th>
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<tr>
<td>1960</td>
<td>Alpha Omega Alpha</td>
</tr>
<tr>
<td>1960</td>
<td>Phi Beta Kappa</td>
</tr>
<tr>
<td>1964</td>
<td>American Association for the Advancement of Science</td>
</tr>
<tr>
<td>1968</td>
<td>American Chemical Society</td>
</tr>
<tr>
<td>1969</td>
<td>American Federation for Clinical Research</td>
</tr>
<tr>
<td>1970</td>
<td>New York Academy of Sciences</td>
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<tr>
<td>1971</td>
<td>American Society for Clinical Pharmacology</td>
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### Grants and Sponsored Research

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<tr>
<th>Period</th>
<th>Grant Description</th>
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<tr>
<td>1970 - 1975</td>
<td>Leukemia Society of America, Inc. Scholar ($100,000)</td>
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<tr>
<td>1971 - 1972</td>
<td>Damon Runyon Memorial Fund, Studies of Reverse Transcriptase in Human Leukemic Cells ($15,000)</td>
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<tr>
<td>1972 - 1973</td>
<td>American Cancer Society, Mechanism of Resistance to Fluorinated Pyrimidines (9645) equipment grant</td>
</tr>
<tr>
<td>1972</td>
<td>National Institutes of Health (NCI) 2 grants pending for funding September, 1972</td>
</tr>
</tbody>
</table>
DATE OF BIRTH: 
PLACE OF BIRTH: 
EDUCATION: Andrews School for Girls, Willoughby, Ohio  
Ashtabula High School  
Ashtabula, Ohio  
Graduated 1953  
St. Johns College, Cleveland, Ohio  
Ohio State University, Columbus, Ohio  
Bachelor of Science, 1957  
University of Maryland, College Park, Maryland  
Master of Science, 1963  
CERTIFICATION OR REGISTRATION: 
Registered Nurse (Ohio, Maryland, Idaho)  
POSITIONS HELD: 
Staff Nurse - Ashtabula General Hospital  
June - September, 1957  
Office Nurse - Surgeon H. H. Canton, M.D.,  
Washington, J.C.  
October, 1957 - November, 1958  
School Nurse, Baltimore City School System  
September, 1959 - June, 1960  
Staff Nurse, Lutheran Hospital Baltimore, Maryland  
June, 1960 - September, 1960  
Instructor - University of Maryland School of Nursing  
Baltimore, Maryland  
September, 1962 - June, 1963  
Instructor - St. Joseph's Hospital Hospital School of Nursing, Baltimore, Maryland  
November, 1965 - August, 1967  
Nursing Coordinator, Mountain States Tumor Institute  
Boise, Idaho  
April, 1970 ---  
PROFESSIONAL ASSOCIATIONS:  
Sigma Theta Tau  
American Nurses Association  
Idaho State Nurses Association  
PUBLICATIONS:  
Masters Thesis, University of Maryland, 1963  
"A Description of the Learning Activities of Basic Collegiate Nursing Students in a Pediatric Out Patient Department"
CURRICULUM VITAE
JOHN J. DAWS

Education:
1956  University of Maryland (A.B.)
1959  Wesley Theological Seminary (M.Div.)

Experience:
1956 - 1961  Pastor, The Lodge Forest Methodist Church, Baltimore, Maryland
1961 - 1969  Pastor, The Glen Mar Methodist Church, Baltimore, Maryland
1969 - 1971  Pastor, The First United Methodist Church, Boise, Idaho
1971 - Present  - Patient Counselor, Mountain States Tumor Institute, Boise, Idaho

Produced 16 mm motion picture film, "Living with Dying"


BIBLIOGRAPHY
C. Ronald Koons, M. D.


ABSTRACTS


ABSTRACTS


HISTORY

The Mountain States Tumor Institute (MSTI) began as a concept in the minds of the community physicians. Because knowledge in oncology was expanding so rapidly, they recognized the need for trained physicians to assist in the care of cancer patients. A cancer center grant application was submitted, approved and funded by Regional Medical Programs in March, 1966. For a while, the Institute functioned in a small radiotherapy facility until its new 14,000 square feet building was completed in May, 1971. The new structure is designed to support ten additional floors, and consists of radiation therapy, chemotherapy, nuclear medicine, nursing, and patient-family emotional support units, plus space for supporting personnel. The Institute has two planning conferences weekly for discussion of new cancer cases and a teaching tumor conference once weekly; in addition, Institute physicians participate in weekly tumor conferences in two neighboring towns. The radiologists and dermatologists in the area have donated their old radiotherapy equipment to MSTI and virtually all such therapy is now done at the Institute.

The Tumor Institute serves southwestern Idaho and eastern Oregon, with a population of approximately 350,000 people. It is located in Boise, the state capitol; the nearest city offering a comprehensive cancer program is 350 miles from Boise at Salt Lake City. This Institute is the only RMP funded cancer center not affiliated with a medical school. (Idaho, Montana and Wyoming have no medical schools.) Patients are accepted by referral only; emphasis is placed on referring physicians’ participation in all phases of treatment. MSTI is an outpatient facility, utilizing the hospitals in the area for inpatient care. It is affiliated formally with its neighbor, St. Luke’s Hospital, which is a general 212 bed hospital.

STAFF

The professional staff consists of two full-time physicians, three part-time physicians, twelve to fifteen physician specialists who participate in various clinics and planning conferences, a nurse coordinator, a patient counselor, two staff nurses, four radiotherapy technicians, a nuclear medicine technician, and a physicist.

The radiotherapist is board certified in internal medicine and therapeutic radiology. He has had five years of chemotherapy experience under Albert H. Owens, Jr., M.D., at Johns Hopkins Hospital, Baltimore, and radiotherapy training under Gilbert H. Fletcher, M.D., at M. D. Anderson Hospital and Tumor Institute, Houston. The director of clinical research has had seven years experience in clinical chemotherapy research under David A. Wood, M. D., at the University of California, San Francisco, and E. J. Frei, III, M. D., at M. D. Anderson Hospital and Tumor Institute, Houston. The need for expanding the full-time medical staff is recognized and recruitment of highly qualified professional people is in progress. MSTI is affiliated with the Southwest Cancer Chemotherapy Study Group, and participates in studies of the Radiotherapy Oncology Group through affiliation with the University of Washington, Department of Radiation.
OBJECTIVES

The principal objective of MCSI is to provide quality cancer services to the people of the region. Without MCSI, patients would have to accept treatment by physicians without training or special interest in cancer or travel 350 miles or more to a medical center. The presence of the Institute has provided an opportunity for clinical research to be conducted utilizing the patients cared for by MCSI physicians. Educational programs are currently being conducted for patients, physicians, paramedical personnel and the public. Training programs in chemotherapy and radiotherapy are being planned. The staff feels strongly that such education and research activities are vital to maintain a high level of competence within the Institute.

A truly interdisciplinary approach is employed in providing service, research and education; a unique benefit of a smaller organization. This applies not only to the chemotherapy and radiotherapy programs but also to the cancer nursing research and patient-family emotional support programs.

FISCAL SUPPORT

The Tumor Institute was built with funds from St. Luke's Hospital and a community charity organization. The equipment was purchased with HMP funds and donations. The day-to-day patient services are paid by patient billings. A grant application has been submitted for cancer chemotherapy research support through the SNCCSG. A feasibility study grant application to the National Cancer Institute will receive an on-site review February 4. A local private foundation has given support to the patient-family emotional support program, and further funds are being applied for through grant applications to NIMH and a national foundation. A capital fund drive in southwestern Idaho and eastern Oregon has been planned and will be started in September, 1972.

REASONS FOR APPLYING FOR MEMBERSHIP IN THE ASSOCIATION OF AMERICAN CANCER INSTITUTES

The exact role(s) that a smaller cancer center might play in the total national picture of "conquering cancer" has not been spelled out. The MCSI feasibility study grant application expresses the desire to explore this role. It is the feeling of the staff that meaningful contact with other centers will be essential for maximum benefit to be achieved from the smaller units. This may also be true if the uniqueness of smaller cancer centers (small populations, geographical variability, less "red tape," greater interdisciplinary function, etc.) is to be exploited.

The smaller centers can benefit administratively from the larger centers experiences and expertise. Small centers will want to grow in a logical fashion, but this growth should not result in expensive duplication and under utilization of facilities and equipment that larger centers already have.

Membership in the AACI of a smaller center which serves a large relatively sparsely populated region should complement the experience of large urban center members and contribute to the understanding and management of cancer in the various geographic and socioeconomic areas of the United States.
The Mountain States Tumor Institute is still a small organization. It is currently run by a Committee-of-the-Whole, consisting of Dr. Maurice M. Burkholder, Dr. James K. Luce, Dr. C. Ronald Koons. The administrative control of MSTI is through the Associate Administrator and the Administrator of St. Luke's Hospital (of which the Tumor Institute is a wholly-owned subsidiary). The Tumor Institute is an out-patient facility only, but is physically connected to the large general hospital (St. Luke's) across the street by a tunnel. The Institute utilizes the radiology, laboratory and pharmacy departments of the hospital to provide necessary ancillary support. In addition, the hospital provides a number of other administrative services for direct and indirect charges. There is a Policy and Planning Council of both lay and professional people representing the region served by the Tumor Institute. This Policy and Planning Council reports directly to the Board of Directors of the Tumor Institute which is identical to the Board of St. Luke's Hospital. Diligent efforts have been underway for more than a year to find a medical director and an administrative assistant. It is felt that one cannot be chosen without the other since they must complement each other.

The goals of MSTI are unchanged (to provide high-quality cancer care) but the mechanisms by which it achieves these are continually being reviewed as the staff tries to define its role in the overall national cancer plan as well as trying to meet its obligation to the people in southwestern Idaho, eastern Oregon, and northern Nevada. The new director and administrative assistant must be sympathetic to the differences that exist between MSTI and the large classical cancer centers. They must also be able to work toward developing an institute which will provide excellent cancer treatment and diagnostic facilities at the same time that it is engaging in education and research. This should be done in a fashion that complements the work of the major cancer centers throughout the country.

On July 1, 1972, the Mountain States Tumor Institute was the recipient of a feasibility study grant from the National Cancer Institute. This is probably the only such grant that was awarded to a non-medical school center. The professional and administrative staff have been spending a great deal of time and effort developing the various methods that MSTI might utilize to achieve its goals and objectives. An outside professional consulting firm has also been employed to assist in this study. In the near future, contact will be made with a number of individuals at various cancer centers for their advice. The study raises more questions than solutions, and the result may be proposed research projects which try to find workable answers to some of these problems.
The Association of American Cancer Institutes may well see its role as one of helping a smaller cancer center in a way which the Association feels might be most effective in the overall national cancer plan. Discussion is needed around the following points.

1. The role of smaller cancer centers in non-medical school facilities.

2. The role of smaller cancer centers in relationship to community practice of medicine.

3. How best to utilize the services of oncologists trained at major cancer centers who prefer to go into "private practice" situations.

4. How new cancer information can be disseminated into practical day-to-day practice.

5. How best the vast numbers of cancer patients throughout the country can be brought into situations where the treatment they receive can be added to the overall accumulation of data on patient response, complications, survival, etc.

6. How do physicians in smaller cancer centers maintain their "expertise" as the years pass and new knowledge continues to be generated?

7. Can there be training opportunities in these cancer centers that would be worthwhile exploiting?

8. If there are differences in the quality of cancer care delivered in private practice as compared with academic centers, what might the role of the smaller cancer centers be in trying to equalize these differences?

9. Are there research projects that can be studied at these smaller cancer centers with equal or greater facility than at large academic centers?

The smaller cancer centers will need to benefit from the advice and experience of larger cancer center members if truly meaningful answers are to be obtained.
MURRAY M. COPELAND, M. D.
VICE PRESIDENT
UNIVERSITY CANCER FOUNDATION

AACI Membership Application

Dr. Clark
MEMBERSHIP APPLICATION
ASSOCIATION OF AMERICAN CANCER INSTITUTES

INSTITUTION:

Name: CANCER RESEARCH CENTER OF GREATER MIAMI

Address: 1700 N W 10th. Avenue

Miami, Florida 33136

Is the institution affiliated with a University, Hospital, or other organization? Yes If so, please specify: University of Miami School of Medicine and Jackson Memorial Hospital

Brief description of purpose of institution, including whether clinical or nonclinical: Comprehensive Cancer Research Center including both clinical and nonclinical facilities

If clinical, how many beds? 28 Member of NCI cooperative group? Yes (Southeastern, Eastern, Leukemia B and GOG Leukemia B.)

Research (list main areas): DNA replication and repair, tRNA synthetase characterization, skin cancer center, methotrexate metabolism, cervical carcinoma synchronization and chemotherapy, investigative cancer chemotherapy, cancer training and education and graduate and post graduate fellows.

BUDGET: Approximate annual budget: $700,000.

Please specify sources and amount of support (e.g. Federal, State, private, etc.): Cancer Research Center support (CA 14395-01) $644,000

Private support - $50,000.

PERSONNEL AND PUBLICATIONS: see attached sheet.

Date of Application: 6/6/73 Signed

Title: Director, Cancer Research Center of Greater Miami

Professor of Medicine

Note: Application should be submitted to Dr. Harold Brown, President, NACI.

McArthur Laboratory for Cancer Research, University of Wisconsin, Madison, Wisc., 53706.