

Role of HIF2 signaling in small intestine regeneration after radiation injury

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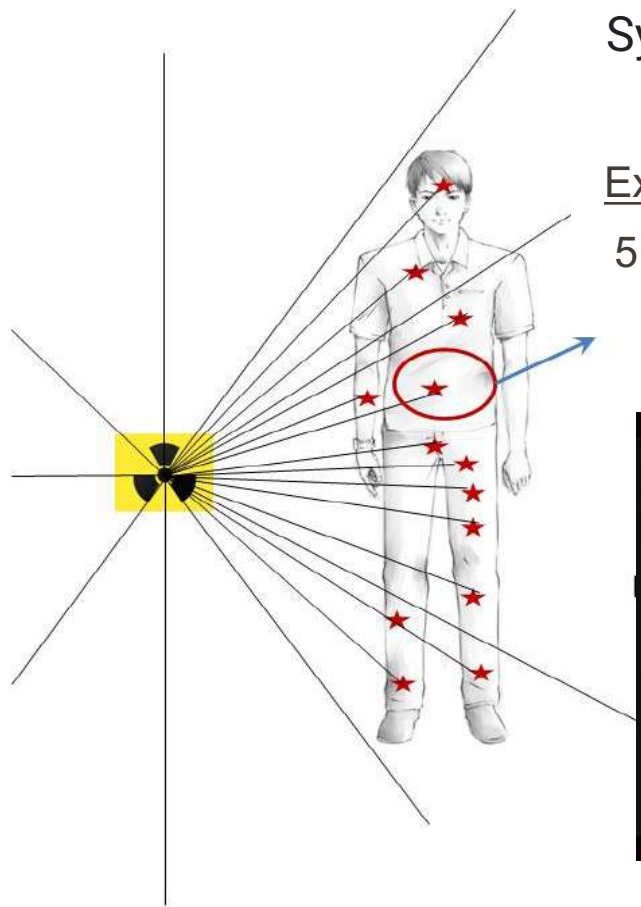
Radiation Oncology Research

Mentor : Dr. Cullen M. Taniguchi

Gastrointestinal -ARS

Symptoms appears within few hours to days

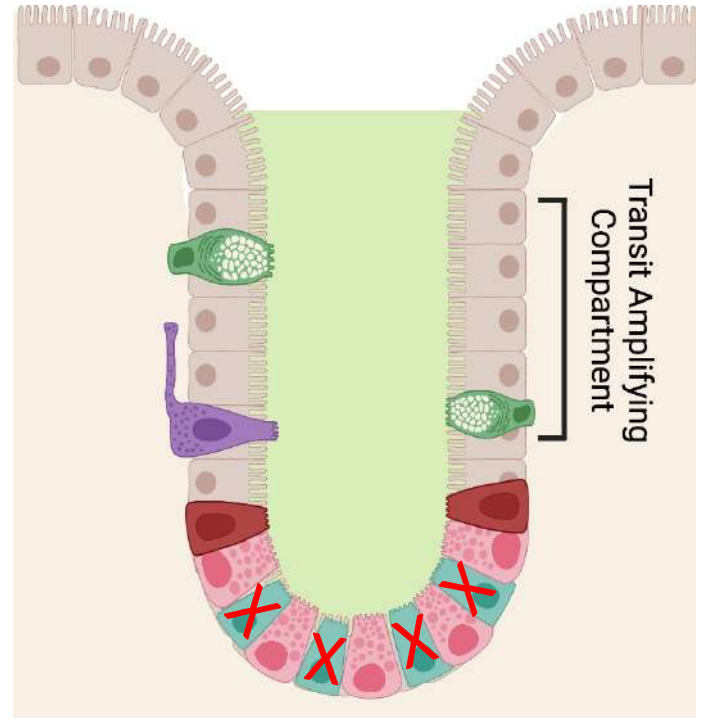
<u>Exposure</u>	<u>Time of Onset</u>	<u>Manifestation</u>
5 - 12 Gy	9 - 10 days	Gastrointestinal (GI) syndrome



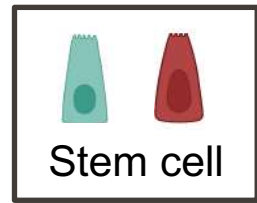
Radiation Exposure



Chernobyl (HBO, 2019)



The Intestinal Crypt

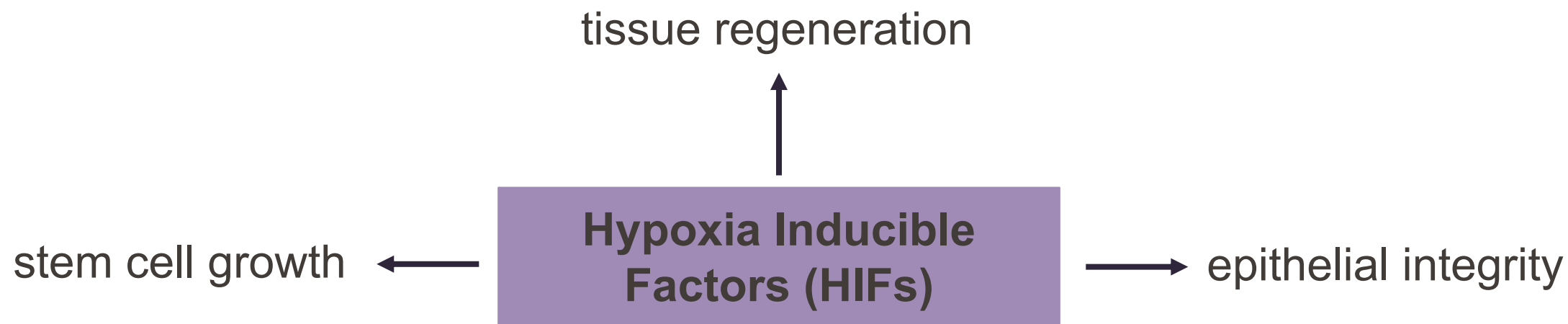




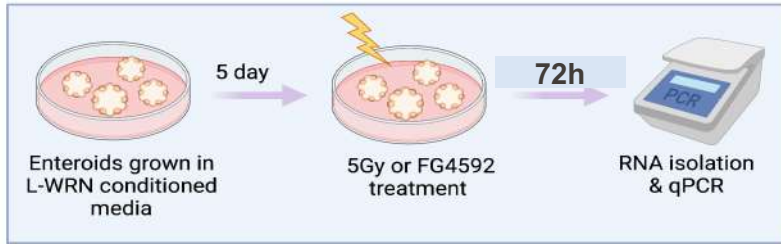
There are no approved treatments for GI-ARS

FG-4592- an oral HIF activator

FDA approved for Anemia treatment and could be rapidly repurposed

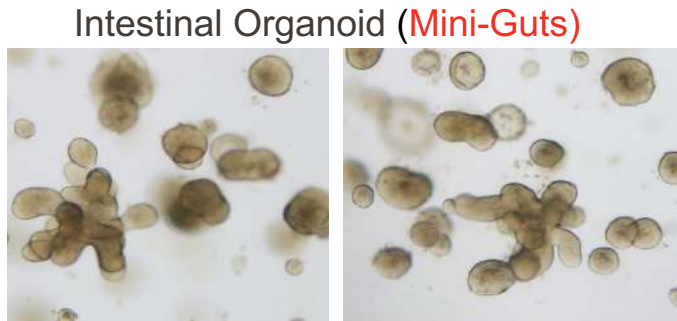
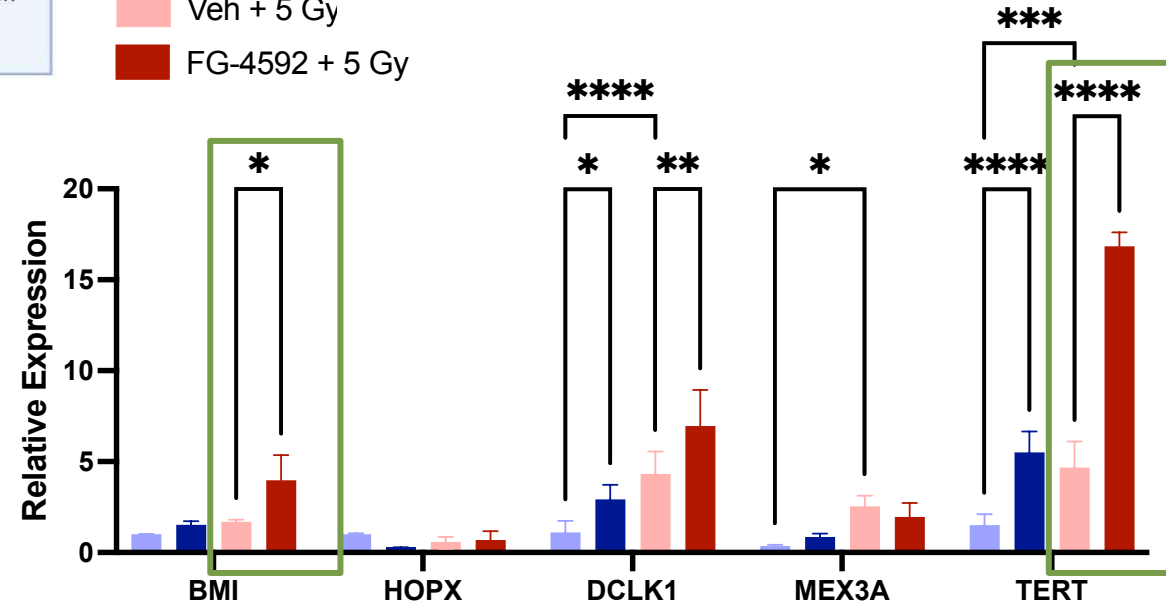


FG-4592 induces intestinal stem cells markers



+4 stem cell markers

- Veh
- FG-4592
- Veh + 5 Gy
- FG-4592 + 5 Gy



FG-4592



↑ intestinal stem cell/crypt survival



GI radioprotection

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The Taniguchi Squad



Thank you for your attention.....