University of Maryland School of Medicine

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Department of Radiation Oncology Monthly Research Update: February 2023

Seed Grant Proposals Due April 17

In February the Radiation Oncology Executive Academic and Advisory Committee announced the opening of the latest cycle of the department's Seed Grant Program. The program is designed to encourage collaborative research within our department and promising outside collaborations that provide preliminary and other data to enhance the pursuit of external funding for continuing research. The due date is Monday, April 17.

Changes this year include opening the program to residents as well as any full-time faculty members in the department (resident applicants should have a designated faculty mentor). Proposals should involve a collaboration between: (1) faculty/residents from at least 2 of the 3 department divisions (Division of Translational Radiation Sciences, Physics, and/or Clinical); **OR** (2) Radiation Oncology faculty/residents and faculty from other UMB departments or schools or other University of Maryland System faculty; **OR** (3) Radiation Oncology faculty/residents and an industry sponsor who will contribute matching funds or other in-kind support.

Two types of awards are offered and will be awarded depending on the quality and scope of applications: (1) **a major research award up to (but preferably less than) $50,000** for innovative investigations likely to result in NIH funding and to provide data/directions that can accelerate career focus and advancement for the applicant; and/or (2) **smaller seed grants in the range of $10,000 to $15,000.**

Criteria for selection include feasibility, novelty, and overall scientific merit of the research proposed; translational nature of the research and/or likelihood of near-term translation to patient benefit; extent to which the proposed research involves promising collaborations; and likelihood that the proposed studies will lead to extramural funding, in particular multi-investigator grants, and to supporting a well-defined long-term research strategy within the department. The award term is 1–2 years. The full application and additional information are available from nknight@umm.edu.

FEBRUARY AT A GLANCE TOTALS

Clinical trials	
Total enrolled	31
GCC, other	4
NRG, NCI, co-ops	3
PCG Registry	24
Grants and contracts	
New awards	0
Submitted	4
Articles published	6

Information for this monthly update should be provided no later than the second Wednesday of each month to Miek Segers at msegers@som.umaryland.edu. The update will be published on the second Friday of each month.

Have questions about identifying a funding source? Finding research partners across the UMB/UM campuses or at another university? Defining future research strategies? Or organizing your thoughts on (virtual) paper? Contact Nancy Knight, PhD, Director of Academic and Professional Development for the department, at nknight@umm.ed

Clinical Trial Enrollment

- 24 patients were enrolled at MPTC on the **PCG Registry**
- 2 patients were enrolled at MPTC on the **Deep Thermal Therapy HUD**
- 2 patients were enrolled at BWMC on **Alliance A221803:** Mepitel film for the reduction of radiation dermatitis in breast cancer patients undergoing post-mastectomy radiation therapy: A randomized phase III clinical trial
- 1 patient was enrolled at BWMC on **RTOG 1308:** Phase III randomized tria comparing overall survival after photon versus proton chemoradiotherapy foı inoperable stage II-IIIB NSCLC
- 1 patient was enrolled at BWMC on **GCC 1944:** Vaginal cuff: A randomized phase III trial of two standard dose fractionation regimens for adjuvant vaginal brachytherapy in early-stage endometrial cancer
- 1 patient was enrolled at MPTC on **GCC 19146:** Comparison and verification of radiation planning for pencil beam scanning proton therapy using single-energy and dual-energy computed tomography simulation methods

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Grants and Contracts

Submitted:

- **Hem Shukla, PhD,** PI, to the National Cancer Institute Clinical and Translational Exploratory/Developmental Studies (R21) program for "Development of a 3D organoid-based screening model for determining pancreatic tumor sensitivity to radiotherapy" ($424,875).
- **Erika Davies, PhD,** PI, to SRI International. (RFP No. RV-11212022-2) for "Animal model development and efficacy testing of candidate MCMs" ($7,310.297).
- **Lei Ren, PhD,** Multi-PI, to the National Institutes of Health Research Project Grant program (PA-20-185) for "Study of biological and radiographic biomarkers and association with ancestry and survival disparities in oral cavity squamous cell carcinoma" ($758,739).
- **Narottam Lamichhane, PhD**, coinvestigator, to MPowering the State Research Collaboration for "Developing CA-19-9 as an imaging biomarker for pancreatic cancer" ($250,000).

Articles Published

Entered into PubMed February 9–March 8. Titles link to PubMed abstracts, with full-text links.

1. **Bentzen SM,** Vogelius IR. Using and understanding survival statistics - or how we learned to stop worrying and love the Kaplan-Meier estimate. *Int J Radiat Oncol Biol Phys.* 2023 Mar 15;115(4):839–846.
2. Esteva A, Feng J, van der Wal D, Huang SC, Simko JP, DeVries S, Chen E, Schaeffer EM, Morgan TM, Sun Y, Ghorbani A, Naik N, Nathawani D, Socher R, Michalski JM, Roach M 3rd, Pisansky TM, Monson JM, Naz F, Wallace J, Ferguson MJ, Bahary JP, Zou J, Lungren M, Yeung S, Ross AE; NRG Prostate Cancer AI Consortium; Sandler HM, **Tran PT,** Spratt DE, Pugh S, Feng FY, Mohamad O. Author Correction: Prostate cancer therapy personalization via multi-modal deep learning on randomized phase III clinical trials. *NPJ Digit Med.* 2023 Feb 22;6(1):27.
3. **Gibbs A,** Gupta P, Mali B, **Poirier Y**, Gopalakrishnan M, **Newman D**, **Zodda A,** Down JD, Serebrenik AA, Kaytor MD, Jackson IL. A C57L/J mouse model of the delayed effects of acute radiation exposure in the context of evolving multi-organ dysfunction and failure after total-body irradiation with 2.5% bone marrow sparing. *Radiat Res.* 2023 Mar 2. Online ahead of print.
4. Jiang Z, Polf JC, Barajas CA, Gobbert MK, **Ren L**. A feasibility study of enhanced prompt gamma imaging for range verification in proton therapy using deep learning. *Phys Med Biol.* 2023 Feb 27. Online ahead of print.
5. **Pollock AE**, Arons D, **Alexander GS**, **Alicia D, Birkman KM, Molitoris JK**, Mehra R, Cullen KJ, Hatten KM, Taylor RJ, Wolf JS, **Regine WF**, Witek ME. Gross tumor volume margin and local control in p16-positive oropharynx cancer patients treated with intensity modulated proton therapy. *Head Neck.* 2023 Feb 25. Online ahead of print.
6. Witek ME, Morris CG, **Alexander GS**, Dontu P, Koroulakis AI, **Regine WF**, Mendenhall WM. Multi-institutional study of clinical outcomes of patients with head and neck cancer presenting with cN3 disease. *Head Neck.* 2023 Feb 28. Online ahead of print.

Important Dates for Upcoming Funding Submissions

Below is an updated calendar with firm due dates for upcoming major NIH deadlines (individual RFA/PA dates may differ). Contact the Department Office of Research Administration (DORA) (msegers@som.umaryland.edu) ASAP if you plan to submit any funding proposal, regardless of funder. Failure to meet these deadlines may result in delaying your submission until the next cycle (if available).

NIH deadline		DORA budget, prelim materials	Dean/SOM prelim materials	FINAL Dean/SOM/SPA
R01 new sub.	06/05/23	05/23/23	05/26/23	05/30//23
R21 new sub.	06/16/23	06/02/23	06/07/23	06/09/23
R01 Resub.	07/05/23	06/20/23	06/23/23	06/27//23
R21 Resub.	07/16/23	06/30/23	07/07//23	07/11//23