

Department of Radiation Oncology

Monthly Research Update: May 2022

2022 Seed Grant Awardees

On June 10 the Executive Academic and Advisory Council (EAAC) announced the winners of the 2022 Department of Radiation Oncology Seed Grants. The awards support faculty members in pursuing collaborative research within our department as well as in outside projects that will provide preliminary data to enhance eligibility for external funding. The awardees, whose 1-year funded research terms will begin on July 1, include:

- **Wei Deng, PhD**, PI, and co-PIs Hem Shukla, PhD, Dong Han, PhD, Sina Mossahebi, PhD, and Amit Sawant, PhD, for “Studying the relationship between linear energy transfer (LET) and FLASH sparing effect of proton FLASH radiation” (\$11,000).
- **Matthew Witek, MD**, PI, and co-PI Phuoc Tran, MD, PhD, as a supplement for the program project “Defining the genomic landscape and clinical outcomes of recurrent head and neck cancer patients treated with proton therapy” (\$25,000).

In addition, the EAAC designated a small fund to serve as an ad hoc resource for limited research pilot investigations throughout the academic year. These will be available to both faculty members and residents.

MAY AT A GLANCE TOTALS

Clinical trials

Total enrolled	48
GCC, other	13
NRG, NCI, co-ops	3
PCG Registry	32

Grants and contracts

New awards	2
Submitted	0

Articles published	9
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Clinical Trial Enrollment

- 32 patients enrolled at MPTC on the **PCG Registry**.
- 2 patients enrolled at MPTC on the **Deep Thermal Therapy HUD**.
- 1 patient at UCH and 1 at MPTC on **GCC 20110**: A single-arm, single-stage phase II trial of Selective Avoidance of nodal VolumEs at minimal Risk (SAVER) in the contralateral neck of patients with p16-positive oropharynx cancer.
- 1 patient 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.
- 1 patient at UMMC on **GCC 1635**: Investigating radiation-induced injury to airways and pulmonary vasculature in lung stereotactic ablative body radiotherapy (SAbR).
- 1 patient at MPTC on **GCC 1886**: Phase I study of concurrent Nab-paclitaxel + gemcitabine with hypofractionated, ablative proton therapy for locally advanced pancreatic cancer.
- 2 patients at UCH on **NRG HN-009**: Randomized phase II/III Trial of radiation with high-dose cisplatin (100 mg/m²) every three weeks versus radiation with low-dose weekly cisplatin (40 mg/m²) for patients with locoregionally advanced squamous cell carcinoma of the head and neck (SCCHN).
- 1 patient at BWMC on **GU005**: Stereotactic body radiation therapy or intensity-modulated radiation therapy in treating patients with stage IIA-B prostate cancer.
- 1 patient at UMMC on **GCC 1926**: A phase I dose escalation study of single fraction pre-operative partial breast s-PBI for early-stage breast cancer.
- 1 patient at UMMC on **GCC 1876**: Tumor bed boost using a breast specific radiosurgery device, the GammaPod: Registry study and evaluation of quality of life with development of sizing nomogram.
- 1 patient at MPTC on **BN005**: A phase II randomized trial of proton vs. photon therapy for cognitive preservation in patients with IDH mutant, low to intermediate grade gliomas.
- 2 patients at MPTC on **GCC 15100**: Pragmatic phase III randomized trial of proton vs. photon therapy for patients with non-metastatic breast cancer receiving comprehensive nodal radiation: a radiotherapy comparative effectiveness (RADCOMP) consortium trial.
- 1 patient enrolled at MPTC on **GCC 19140**: Pilot study of laser interstitial thermal therapy followed by hypofractionated radiation therapy for recurrent high-grade gliomas.

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.edu

Grants and Contracts

Funded:

- **Soha Bayzar, MD, PhD** (PI), from an RSNA Research Education Grant, for “Ultra-high dose rate sparing of lung tissue during radiation therapy” (\$30,000).
- **Phuoc T. Tran, MD, PhD** (PI), from a Department of Defense W81XWH-21-1-0296 transfer, for “Novel biomarkers to direct stereotactic ablative radiotherapy in castration-sensitive oligometastatic prostate cancer” (\$1,398,438).

Articles Published

Entered into PubMed May 12–June 8. Titles link to PubMed abstracts, where full-text links are available.

1. Eckstein J, **Rana ZH**, Caravan S, Sharma R, Potters L, Parashar B. [Burnout in radiation oncology physician workforce: The effect of mindfulness and fulfillment](#). *Adv Radiat Oncol*. 2022 Apr 20;7(6):100971.
2. Hoeben BAW, Pazos M, Seravalli E, Bosman ME, Losert C, Albert MH, Boterberg T, Ospovat I, Mico Milla S, Abakay CD, Engellau J, Johansson V, Kos G, Supiot S, Llagostera C, Bierings M, Scarzello G, Seiersen K, Smith E, Ocanto A, Ferrer C, **Bentzen SM**, Kobzyeva DA, Loginova AA, Janssens GO. [ESTRO ACROP and SIOPE recommendations for myeloablative total body irradiation in children](#). *Radiother Oncol*. 2022 May 31:S0167-8140(22)04133-0. Online ahead of print.
3. Kim SR, **Jiang K**, Chen X, Puranik AS, Zhu XY, Lerman A, Tchkonja T, Kirkland JL, Lerman LO. [Selective kidney targeting increases the efficacy of mesenchymal stromal/stem cells for alleviation of murine stenotic-kidney senescence and damage](#). *J Tissue Eng Regen Med*. 2022 Jun;16(6):550–558.
4. Liu X, **Van Slyke AL**, Pearson E, Shoniyozov K, Redler G, Wiersma RD. [Improving the efficiency of small animal 3D-printed compensator IMRT with beamlet intensity total variation regularization](#). *Med Phys*. 2022 May 24. Online ahead of print.
5. Rogers CL, Pugh SL, Vogelbaum MA, Perry A, Ashby LS, Modi JM, Alleman AM, Barani IJ, Braunstein S, Bovi JA, de Groot JF, Whitton AC, Lindhorst SM, Deb N, Shrieve DC, Shu HK, Bloom B, Machtay M, **Mishra MV**, Robinson CG, Won M, Mehta MP. [Low-risk meningioma: Initial outcomes from NRG Oncology/RTOG 0539](#). *Neuro Oncol*. 2022 Jun 3:noac137. Online ahead of print.
6. Said Camilleri J, Farrugia L, Curto S, **Rodrigues DB**, Farina L, Caruana Dingli G, Bonello J, Farhat I, Sammut CV. [Review of thermal and physiological properties of human breast tissue](#). *Sensors (Basel)*. 2022 May 20;22(10):3894.
7. Solanki AA, Kates MR, **Tran PT**. [Paving the road to the future of chemoradiotherapy in muscle-invasive bladder cancer: 10-year follow-up of BC2001](#). *Eur Urol*. 2022 May 28:S0302-2838(22)02343-0. Online ahead of print.
8. Sutera P, Deek MP, Van der Eecken K, Wyatt AW, Kishan AU, **Molitoris JK, Ferris MJ**, Siddiqui MM, **Rana Z, Mishra MV, Kwok Y**, Davicioni E, Spratt DE, Ost P, Feng FY, **Tran PT**. [Genomic biomarkers to guide precision radiotherapy in prostate cancer](#). *Prostate*. 2022 Aug;82 Suppl 1:S73–S85.
9. **Van Slyke AL**, El Khatib M, Velalopoulou A, Diffenderfer E, Shoniyozov K, Kim MM, Karagounis IV, Busch TM, Vinogradov SA, Koch CJ, Wiersma RD. [Oxygen monitoring in model solutions and in vivo in mice during proton irradiation at conventional and FLASH dose rates](#). *Radiat Res*. 2022 May 31. 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
R21 new 06/16/22	06/03/22	06/07/22	06/09/22
R01 resub 07/05/22	06/20/22	06/23/22	06/27/22
R21 resub 07/16/22	07/01/22	07/07/22	07/11/22

Also attached is the official 2022 NIH routing chart for submissions through our institution. Note that the dates reflected on the chart do not include the internal departmental deadlines that must be met to prepare submissions.

2022 NIH Standard Due Dates and Internal Routing Deadlines

updated 12/02/2021

Activity Code	Cycle I			Cycle II			Cycle III		
	NIH deadline	ORA deadline	SPA deadline	NIH deadline	ORA deadline	SPA deadline	NIH deadline	ORA deadline	SPA deadline
AIDS related (<i>all</i>)	<u>May 7th</u>	April 28th	May 2nd	Sept 7th	Aug 26th	Aug 30th	<u>Jan 7th, 2023</u>	Jan 3rd *	Jan 3rd *
P series (<i>all</i>)	Jan 25th	Jan 13th	Jan 18th	<u>May 25th</u>	May 16th	May 18th	Sept 25th	Sept 15th	Sept 19th
R18, U18, R25 (<i>all</i>)	Jan 25th	Jan 13th	Jan 18th	<u>May 25th</u>	May 16th	May 18th	Sept 25th	Sept 15th	Sept 19th
Construction grants (<i>all</i>)	Jan 25th	Jan 13th	Jan 18th	<u>May 25th</u>	May 16th	May 18th	Sept 25th	Sept 15th	Sept 19th
T series, D series (<i>all</i>)	Jan 25th	Jan 13th	Jan 18th	<u>May 25th</u>	May 16th	May 18th	Sept 25th	Sept 15th	Sept 19th
R01 & U01 (<i>new</i>)	<u>Feb 5th</u>	Jan 27th	Jan 31st	<u>June 5th</u>	May 25th	May 31st *#	Oct 5th	Sept 26th	Sept 28th
K series (<i>new</i>)	<u>Feb 12th</u>	Feb 3rd	Feb 7th	<u>June 12th</u>	June 2nd	June 6th	Oct 12th	Oct 3rd	Oct 5th
R03, R21, R33, R21/R33, R34, R36, U34, UH2, UH3, UH2/UH3 (<i>new</i>)	Feb 16th	Feb 7th	Feb 9th	June 16th	June 7th	June 9th	Oct 16th	Oct 6th	Oct 10th
R01 and U01 (<i>renewal, resubmission, revision</i>)	<u>March 5th</u>	Feb 24th	Feb 28th	<u>July 5th</u>	June 23rd	June 27th	Nov 5th	Oct 27th	Oct 31st
K series (<i>renewal, resubmission, revision</i>)	<u>March 12th</u>	March 3rd	March 7th	July 12th	June 30th	July 5th	<u>Nov 12th</u>	Nov 3rd	Nov 7th
R03, R21, R33, R21/R33, R34, R36, U34, UH2, UH3, UH2/UH3 (<i>renewal, resubmission, revision</i>)	March 16th	March 7th	March 9th	July 16th	July 7th	July 11th	Nov 16th	Nov 7th	Nov 9th
F series (<i>all</i>)	Apr 8th	March 30th	Apr 1st	Aug 8th	July 28th	Aug 1st	Dec 8th	Nov 29th	Dec 1st
R13 & U13 (<i>all</i>)	Apr 12th	Apr 1st	Apr 5th	Aug 12st	Aug 3rd	Aug 5th	Dec 12th	Dec 1st	Dec 5th

NIH deadlines in **bold underline** fall on a weekend or federal holiday and will be shifted to the next business day, per NIH policy. Internal deadlines are calculated according to the shifted NIH deadline.

ORA Deadline: Personnel, effort, budget materials, performance site and compliance forms routed as **final, 7 business days** prior to NIH deadline.

SPA Deadline: All proposal materials routed as **final** by 5 pm, **5 business days** prior to NIH deadline.

* Extended internal deadlines due to a campus holiday. # Following Memorial Day, final proposals must be at SPA by 9:00 am on May 31st.