

# Department of Radiation Oncology

## Monthly Research Update: January 2022

### New Year, New Research Awards

Congratulations to Isabel Lauren Jackson, PhD, and Phuoc T. Tran, MD, PhD, who actively and successfully pursued new funding opportunities and research strategies in January!

#### Funded

- **Isabel Lauren Jackson, PhD (PI)**, as subcontract PI to Innovation Pathways LLC for “Evaluation of IPW-5371, a TGFbRI kinase inhibitor, dosed as a single agent or in combination with G-CSF, as a medical countermeasure against the delayed effects of total body irradiation in mice” (\$316,658).
- **Phuoc T. Tran, MD, PhD (PI)**, a Prostate Cancer Foundation Challenge award for “Radiolabeled systemic therapy with SABR for castration-sensitive prostate cancer oligometastatic disease” (\$981,756).

#### Submitted

- **Isabel Lauren Jackson, PhD (PI)**, to the Henry M. Jackson Foundation for the Advancement of Military Medicine (RFP RFX000707 NIAID) for “Advanced development of BBT-059 as a radiation countermeasure in rhesus/cynomolgus macaque” (\$1,637,002).
- **Isabel Lauren Jackson, PhD (PI)**, to the Henry M. Jackson Foundation for the Advancement of Military Medicine (RFP RFX000708 JPC7) for “Advanced development of BIO 300 for acute radiation syndrome in the rhesus/cynomolgus macaque” (\$739,555).
- **Isabel Lauren Jackson, PhD (PI)**, to the Henry M. Jackson Foundation for the Advancement of Military Medicine (RFP RFX000709 BARDA) for “Evaluation of the efficacy of enrofloxacin/ertapenem versus enrofloxacin/ertapenem/pegfilgrastim in irradiated rhesus/cynomolgus macaques receiving minimal supportive care” (\$1,577,578).
- **Phuoc T. Tran, MD, PhD (PI)**, subaward from the Johns Hopkins University on U01CA212007, for “Integrating bioinformatics into multiscale models for hepatocellular carcinoma” (\$215,006).

### Clinical Trial Enrollment

- 23 patients at MPTC on the **PCG Registry**.
- 2 patients at MPTC on the **Deep Thermal Therapy HUD**.
- 2 patients 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 MPTC on **GCC 2048**: A phase I dose escalation study of hypofractionated accelerated pelvic nodal radiotherapy delivered with a simultaneously integrated prostate boost for patients with localized, intermediate- and high-risk prostate cancer.
- 1 patient at MPTC on **GCC 15100**: A 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 at MPTC on **GCC 19140**: Pilot study of laser interstitial thermal therapy followed by hypofractionated radiation therapy for treatment of recurrent gliomas.
- 1 patient was UMMC on **NRG BN007**: A randomized phase II/III open-label study of ipilimumab and nivolumab versus temozolomide in patients with newly diagnosed MGMT unmethylated glioblastoma.
- 1 patient at UMMC on **GCC 1635**: Investigating radiation-induced injury to airways and pulmonary vasculature in lung stereotactic ablative body radiotherapy.
- 1 patient at UMMC on **GCC 20138**: Laser interstitial thermal therapy followed by hypofractionated radiation therapy for treatment of newly diagnosed high-grade gliomas.

### JANUARY AT A GLANCE TOTALS

#### Clinical trials

Total enrolled	33
GCC, other	8
NRG, NCI, co-ops	2
PCG Registry	23

#### Grants and contracts

New awards	2
Submitted	4

#### Articles published

15

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](mailto: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](mailto:nknight@umm.edu)

## Articles Published

Entered into PubMed Jan. 12–Feb. 10. Titles link to PubMed abstracts, where full-text links are available.

- Baer MR, Kogan AA, **Bentzen SM**...**Rassool FV**. [Phase I clinical trial of DNA methyltransferase inhibitor decitabine and PARP inhibitor talazoparib combination therapy in relapsed/refractory acute myeloid leukemia](#). *Clin Cancer Res*. 2022 Jan 28;clincanres.3729.2021. Online ahead of print.
- Cao Y, Song DY, Deville C, DeWeese TL, Greco S, **Tran PT**, Deek MP. [Radiating the prostate bed in relapsed oligometastatic prostate cancer: How comprehensive should we be?](#) *Prostate*. 2022 Jan 11. Online ahead of print.
- Carey GB, Ezelle HJ, Steinle N, Cao Q, Simington L, Matson C, Singh N, Jones L, **Mohindra P**, Cullen KJ, Giglio M, Parker E, Hassel BA. [Robust institutional support and collaboration between summer training programs in cancer and biomedicine drive the pivot to a virtual format in response to the COVID pandemic](#). *J Cancer Educ*. 2022 Jan 31:1–15. Online ahead of print.
- Chen L, **Becker SJ**, **McAvoy SA**, **Nichols EM**, **Guerrero M**. [Correlation of treatment time to target volume for GammaPod treatments: A simple second calculation](#). *J Appl Clin Med Phys*. 2022 Feb 7. Online ahead of print.
- Guerrieri P, Jacob NK, Maxim PG, **Sawant A**, Van Nest SJ, **Mohindra P**, et al. [Three discipline collaborative radiation therapy \(3DCRT\) special debate: FLASH radiotherapy needs ongoing basic and animal research before implementing it to a large clinical scale](#). *J Appl Clin Med Phys*. 2022 Feb 1:e13547. Online ahead of print.
- Kishan AU, Steigler A, Denham JW...**Tran PT**, et al. [Interplay between duration of androgen deprivation therapy and external beam radiotherapy with or without a brachytherapy boost for optimal treatment of high-risk prostate cancer: A patient-level data analysis of 3 cohorts](#). *JAMA Oncol*. 2022 Jan 20:e216871. Online ahead of print.
- Li H, Dong L, Bert C...**Vedam S**. [AAPM Task Group Report 290: Respiratory motion management for particle therapy](#). *Med Phys*. 2022 Jan 23. Online ahead of print.
- Mashayekhi M**, Ramirez Tapia I, Balagopal A, et al. [Site-agnostic 3D dose distribution prediction with deep learning neural networks](#). *Med Phys*. 2022 Jan 17. Online ahead of print.
- Perstin A, **Poirier Y**, **Sawant A**, Tambasco M. [Quantifying the DNA-damaging effects of FLASH irradiation with plasmid DNA](#). *Int J Radiat Oncol Biol Phys*. 2022 Feb 3:S0360-3016(22)00095-5. Online ahead of print.
- Salem AM, **Jackson IL**, **Gibbs A**, **Poirier Y**, **Newman D**, **Zodda A**, Vujaskovic Z, Kaytor MD, Serebrenik AA, Gobburu J, Gopalakrishnan M. [Interspecies comparison and radiation effect on pharmacokinetics of BIO 300, a nanosuspension of genistein, after different routes of administration in mice and non-human primates](#). *Radiat Res*. 2022 Feb 4. Online ahead of print.
- Snyder C, Choi Y, Blackford AL...**Tran PT**, Wolff AC, Smith KC; SSCP Stakeholder Advisory Board. [Simplifying survivorship care planning: A randomized controlled trial comparing 3 care plan delivery approaches](#). *J Natl Cancer Inst*. 2022 Jan 11;114(1):139–148.
- Sutera P, Phillips RM, Deek M, Ozyigit G, Onal C, **Tran PT**. [The promise of metastasis-directed therapy for oligometastatic prostate cancer—Going beneath the surface with molecular imaging](#). *J Nucl Med*. 2022 Jan 20;jnumed.121.263684. Online ahead of print.
- Sutera P, Van Der Eecken K, Kishan AU,...**Tran PT**, Deek MP. [Definitions of disease burden across the spectrum of metastatic castration-sensitive prostate cancer: comparison by disease outcomes and genomics](#). *Prostate Cancer Prostatic Dis*. 2022 Jan 11. Online ahead of print.
- Vogelius IR, **Bentzen SM**. [Proton vs photon radiation therapy for glioblastoma: Maximizing information from trial](#). *Neuro Oncol*. 2022 Jan 13:noab261. Online ahead of print.
- Ward MC, **Bentzen S**, Fasola CE, Khan AJ, White RL, Vicini F, Shah C. [An estimate of local failure in the TARGIT-A trial of pre-pathology intraoperative radiation therapy for early breast cancer](#). *Int J Radiat Oncol Biol Phys*. 2022 Jan 19;S0360-3016(21)03434-9. Online ahead of print.

## Important Dates for Upcoming Funding Submissions

Below is an updated calendar with firm due dates for upcoming major NIH deadlines in 2022 (individual RFA/PA dates may differ). Contact the Department Office of Research Administration (DORA) ([msegers@som.umaryland.edu](mailto: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 resub 3/05/22	02/22/22	02/24/22	02/28/22
R21 resub 3/16/22	03/03/22	03/07/22	03/09/22
R01 new 6/5/22	05/23/22	05/26/22	05/30/22
R21 new 6/16/22	06/03/22	06/07/22	06/09/22