

Resource Summary Report

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University of Pennsylvania Perelman School of Medicine Cell and Animal Radiation Core Facility

RRID:SCR_022377

Type: Tool

Proper Citation

University of Pennsylvania Perelman School of Medicine Cell and Animal Radiation Core Facility (RRID:SCR_022377)

Resource Information

URL: <https://www.med.upenn.edu/carc/>

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Description: Core provides services to users for performing precision, image guided radiotherapy with both Photons and Protons (including FLASH proton radiotherapy) on cells, rodents and larger animals. Physicists will provide expert dosimetry and treatment planning capabilities. Instrumentation consists of two image guided SARRP 200 Small Animal Radiation Research Platforms (Xstrahl) capable of irradiating rodent tissues from 1 mm-20 mm in diameter; research proton beamline (IBA, Roberts Proton Center); one X-RAD 320ix cabinet x-ray irradiator (Precision X-Ray); and two Cs gamma-ray irradiators (Shepherd Mark I), suitable for whole body radiation of rodents.

Abbreviations: CARC

Synonyms: University of Pennsylvania Perelman School of Medicine Cell and Animal Radiation Core, Cell and Animal Radiation Core

Resource Type: access service resource, core facility, service resource

Keywords: USEDit, ABRF, image guided radiotherapy with Photons and Protons, FLASH proton radiotherapy, image guided radiotherapy on cells, rodents and larger animals

Availability: open

Resource Name: University of Pennsylvania Perelman School of Medicine Cell and Animal Radiation Core Facility

Resource ID: SCR_022377

Alternate IDs: ARBF_1378

Alternate URLs: <https://coremarketplace.org?citation=1&FacilityID=1378>

Record Creation Time: 20220602T050140+0000

Record Last Update: 20260912T200416+0000

Ratings and Alerts

No rating or validation information has been found for University of Pennsylvania Perelman School of Medicine Cell and Animal Radiation Core Facility.

No alerts have been found for University of Pennsylvania Perelman School of Medicine Cell and Animal Radiation Core Facility.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 19 mentions in open access literature.

Listed below are recent publications. The full list is available at [SPARC SAWG](#) .

Deng MZ, et al. (2026) Cell-derived Nanoparticles Provide a Robust Platform to Manufacture Therapeutic T cells. Research square.

Verginadis II, et al. (2025) FLASH proton reirradiation, with or without hypofractionation, reduces chronic toxicity in the normal murine intestine, skin, and bone. Radiotherapy and oncology : journal of the European Society for Therapeutic Radiology and Oncology, 205, 110744.

Ruppert K, et al. (2025) Regional variations in hyperpolarized ^{129}Xe lung MRI: Insights from CSI-CSSR and CSSR in healthy and irradiated rat models. Magnetic resonance in medicine, 93(3), 902.

Porazzi P, et al. (2025) EZH1/EZH2 inhibition enhances adoptive T cell immunotherapy against multiple cancer models. Cancer cell, 43(3), 537.

Pardy RD, et al. (2024) Analysis of intestinal epithelial cell responses to *Cryptosporidium* highlights the temporal effects of IFN- γ on parasite restriction. PLoS pathogens, 20(5), e1011820.

Morral C, et al. (2024) p53 promotes revival stem cells in the regenerating intestine after severe radiation injury. Nature communications, 15(1), 3018.

Dimitri AJ, et al. (2024) TET2 regulates early and late transitions in exhausted CD8 $^{+}$ T cell differentiation and limits CAR T cell function. Science advances, 10(46), eadp9371.

Kim K, et al. (2024) FLASH Proton Radiation Therapy Mitigates Inflammatory and Fibrotic Pathways and Preserves Cardiac Function in a Preclinical Mouse Model of Radiation-Induced Heart Disease. *International journal of radiation oncology, biology, physics*.

Amit U, et al. (2024) Proton radiation boosts the efficacy of mesothelin-targeting chimeric antigen receptor T cell therapy in pancreatic cancer. *Proceedings of the National Academy of Sciences of the United States of America*, 121(31), e2403002121.

Patel RP, et al. (2024) CD5 deletion enhances the antitumor activity of adoptive T cell therapies. *Science immunology*, 9(97), eadn6509.

Lim TL, et al. (2024) Early Inflammation and Interferon Signaling Direct Enhanced Intestinal Crypt Regeneration after Proton FLASH Radiotherapy. *bioRxiv : the preprint server for biology*.

Chowdhury P, et al. (2024) Proton FLASH Radiotherapy Ameliorates Radiation-induced Salivary Gland Dysfunction and Oral Mucositis and Increases Survival in a Mouse Model of Head and Neck Cancer. *Molecular cancer therapeutics*, 23(6), 877.

Verginadis II, et al. (2024) FLASH proton reirradiation, with or without hypofractionation, mitigates chronic toxicity in the normal murine intestine, skin, and bone. *bioRxiv : the preprint server for biology*.

Pardy RD, et al. (2023) Analysis of intestinal epithelial cell responses to *Cryptosporidium* highlights the temporal effects of IFN- γ on parasite restriction. *bioRxiv : the preprint server for biology*.

Newington L, et al. (2023) Development of a framework and research impact capture tool for nursing, midwifery, allied health professions, healthcare science, pharmacy and psychology (NMAHPPs). *BMC health services research*, 23(1), 433.

Yu Z, et al. (2023) Imaging analysis of the biological parameters of the lens in patients with cortical age-related cataracts using ultrasound biomicroscopy. *BMC ophthalmology*, 23(1), 480.

Morral C, et al. (2023) p53 promotes revival stem cells in the regenerating intestine after severe radiation injury. *bioRxiv : the preprint server for biology*.

She X, et al. (2022) Accelerating input-output model estimation with parallel computing for testing hippocampal memory prostheses in human. *Journal of neuroscience methods*, 370, 109492.

Alfonzetti T, et al. (2022) Phytoradiotherapy to enhance cancer treatment outcomes with cannabidiol, bitter melon juice, and plant hemoglobin. *Frontiers in oncology*, 12, 1085686.