Department of Radiation Oncology
Free Radical and Radiation Biology Program
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FY 2025-2026 RADIATION AND FREE RADICAL RESEARCH SERVICES AND RATES
(Director overall responsible to CCOM/HCCC/P30 CCSG – Douglas R. Spitz, PhD)
Effective Date: October 1, 2025

General Fees:

Consult Fee: $116/hour
Assessed at initial planning stage if recommended by service director.
Fee includes consult with laboratory or physics specialist for project and experiment planning purposes.

Weekend Hours: will be assessed at 1.5 times the stated rates below.
Please note that weekend hours are very limited and only available for crucial circumstances only.

Cancellations:
Full one-hour charged for cancellations within 24 hours of scheduled service.

External Users:
Users other than University of Iowa investigators enjoy these rates x 1.5.
The regular charges for non-UI members associated with the RFRRC can be negotiated. This will be assessed on a case-by-case basis and will be done at the discretion of the RFRRC and University of Iowa Department of Radiation Oncology.

****All users are invoiced for services rendered**

Ionizing Radiation Services (IRS)
Contact: Vahid Nasirian
vahid-nasirian@uiowa.edu

Services:

Radiabeam FLASH electron irradiator

- 9 MeV electron beam
- Maximum dose rate: 77,000 Gy/s
- Minimum dose rate: 0.6 Gy/s

Xstrahl X-Ray Cabinet

- CIX3, Xstrahl; Maximum Voltage: 320 kV
- Maximum Field Size: 51.3 cm diameter at 70 cm FSD; Dose rate: 71.4 cGy/min

Small Animal Radiation Research Platform (SARRP)

- Xstrahl, pre-clinical system; On-board high-resolution cone beam-CT imaging
- Targeted beams with ≥3 mm field sizes; Maximum x-ray energy of 220 kVp
- MuriPlan treatment planning software; Dose rate: 243 cGy/min

Rate for cleaning fee for barrier access (any service) $55 (no discount)

	Base Rate	**HCCC/CCOM Rate** (30% Discount)
Rates: Xstrahl X-Ray Cabinet		
Appointment/ hour	$73	$51
Each subsequent hour if technician is not present	$19	$13
Rates: Xstrahl SARRP		
Appointment/ hour	$160	$112
Each Subsequent Hour if technician is not present	$67	$47
Rates: Radiabeam Flash Electron irradiator		
Appointment/hour	$330	$231

Antioxidant Enzyme Services (AES)

Contact: Dr. Spitz
douglas-spitz@uiowa.edu

Services:

The AES will carry out analysis of major antioxidant enzymes (i.e., CuZnSOD, MnSOD, EcSOD, CAT, GSTs, GGTs, GCS, and GPx), $O_2^{\bullet}$-, H_2O_2, and soluble small molecular weight thiols/redox couples [i.e., cysteine, γ-glutamylcysteine, homocysteine, N- acetylcysteine, GSH/GSSG, NADPH/NADP+, $Trx(SH)_2/TrxS_2$] and electron transport chain proteins as well as:

- Measure electron transport chain complex (I-V) activities with protein assays for normalization 44$/sample
- Measure thiols/redox couples and antioxidant enzyme activities.
  CuZnSOD, MnSOD, EcSOD, CAT, GSTs, GGTs, GSH/GSSG, NADPH/NADP+, and GPx activities with protein assay for normalization 44$/sample
- Measure immunoreactive protein for antioxidant enzymes.
  Cost of antibodies, supplies, and personnel (50$/hour)
- Determine steady state levels of mRNA for redox biology proteins with quantitative PCR; Cost of primers, supplies, and personnel (50$/hour)
- Transfect antioxidant enzyme sense and antisense cDNAs into user specified cell lines and characterize the alterations. Cost of supplies and personnel (50$/hour)
- Maintain, develop, and provide reagents for the study of antioxidant/ pro-oxidant proteins and $O_2^{\bullet}$-, H_2O_2 measurements in living cells and tissues: i.e., fluorescent probes, antibodies, cDNAs, vectors, and cell lines; Cost of supplies and personnel (50$/hour)
- Antisense/siRNA/adenoviral/lentiviral reagents for antioxidant proteins; Cost of supplies and personnel (50$/hour)
- Provide O_2 environments at varying levels from 1% to 20% O_2. Cost of supplies and personnel (50$/hour)

ESR Facility Services
Contact: Brett Wagner
brett-wagner@uiowa.edu
EMRB 68
319-335-6749

A 30% discount is provided for instrument use by HCCC/CCOM members.

	Base Rate	HCCC/CCOM Rate (~30% Discount)
ESR Instrument use (Standard configuration)	$93 h^{-1}	$66 h^{-1}
ESR Instrument use (Low temperature)	$114 h^{-1}	$80 h^{-1}
Nitric Oxide Analyzer Setup fee $61/$43	$66 h^{-1}	$48 h^{-1}
Beckman LS-50B Fluorescence	$44 h^{-1}	$31 h^{-1}
Oxygen Monitor systems (YSI or Biostat)	$18 h^{-1}	$13 h^{-1}
Seahorse Instrument	$150 h^{-1}	$106 h^{-1}
Supplies Consumables $145 (typical costs of plate and media) Mito reagents $ 18 each *Typical Seahorse Experiments require 1.5-2.0 h instrument time		
Labor charges	$110 h^{-1}	$79 h^{-1}

Small routine supplies necessary for “in facility” sample handing and preparation are included in the above.

Specialty chemicals and supplies are charged at cost, which includes the labor cost for preparation to be user-ready. Because this is a pass-through expense, discounts are not normally available.

For specific assays, such as vitamin C, vitamin E, or superoxide, charges are calculated by hour of instrument use plus appropriate analysis and labor costs. A 30% discount for the analysis of vitamin C in patient samples for UIHC/HCCC clinical trials is provided.

Rates are based on anticipated costs for repair and upkeep, labor involved in calibration, quality control, and the cost of small supplies.

Radioisotope Research Facility

Contact: Mike Petronek
michael-petronek@uiowa.edu

Services:

	Base Rate per hour	HCCC and CCOM Rate per hour
Hot Lab – Use of the entire lab	$200	$140
Hot Lab – Use of Cell Culture Suite	$100	$70