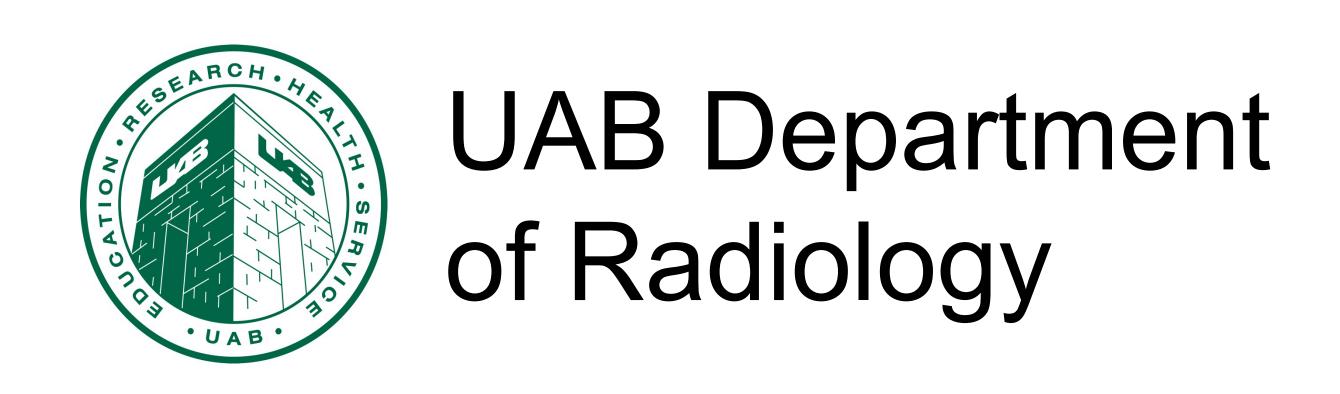


# Preclinical Imaging Shared Facility

Kurt R. Zinn, D.V.M., Ph.D., Facility Director Harrison Kim, Ph.D., M.B.A. and Mark Bolding, Ph.D., Co-directors



# Services and Operation

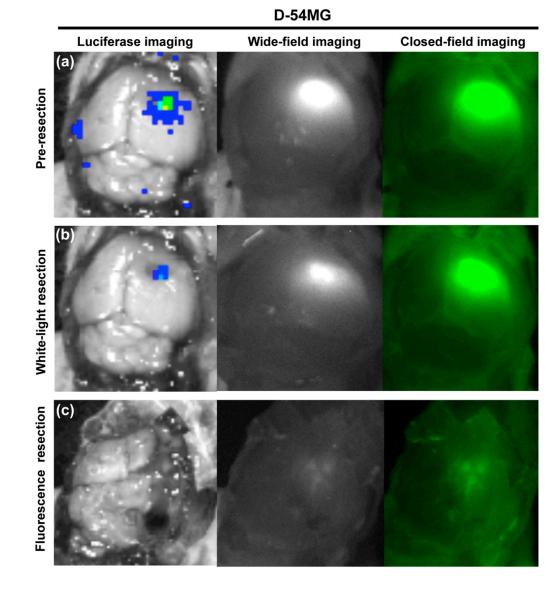
- Provide state-of-the-art molecular imaging for preclinical studies in appropriate animal models, and support IND's for transition to human imaging studies.
- Provide consultation and training to UAB-CCC members for molecular imaging in cancer models.
- Establish methods for image analyses.
- Maintain the instruments and keep them accurately calibrated.
- Develop novel imaging technologies and acquire new instruments
- Offer services which can be translated into clinical applications with ease

#### Rationale and Value-Added

- Rationale: The high cost of the instruments prevents individual users from purchasing them for individual use.
- Value Added: (1) Repeated imaging studies are cost-effective because data are collected in the same animals over time without termination. (2) Imaging data is also more beneficial to evaluate treatment efficacy, since the response can be monitored in real-time in the same animals. (3) The entire animal is examined, providing information that would not otherwise be obtained. (4) Multiple modalities may be utilized to generate structural and functional results.

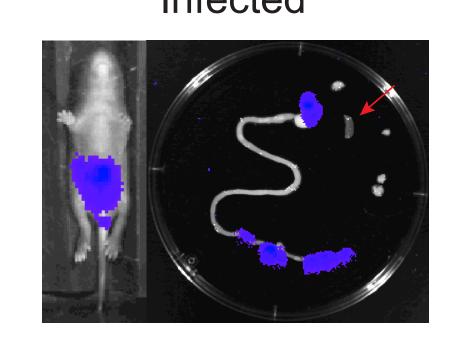
# Preclinical and Multimodality Imaging

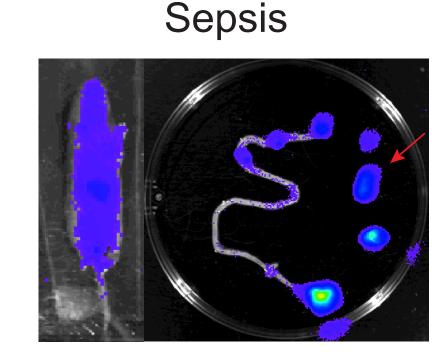
#### Fluorescence and Bioluminescence



(courtesy of Dr. Warram)

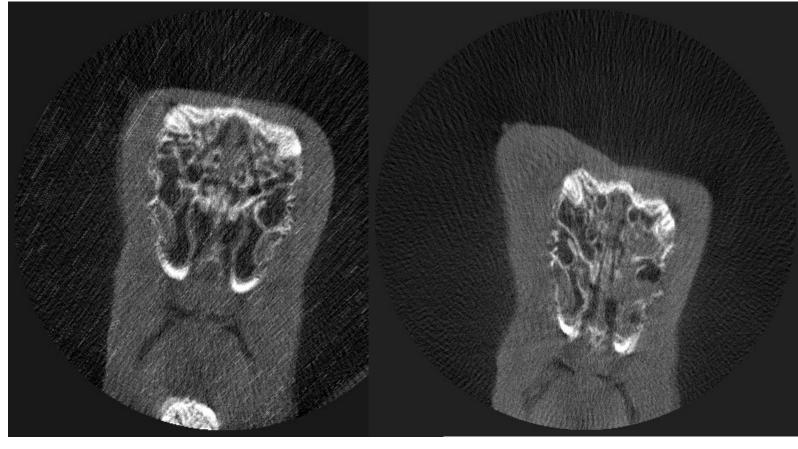
#### Bioluminescence





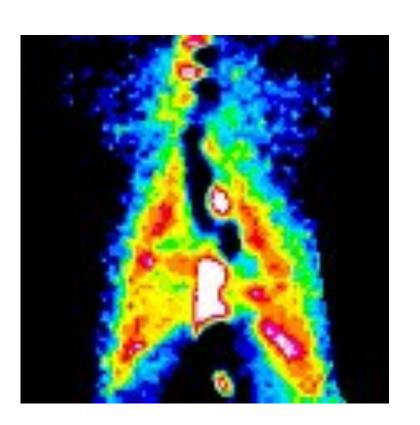
(courtesy of Dr. Weaver)

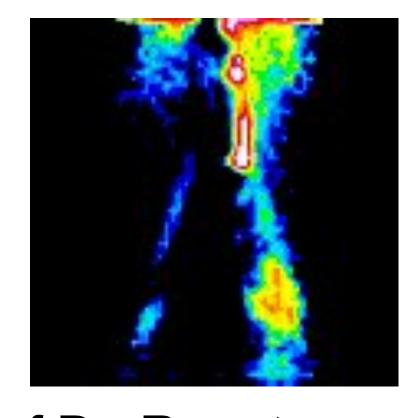
### Sinusitis Imaging on CT



(courtesy of Dr. Cho)

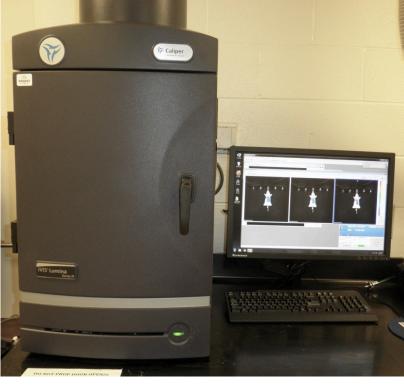
## MCC Assay Imaging on SPECT





(courtesy of Dr. Rowe)



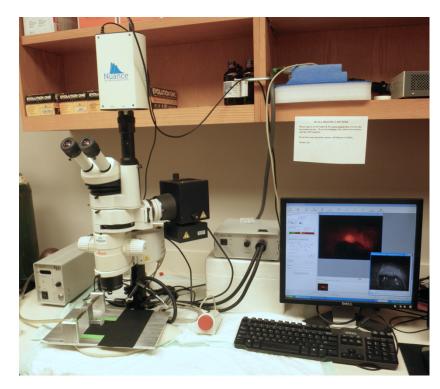




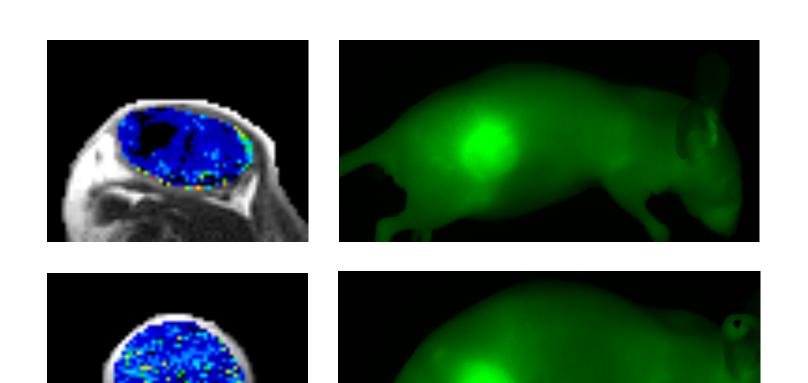






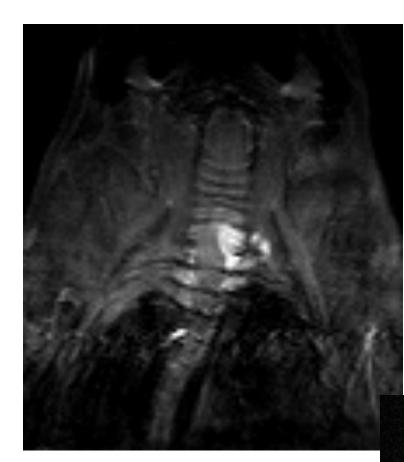


#### MRI and Fluorescence

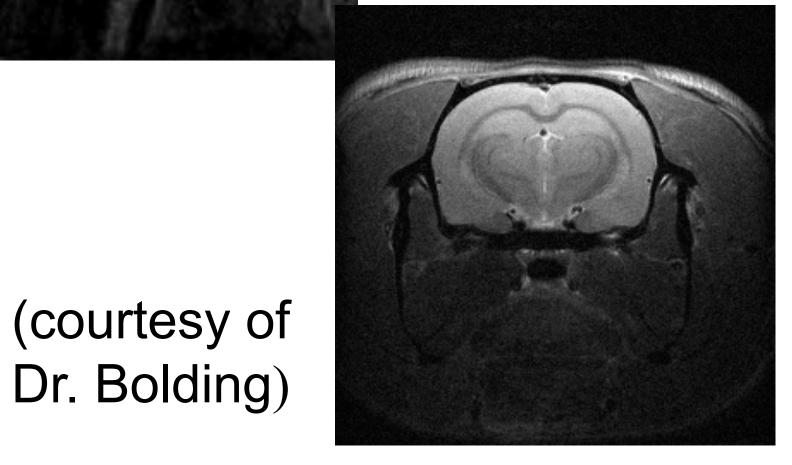


(courtesy of Dr. Kim)

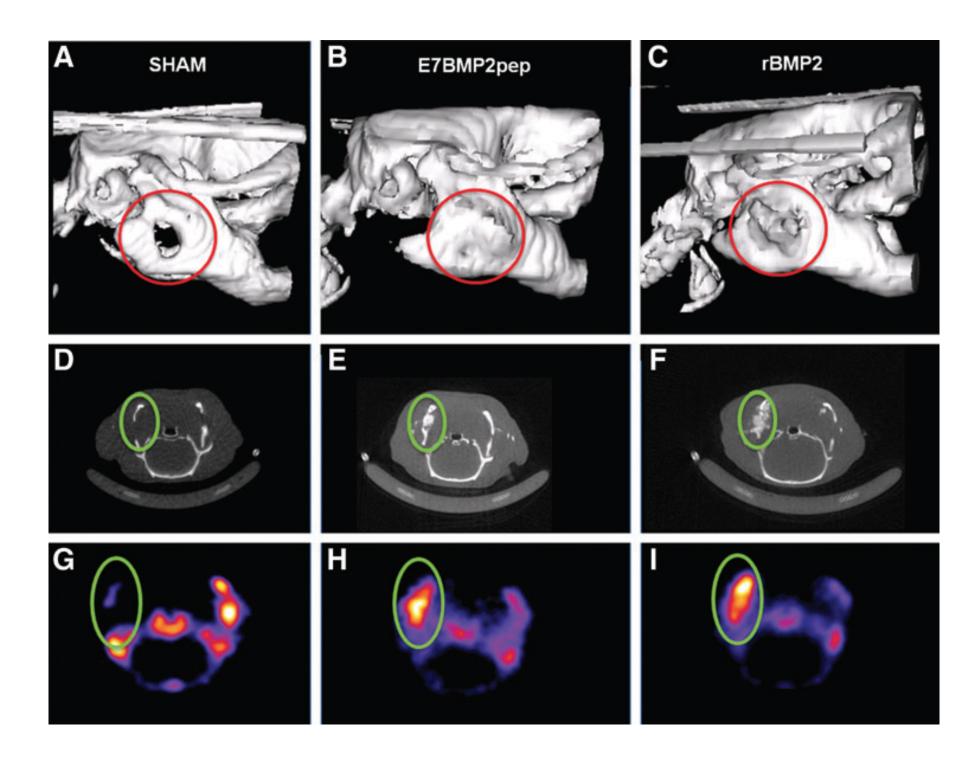
MRI



(courtesy of Dr. Kesterson)



PET/CT



(courtesy of Dr. Bellis)

#### Fee Schedule

Modality	Cost
Bioluminescence	\$6/mouse \$50/hr
Fluorescence (multiple platforms)	\$40-100/hr
MRI	\$125/hr
SPECT/PET/CT	\$100/hr
Ultrasound	\$100/hr
Radiolabeling, Protein conjugation	Labor + materials

Labor \$35/hr
Account required for Imaging

# **Future Plans**

## Improve Imaging Services:

- Expand MRI/MRS and microPET imaging (including new PET tracers like F-18-FLT, F-18-FMISO, Br-76 and Cu-64)
- Increase user base; continue training sessions; introduce animal imaging on the new PET/MR
- Increase species imaging capability and Pl collaboration for additional IND application submission

#### **Project Development:**

- Incorporate radiochemistry facility which is available for specialty radiolabeling and conjugation
- Explore instrument modification to allow unique animal research and experimental conditions