## BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors in the order listed on Form Page 2.
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| NAME | POSITION TITLE |
|---|---|
| Ron C. Mease | Associate Professor of Radiology |
| eRA COMMONS USER NAME (credential, e.g., agency login)<br>RMease | |

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable.)*

| INSTITUTION AND LOCATION | DEGREE *(if applicable)* | MM/YY | FIELD OF STUDY |
|---|---|---|---|
| Kutztown State College, Kutztown, PA | B.S. | 1978 | Chemistry |
| Seton Hall University, South Orange, NJ | M.S. | 1981 | Organic Chemistry |
| Seton Hall University, South Orange, NJ | Ph.D. | 1984 | Organic Chemistry |
| Argonne National Laboratory, Argonne, IL | Postdoc | 1984-87 | Radiopharmaceuticals |

### A. Personal Statement

Research Component 1-Theranostic Imaging of Metastatic Prostate Cancer requires the preparation of radiolabeled nanoplex as well as the preparation of Prostate Specific Membrane Antigen binding imaging agent [$^{18}$F]DCFBC. My previous experience in the design and preparation of preorganized bifunctional chelating agents for radiometal labeling of biomolecules as well as the preparation of radiometal labeled cell membrane intercalating dyes establishes my qualifications to supervise the preparation of the radiolabeled nanoplex. In addition, for the past seven years I have been directing the chemistry/radiochemistry effort within the Small Animal Imaging Resource (SAIR) at JHU. As part of this effort I have prepared [$^{18}$F]DCFBC manually for preclinical studies, synthesized its precursor using GMP methods, assisted in the development of a semi-automated procedure for its radiosynthesis for clinical use, and am currently using this procedure to prepare [$^{18}$F]DCFBC for clinical use.

### B. Positions and Honors

**Positions and Employment**

| | |
|---|---|
| 1987-90 | Assistant Scientist, Medical Department, Brookhaven National Laboratory, Upton, NY |
| 1990-92 | Associate Scientist, Medical Department, Brookhaven National Laboratory, Upton, NY |
| 1992-95 | Assistant Research Professor, The George Washington University, Radiology Department |
| 1995-97 | Associate Research Professor, The George Washington University, Radiology Department |
| 1998-03 | Associate Research Professor, University of Maryland at Baltimore, Diagnostic Radiology |
| 2003-05 | Visiting Associate Professor, Johns Hopkins University, Division of Neuroradiology, Department of Radiology and Radiological Sciences |
| 2005-present | Associate Professor, Johns Hopkins University, Division of Neuroradiology, Department of Radiology and Radiological Sciences |
| 2010-present | Associate Professor, Johns Hopkins University, Department of Oncology |

### C. Selected peer-reviewed publications

**Most relevant to the current application**


1. Mease RC, Meinken GE, Mausner LF, Chinol M, Kolsky KL, Straub R, Chatal J-F, Steplewski Z, and Srivastava SC Synthesis and evaluation of 4-isothiocyanato- and 4-bromoacetamido-cyclohexyl EDTA as bifunctional chelating agents. J. Labelled Compd. Radiopharm. 1993;32:410-412.
2. Faivre-Chauvet A, Gestin JF, Mease RC, Sai-Maurel C, Thedrez P, Slinkin M, Meinken GE, Srivastava SC, and Chatal JF. Introduction of five potentially metabolizable linking groups between 111In-Cyclohexyl EDTA derivatives and F(ab')2 fragments of anti-carcinoembryonic antigen antibody - 2. Comparative Pharmacokinetics and biodistribution in human colorectal carcinoma-bearing nude mice. Nucl. Med. Biol. 1993 ;20:763-771.

3. Gestin, JF, Faivre-Chauvet A, Mease RC, Sai-Maurel C, Thedrez P, Slinkin M, Meinken GE, Srivastava SC, and Chatal JF. Introduction of five potentially metabolizable linking groups between 111In-Cyclohexyl EDTA derivatives and F(ab')2 fragments of anti-carcinoembryonic antigen antibody - 1. A new reproducible synthetic method. Nucl. Med. Biol. 1993;20:755-762.
4. Foss CA, Mease RC, Fan H, Wang Y, Ravert HT, Dannals RF, Oleszewski RT, Heston WD, Kozikowski AP, and Pomper MG. Radiolabeled small molecule ligands for prostate-specific membrane antigen: *In vivo* imaging in experimental models of prostate cancer. Clin. Cancer. Res. 2005;11:4022-4028.
5. Mease RC, Dusich C, Foss CA, Ravert HT, Dannals RF, Seidel J, Prideaux A, Fox J, Sgouros G, Kozakowski AP, Pomper, MG. Synthesis and *in vivo* evaluation of N-[N-[(S)-1,3-dicarboxypropyl]carbamoyl]-4-[18F]fluorobenzyl[L-cysteine, [18F]DCFBC: a new imaging probe for prostate cancer. Clin. Cancer Res. 2008;14:3036-4043 PMCID: PMC3078104.
6. Chandran SS, Banerjee SR, Mease RC, Pomper MG, and Denmeade SR. Characterization of a targeted nanoparticle functionalized with a urea-based inhibitor of prostate-specific membrane antigen (PSMA). Cancer Biology and Therapy. 2008;7:974-982 PMC Journal - In Process.
7. Banergee SR, Foss CA, Castanares M, Mease RC, Byun Y-J, Fox JJ, Hilton j., Lupold S, Kozikowski AP, and Pomper MG. Synthesis and evaluation of technetium-99m- and rhenium-labeled inhibitors of the prostate specific membrane antigen (PSMA). J. Med. Chem. 2008;51:4504-4517. PMC Journal - In Process.
8. Barinka C, Byun Y, Dusich CL, Bannerjee SR, Chen Y, Castanares M, Kozikowski AP, Mease RC, Pomper MG, and Lubkowski J. Interactions between human glutamate carboxypeptidase II and urea-based inhibitors: Structural characterization. J. Med. Chem. 2008,51:7737-7743 PMC Journal - In Process.
9. Chen Y, Foss CA, Byun Y, Nimmagadda S, Pullambhatla M, Fox JJ, Castanares M, Lupold SE, Babich JW, Mease RC, and Pomper MG. Radiohalogenated prostate-specific membrane antigen (PSMA)-based ureas as imaging agents for prostate cancer. J. Med. Chem. 2008,51:7933-7943 PMCID2631656.
10. Wang H, Byun, Y, Barinka C, Pullambhatla M, Bhang H-C, Fox JJ, Lubkowski J, Mease RC, Pomper M.G. Bioisosterism of urea-based GCPII inhibitors: Synthesis and structure-activity relationship studies. Bioorganic & Medicinal Chemistry Letters 2010;20(1):392-397 PMCID2818328 [Available on 2011/1/1].
11. Banerjee, SR, Pullambhatla M, Byun Y, Nimmagadda S, Green G, Fox J, Horti A, Mease RC, Pomper MG. 68Ga-Labeled Inhibitors of Prostate-Specific Membrane Antigen (PSMA) for Imaging Prostate Cancer. Journal of Medicinal Chemistry 2010;53(14):5333-5341. PMC Journal - In Process.
12. Mease RC. Radionuclide based imaging of Prostate Cancer. Current Topics in Medicinal Chemistry. E-pub ahead of print PMC Journal - In Process.

**D. Research Support**

**Ongoing Research Projects**

2P50CA103175-06A2 (Bhujwalla) 09/22/11-07/31/16
NCI JHU ICMIC Program
This center grant funds an *in vivo* Cellular and Molecular Imaging Center at Johns Hopkins. The program consists of four research components, four developmental projects, one career development award and four resources.

R01 CA134675 (Pomper) 04/01/09-03/31/14
NIH
PSMA-Based Cancer Imaging Agents
The goal is to provide an agent or several agents that can image primary tumors and/or metastatic prostate cancer tumors.

**Completed Projects Within Last Three Years**

W81XWH-09-1-0285 (Mease) 04/01/09-03/31/12
Department of Defense
PSA-Prodrug Based Mulitmodality Agents for Imaging Prostate Cancer
The goal is to produce a multimodality agent for imaging PSA expressing tumors.

U24 CA92871 (Pomper) 03/09/07-02/29/12

NIH
Small Animal Imaging Resource (SAIR)
The goal is to move small animal imaging science forward to a point where the incorporation of imaging techniques become second nature in the daily practice of cancer researchers.

R21 MH080580-01A2 (Pomper) 07/01/07-06/30/12
NIH
GCPII-Based Brain Imaging Agents
The goal is to develop imaging agents for GCPII that are blood-brain barrier permeable.

1 R21 CA131702-01 (Pomper) 04/01/09-03/31/11
NIH
Alpha Methyl AcylCoa Racemase (AMACR)
The goal is to develop imaging agents for alpha-methylacyl-coenzyme A racemase (AMACR) which will be used to detect intraprostatic lesions in patients with prostate cancer.

R21 EB005324 (Pomper) 09/15/05-08/31/09
NIH
PSMA-based Gene Reporter-Probe System
The goal is to develop a general probe for molecular-genetic imaging of cells that provides an amplification mechanism for high sensitivity and is biocompatible for clinical translation.