BIOGRAPHICAL SKETCH

Provide the following information for the key personnel and other significant contributors in the order listed on Form Page 2.
Follow this format for each person. **DO NOT EXCEED FOUR PAGES.**

NAME	POSITION TITLE
George Sgouros	Professor of Radiology
eRA COMMONS USER NAME GSGOURO1	

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

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
Columbia University, SEAS, New York NY	B.S.	1984	Applied Physics
Cornell University, Grad. School of Med. Science	Ph.D.	1991	Physiol. and Biophysics
Memorial Sloan-Kettering Cancer Center	Postdoc	1991-93	Medical Physics

A. Personal Statement

My lab focuses on two major areas – pre-clinical studies/dosimetry/modeling of alpha-particle therapy (mostly against micromets) and patient-specific 3-D dosimetry. Both of these efforts have been supported by the NIH for some 15 years and substantial contributions have been made by my lab in both areas. This ICMIC project focuses on radiopharmaceutical targeting of enzymatic processes that are specific to virally induced cancer and that can be activated by well established lytic agents. I have worked with the PI on this project and was involved in the patient dosimetry for FDA approval of a pilot trial. In addition to supporting the dosimetry, this treatment investigation also involves a pharmacokinetic modeling component and my experience on both modeling and dosimetry will support the work described in the project.

B. Positions and Honors

Positions and Employment

1984-85	Research Assistant, Massachusetts Institute of Technology, Cambridge, MA
1985-86	Project Engineer, Medinet, Inc, Purchase, NY
1986-90	Sr. Research Specialist/Research Coord., Cornell University Medical College, NY, NY
1993-98	Assist. Member, Memorial Sloan-Kettering Cancer Center, New York, NY
1994-99	Assist. Professor, Cornell University Medical College, NY NY
1998-03	Assoc. Member, Memorial Sloan-Kettering Cancer Center, New York, NY
1999-03	Assoc. Professor, Cornell University, Weill Medical College, NY NY
2003-05	Visiting Assoc. Prof., Johns Hopkins University, School of Medicine, Baltimore MD
2005-07	Assoc. Prof., Johns Hopkins University, School of Medicine, Baltimore MD
2007-Present	Prof. Radiology, Johns Hopkins University, School of Medicine, Baltimore MD

Other Experience and Professional Memberships

1983	Sigma Pi Sigma (National Physics Honor Society); Tau Beta Pi (National Engineering Honor Society
1990	Steering Committee Member, American Association of Physicists in Medicine (AAPM), Task Group on Internal Emitter Dosimetry
1996	Chairman, Dosimetry, Physics and Radiobiology Panel, Department of Energy, Alpha-Emitters for Medical Therapy Workshop
1997, 98	Study Section, SEP Member, NCRR, NIH
1997-03	Chairman, Sub-Committee on Non-Human Use, Committee on Radiation, MSKCC
1999	Site visit committee member, NCI, NIH
2001	Oncological Sciences IRG Study Section Boundaries Team member, NIH, Center for Scientific Review
2008	Medical Internal Radiation Dose (MIRD) Committee Chairman, Society of Nuclear Medicine

Honors

1991	Cancer Research Institute/Jesselson Foundation Fellowship Award,
1998	Louise and Allston Boyer Young Investigator Award, MSKCC
2001	CaP CURE Award Recipient

C. Selected Peer-Reviewed Publications (selected from 100)

Most relevant to the current application

1. Sgouros G, Barest G, Thekkumthala J, Chui C, Mohan R, Bigler RE, Zanzonico PB. Treatment planning for internal radionuclide therapy: Three-dimensional dosimetry for non-uniformly distributed radionuclides. J Nucl Med 1990; 31(11):1884-1891.
2. Sgouros G, Chiu S, Pentlow KS, Brewster LJ, Kalaigian H, Baldwin B, Daghighian F, Graham MC, Larson SM, Mohan R. Three-dimensional dosimetry for radioimmunotherapy treatment planning. J Nucl Med 1993; 34:1595-1601.
3. Sgouros G, Graham MC, Divgi CR, Larson SM, Scheinberg DA. Modeling and dosimetry of monoclonal antibody M195 (anti-CD33) in acute myelogenous leukemia. J Nucl Med 1993; 34:422-430.(27,24).
4. Kolbert KS, Sgouros G, Scott AM, Bronstein JE, Malane RA, Zhang J, Kalaigian H, McNamara S, Schwartz L, Larson SM. Implementation and evaluation of patient-specific three-dimensional internal dosimetry. J Nucl Med 1997; 38:301-308.
5. Furhang EE, Chui C-S, Kolbert KS, Larson SM, Sgouros G. Implementation of a Monte Carlo dosimetry method for patient-specific internal emitter therapy. Med Phys 1997, 24:1163-1172.
6. Sgouros G, Squeri S, Ballangrud ÅM, Kolbert KS, Teitcher JB, Panageas KS, Finn RD, Divgi CR, Larson SM, Zelenetz AD. Patient-Specific, 3-D dosimetry in Non-Hodgkin's Lymphoma Patients Treated with ^{131}I-anti-B1 Antibody: Assessment of tumor dose-response. J Nucl Med 2003; 44:260-268.
7. Sgouros G, Kolbert KS, Sheikh A, Pentlow KS, Mun EF, Barth A, Robbins RJ, Larson SM. Patient-specific dosimetry for ^{131}I thyroid cancer therapy using ^{124}I-PET and 3D-ID. J Nucl Med, 2004; 45:1366-72.
8. Song H, He B, Prideaux AR, Du Y, Frey EC, Kasecamp W, Ladenson PW, Wahl RL, Sgouros G. Lung dosimetry for radioiodine therapy treatment planning in the case of diffuse lung metastases. J Nucl Med, 2006; 47:1985-1994.
9. Prideaux AR, Song H, Hobbs RF, He B, Frey EC, Ladenson PW, Wahl RL, Sgouros G. Three-Dimensional Radiobiological Dosimetry (3D-RD): Application of radiobiological modeling to patient-specific, 3-D imaging-based internal dosimetry. J Nucl Med, 2007; 48:1008-1016.
10. Baechler S, Hobbs RF, Prideaux AR, Wahl RL, Sgouros G. Extension of the biological effective dose to the MIRD schema and possible implications in radionuclide therapy dosimetry. Med Phys. 2008 35:1123-1134. PMC Journal - In Process.
11. Hobbs RF, Wahl RL, Lodge MA, Javadi MS, Cho SY, Chien DT, Ewertz ME, Esaias CE, Ladenson PW, Sgouros G. ^{124}I PET-based 3D-RD dosimetry for a pediatric thyroid cancer patient: Real-time treatment planning and methodological comparison. J Nucl Med, 2009; 50(11):1844-1847. NIHMS186046.
12. Fu D, Tanhehco Y, Chen J, Foss CA, Fox JJ, Chong J, Hobbs RF, Fukayama M, Sgouros G, Kowalski J, Pomper MG, Ambinder RF. Bortezomib-induced enzyme-targeted radiotherapy in herpes virus-associated tumors. Nat Med 2008;14(10):1118-22. NIHMS115938.

Additional publications of importance to the field (in chronological order)

1. Sgouros G. Bone marrow dosimetry for radioimmunotherapy: Theoretical considerations. J Nucl Med 1993; 34:689-694
2. Kolbert KS, Hamacher KA, Jurcic JG, Scheinberg DA, Larson SM, Sgouros G. Parametric images of antibody pharmacokinetics in Bi-213-HuM195 Therapy of Leukemia. J Nucl Med, 2001; 42:27-32. (18,12).
3. Sgouros G, Song H, Ladenson PW, Wahl RL. Lung toxicity in radioiodine therapy of thyroid carcinoma: Development of a dose-rate method and dosimetric Implications of the 80 mCi rule. J Nucl Med, 2006; 47:1977-1984.

D. Research Support

Ongoing Research Support

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.

R01CA138636 (Ambinder) 04/01/10-02/28/14

NIMH
BETR Therapy for Herpes virus-associated Tumors
The goal of this study is to evaluate BETR therapy for Herpes virus-associated tumors.

R21-MH080580 (Pomper) 09/1/09-08/31/12
NIH
GCPII-Based Brain Imaging Agents The goal of study is to evaluate GCPII-Based Brain Imaging Agents

2R01CA116477 (Sgouros) 08/26/11-06/30/16
NIH
Dose Response in Radionuclide Therapy
Incorporate radiobiologic modeling into 3D-ID dosimetry software; evaluate improvement in dose-response relationship using patient studies.

R01 CA109234 (Frey) 09/15/11-07/03/16
NIH
Quantitative SPECT for Targeted Radionuclide Therapy
The major goal of this grant is to develop iterative reconstruction technique for calculating cumulated activity, investigate advantages of longitudinal recon vs recon at each time-point.

R01EB013558 (Sgouros) 09/01/11–08/31/16
Dose Reduction in Pediatric Molecular Imaging
The goal of this study is to evaluate pediatric medical imaging.

Completed Projects Within Last Three Years

R01 CA116477 (Sgouros) 05/01/06-04/30/11
NIH/NCI
Dose-Response in Radionuclide Therapy
The goal of this project is to incorporate radiobiologic modeling into 3D-ID dosimetry software; evaluate improvement in dose-response relationship using patient studies.

BC062968 (Lingappa) 08/30/07-09/29/10
DOD BCRP Multidisciplinary Postdoctoral Award
Anti-tumor immunization by liposomal delivery of vaccine to the spleen
Investigate use of splenotropic liposomes for enhanced anti-tumor vaccination.

R01 CA113797 (Sgouros) 02/09/05-11/30/09
NIH/NCI
Targeted Alpha-Particle Therapy of Metastases
This is the grant that we seek to competitively renew. ^{213}Bi to investigate alpha-emitter targeting of metastatic BCa in a pre-clinical animal model.

1F32CA12365 (Yah-el Har-el) 07/01/06-06/30/09
Ruth L. Kirstein National Research Service Award (NRSA)-Fellowship in Nanotechnology for Medicine, Liposomal Delivery of High LET Emitters to Cell Nuclei
Liposomes for delivery of alpha-emitters to the cell nucleus.