Direction Générale de la Recherche Scientifique et du Développement Technologique

The National Research Center of Biotechnology (C.R.Bt)

Constantine, December 19- 21, 2011

Algerian-American Foundation for Culture, Education, Science, and Technology

AAF-Cancer Group Committee

The 'Center of Excellence in Cancer' Project
Bios des Invités de l'AAF – AAF Participants

Amirouche, Farid, Ph.D. (Website) Professor Orthopedics, Bioengineering and Mechanical Engineering University of Illinois, Chicago, IL	**Kherbache, Himed M.D. (Website)** Attending Physician Division of Nuclear Medicine, Department of Radiology Veterans Affairs Medical Center, Washington DC
Amri, Hakima, Ph.D. (Website) Assistant Professor Department of Biochemistry, Cellular and Molecular Biology Georgetown University Medical Center, Washington DC	**Merghoub, Taha, Ph.D. (Website)** Assistant Professor Melanoma Sarcoma Service, Department of Medicine and Immunology Department Memorial Sloan Kettering Cancer Center, New York, NY
Beddar, Sam, Ph.D. (Website) Professor Division of Radiation Oncology, Department of Medical Physics The University of Texas MD Anderson Cancer Center, Houston, TX	**Ouhib, Zoubir, M.S., DABR (Website)** Assistant Professor Florida Atlantic University & The Lynn Cancer Institute Boca Raton, FL

Farid Amirouche, Ph.D.

Farid Amirouche is a University of Illinois Scholar Professor, Professor of Bioengineering and Mechanical engineering and a Professor of Orthopedics in the College of Medicine at the University of Illinois at Chicago. He served as a university Fellow for Academic leadership of Big 10 universities in 2009-2010, he is currently the director of Orthopedic research in the nation largest medical school where he supervises residents and medical students. He is also the Director of the Biomechanics Research Laboratory where he works with graduate students from Bioengineering and mechanical engineering. Additionally since 2007 Pr. Amirouche has coordinated the orthopedic research at the Illinois Bone and Joint Institute. He served as a Chairman of the UIC Faculty Advisory Committee (FAC) from 1993-1997 and worked closely with several Deans, Provost, Chancellor and President

His past research was supported by NIH, NIOSH, NSF, NASA, US Air Force and several industrial companies including Baxter, Johnson and Johnson Depuy Orthopedics and Zimmer. He developed unique expertise to help shape the synergy and collaboration between industry and colleges and help the university with its outreach programs with the industry. Pr. Amirouche has developed a broad experience in all R&D related areas of new product realization, from concept phase to market readiness. His specific expertise encompasses design of medical devices, engineering biomaterials, and clinical testing strategy. Pr. Amirouche specializes in the major aspects of intelligent prosthesis and patient specific implants as well as specific product development: orthopedic advanced technologies, risk analysis, biomaterials selection, verification/validation testing, failure analysis and intellectual property related to strategy, validity and infringement, and forensic failure analysis of medical devices. He has served as an expert witness in biomechanics and human impact injuries.

Pr. Amirouche's research interests are in the areas of knees/hips and spine biomechanics and biological tissues and the bone/implant interface; implant durability and wear; kinematics and kinetics of human joints; experimental and finite element analysis used to characterize the mechanical behavior of biological tissues and reconstructive devices for orthopedic, spinal surgery and clinical interventions; coatings for enhanced implant fixation and prevention of implant loosening; image guided surgical techniques, computer aided surgical instruments and telemetric medical devices; intelligent implantable medical devices, biosensors and drug/device combination medical delivery.

Pr. Amirouche is also the Chief Technology Officer of Ortho Sensing Technologies, a medical device start-up company. His activities and responsibilities included new product development; fund raising, complete engineering management, and development of strategies for corporate licensing, FDA and clinical trials, M&A due diligence and integration, intellectual property analysis, and IP prosecution support. He served on national and international scientific advisory boards. Pr. Amirouche has been an Active Reviewer and Panelist for the NIH and NSF and served as Vice President of the World Academy of Biotechnology of UNESCO. Pr Amirouche is the author of several books, technical papers, and holds several patents. He supervised over 24 PhDs and 80 MS students and serves as a mentor to a number of international students. He was recently inducted into the "Palmes Academiques" in 2008. Additionally, Pr. Amirouche was a recipient of the G7 Fellowship in 1993 sponsored by the National Research Council of Canada, DOE Fellowship1987, and is an ASME Fellow since 2005.

Hakima Amri, Ph.D.

Professor Hakima Amri is a faculty at Georgetown University in the Department of Biochemistry and Molecular and Cellular Biology. She is the co-founder and co-director of the Integrative Medicine master's program in Physiology, one of its kind graduate program in the United States that combines human physiology and integrative medicine. Pr. Amri's research program includes a focus on cancer. She developed a novel analytical method based on evolutionary biology to stratify patients, diagnose, and determine treatment effectiveness. This method that she named Phylomics® is also applied for early detection of cancer and biomarkers discovery. Her other line of research is the investigation of phytomedicinal compounds as therapeutics for cancer treatment. Dr. Amri is presently serving as Chair of the Teaching and Pedagogy Subcommittee of the Faculty Development Committee and on the Committee of Evaluation and Assessment of the medical courses offered at the Georgetown University Medical School.

Pr. Amri graduated with a Bachelor's degree, DES (Diplôme D'Etudes Supérieures) in Animal and Developmental Biology from l'Université de Constantine. After successfully completing the nationwide science competition, she received a Franco-Algerian scholarship to pursue her graduate education at Pierre and Marie Curie University, Jussieu, Paris 6. Pr. Amri obtained a Master's of Science in Reproductive Biology and a PhD in Biochemistry. Her doctoral work focused on characterizing the regulation of the estrogen synthetase (cytochrome *P450* aromatase enzyme) and the identification of a naturally occurring aromatase inhibitor. The aromatase is deregulated in the hormone-dependent cancers and its inhibition is the research focus of several scientific groups and pharmaceutical companies.

She is currently applying systems biology approaches to cancer omics data (genomics, proteomics, and metabolomics) and diagnostic biomarkers discovery. Her *cladistics* approach that is anchored in biological concepts provides the step-by-step molecular stratification from healthy to disease and offers the shared derived characters as biomarkers. Her work has sorted clonal aberrations from non-expanding mutations in prostate cancer, which could lead to developing diagnostic biomarkers. Because of its dynamic nature, Phylomics® detects those at risk of developing cancer, allows early detection, and evaluates treatment response. Her other line of research is in Phytomedicine for hormone-dependent cancers. With her colleagues, she showed that treatment of nude mice with *Ginkgo biloba* extract significantly reduced the size of breast tumor xenografts. Knowing that saw palmetto extract is commonly used for prostate health, she investigated its effect on prostate cancer and showed that *in vitro* cell proliferation and cancer xenografts were decreased. In addition to reduced cell proliferation and increased apoptosis, she identified a novel cell death mechanism that was different from apoptosis, necrosis, autophagy, and mitotic catastrophy. Dr. Amri is currently characterizing this new cell death mechanism.

As the co-director and co-founder of the Physiology/Integrative Medicine graduate program, Pr. Amri has taught a significant number of students in classroom and laboratory settings, spanning undergraduate, graduate, doctoral, and post-doctoral levels. Pr. Amri's scholarly activities are marked by her published work in peer-reviewed journals, presentations at national and international conferences, and authorship of several book chapters and reviews. Her research has attracted funds from both federal and private sectors.

Sam Beddar, Ph.D.

Sam Beddar is a tenured Professor at the University of Texas MD Anderson Cancer Center within the Division of Radiation Oncology and Professeur Adjoint, Département de Physique, Génie Physique et Optique, Université Laval, Québec City, Canada.

Professor Beddar was born in Constantine, Algeria, and went to the University of Wisconsin – Madison, driven to study medical physics. He concentrated his research on plastic scintillation dosimetry, publishing several seminal papers on the subject, and receiving his doctorate in 1990.

Pr. Beddar next joined Princess Margaret Hospital as a staff physicist, and then in 1993 became an assistant professor at the University of Rochester Medical Center. Following a post at Albany Medical College he accepted a position at Cleveland Clinic in 1998, where he established an intraoperative radiation therapy program using the first commercially available Mobetron portable linear accelerator. In 2002, he became an associate professor at MD Anderson Cancer Center, joining the Brachytherapy service. In 2005 he became Chief of the Gastrointestinal Service, focusing his clinical attention on developing 4D-CT with intravenous contrast for the liver, respiratory-gated radiation therapy for GI cancers, and Director of intraoperative radiation therapy program.

The main focus of Pr. Beddar's research laboratory has been in the field of scintillation dosimetry for radiation therapy and diagnostic imaging. He has successfully received funding for fourteen grant proposals since joining MD Anderson cancer center in 2002, establishing an active research lab. At present, Pr. Beddar is a PI on an NIH R01 grant and on 3 NIH grants: Co-investigator on a P01 and an R21 and a project leader on a T-32 NIH grants. He has been also serving on many NIH Study Sections. He has collaborated with scientists all over the world, including Canada, Australia, and France. In the last 5 years, Pr. Beddar has published 50 peer-reviewed papers on clinical and research-oriented topics, including scintillation dosimetry, MOSFET dosimetry, IntraOperative Radiation Therapy, 4D-Computerized Tomography. Image Guided raditherapy and Proton radiotherapy.

Pr. Beddar is a lecturer for many courses both within the University of Texas Graduate School of Biomedical Sciences. He serves as Course Director for the GSBS Introductory Radiation Therapy Physics Rotation course. He also holds a Professeur Adjoint appointment in the "Département de Physique, Génie Physique et Optique", Université Laval, Québec City, Québec, Canada. He has served as mentor for 10 graduate students, eight post-doctoral research fellows, and fifteen clinical residents in the last 5 years.

Dr. Beddar published over a 100 scientific papers and book chapters in his field, and serves as a reviewer for NIH study section review panels. Pr. Beddar served as an Associate Editor for the Medical Physics Journal, is serving as a Guest Associate Editor for Medical Physics, Section Editor for the Journal of Applied Clinical Medical Physics and is serving as a reviewer for several other scientific journals, including the International Journal of Radiation Oncology Biology Physics, Physics in Medicine and Biology and Radiotherapy and Oncology Journal.

Himed Kherbache, M.D.

A native of Skikda, Algeria, Himed Kherbache M.D. attended Medical School in Algiers in 1974 and obtained a MD degree in 1981. He completed a Neurosurgery residency in Mustapha University Hospital in 1986.

He practiced Neurosurgery in Tizi-Ouzou and Algiers (CHU Zemirli) before moving to the United States of America in 1994. He obtained his Board-Certification in Nuclear Medicine in 2004, and currently holds a State of California license. He completed his postgraduate education in the Oregon Health Science University (OHSU) of Portland, Oregon where he did an Internship in Surgery and a fellowship in Neuro-Oncology.

He was accepted in a residency program of Nuclear Medicine and graduated in 2002 from University of Southern California (USC) in Los Angeles. In view of his particular interest and involvement in the rich program of Nuclear Cardiology at Los Angeles County/USC Hospital, he passed the Certification Board of Nuclear Cardiology in 2006. He was accepted in the newly implemented PET/CT fellowship program at USC and graduated in June 2008.

In July 2008, he was appointed as an Attending Physician in the Department of Radiology of the Veterans Affairs (VA) Hospital in Washington DC where he is currently practicing Nuclear Medicine with full time Teleradiology privileges in the sister VA Hospital of Martinsburg, West Virginia.

Dr. Kherbache is involved daily in PET/CTs interpretations, and in formulating individualized treatment strategies at 'Tumor Board' meetings, a forum of a multidisciplinary group of oncologists with particular focus on Head & Neck and thoracic malignancies, as well as Lymphomas.

He is a member of the Algerian American Foundation since its creation. He is currently involved in the Health group and has contributed to the visit in the US of the first Algerian physician, the president of the Algerian Society of Neurosurgery, to start a fruitful collaboration with our colleagues in Algeria. He has practiced as a resident and a medical doctor for more than fifteen years in each of the Algerian and the US health care systems.

Taha Merghoub, PhD.

Dr. Merghoub is a faculty (Assistant Attending Lab Member) in the Melanoma Sarcoma Service, Department of Medicine, Memorial Sloan Kettering Cancer Center (MSKCC), New York, USA. His research focuses on the interplay between tumors and the immune system in early stages of melanomagenesis, and the development of novel immunotherapeutic treatment strategies for the treatment of melanoma.

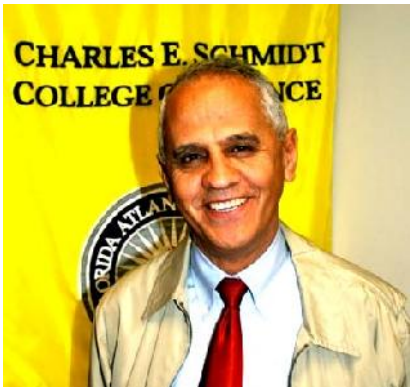
Dr. Merghoub received his B.A. degree from University of Algiers, Algeria, DES (Diplôme D'Etudes Supérieures) in Genetics. He went on to receive a M.S. (Applied Biology and Genetics) and Ph.D. degree (Human Genetics) with highest distinction from University of Paris 7, France. His thesis work with Dr. Jacques Elion and Dr. Rajagopal Krishnamoorthy focused on the study of genetic polymorphism in the fetal hemoglobin gene in patients with sickle cell anemia and thalassemia. His findings provided insight into the correlation between genotypes and phenotypes among patients with sickle cell anemia and thalassemia. Dr. Merghoub's graduate work was remarkably productive, with 9 publications in leading peer-reviewed journals (3 as first author, in *Blood, European Journal of Human Genetics, and American Journal of Hematology*).

After graduation in 1997, he pursued his post-doctoral research with Dr. Pier Paolo Pandolfi at MSKCC. He characterized the transcriptional properties of the Pokemon gene and its role during development which led to publications in *Nature* and *Science*. He also played an active role in the generation of mouse models for acute promyelocytic leukemia, and furthered his knowledge and experience in mouse genetics. Dr. Merghoub was a Senior Research Scientist in Dr. Alan Houghton's laboratory from 2002-2008. His research focus included development of mouse models that spontaneously develop melanoma, elucidating the interactions between tumors and the immune system, and examining the role of FAPα (fibroblast activation protein-alpha) in tumorigenesis.

In 2008 Dr. Merghoub was promoted to Assistant Professor, Melanoma Sarcoma Service, Department of Medicine, MSKCC. His research is focused on examining the systemic immune responses during various stages of tumor progression in mice with spontaneous melanoma as well the establishment of a melanoma repository consisting of cell lines from patients undergoing experimental therapy for melanoma at MSKCC. The repository includes a vast number of cultured melanomas (short-term cultures and cell lines) derived from primary lesions and metastases (skin, lymph node, visceral, lung and bone). The MSKCC collection possesses clinical annotation of tissue site, pathology, response to treatment, and clinical course and outcomes for these cell lines.

Dr. Merghoub's research also involves investigating the therapeutic efficacy of new immunotherapy strategies in combination with novel targeted pathway inhibitors such as Braf inhibitors. The working hypothesis being that agents or drugs which cause tumor cell death (small molecule inhibitors) can result in the release of antigens that will in turn immunize the patient against cancer cells, and the addition of immune modulators (antibodies to PD-1, GITR, OX40 and CTLA-4) will allow for the induction of memory responses which lead to long-term control of tumor growth. The targeted therapies have been shown to have efficacy in melanoma as single agents in both preclinical and early clinical trials. Two of these treatments have been recently approved by the FDA. This work is collaborative involving joint projects with Drs. Merghoub, Jedd Wolchok, James Allison, and Neal Rosen, leaders in the immunology and targeted therapy fields.

Zoubir Ouhib, MS, DABR



Zoubir Ouhib is currently the Chief of Brachytherapy at the Lynn Cancer Institute of Boca Raton Regional Hospital in Boca Raton, Florida. He is an Assistant Professor at Florida Atlantic University (graduate Medical Physics program.)

He is the chair of the American Brachytherapy Physics committee for the American Brachytherapy Society (ABS). He currently serves as the liaison for the The Groupe Européen de Curiethérapie (GEC,) the European Society for Therapeutic Radiology and Oncology (ESTRO) and the American Brachytherapy Society (ABS). He has served as president of the Florida Chapter of the American Association of Medical Physicists (AAPM.)

Zoubir Ouhib graduated in 1975 from the University of Oran, Algeria, with a D.E.S (Diplôme D'Etudes Supérieures) in Physics (solid state). He was a recipient of scholarship to pursue his studies in the United States where he earned a Master of Science in Nuclear Engineering at Georgia Institute of Technology and a Master of Science in Medical Physics at the University of Cincinnati. His thesis in medical physics was in Dosimetry of Low Dose Rate Breast Brachytherapy using Iridium -192.

He started as a staff member in clinical medical physics in 1982 at the Wellman Cancer Center in Lakeland, Florida. In 1986, he became the Chief Medical Physicist at Tampa General Hospital in Tampa, Florida. He went on to join Dartmouth Hitchcock Medical Center in 1992. In 1994, he became the Director of the Medical Physics Department at the Elliot Hospital in Manchester, New Hampshire. He joined Boca Raton Regional Hospital in 1998.

He has served as a reviewer for medical physics scientific journals. He is the chair and founder of an annual ABS school: "Quality Management in Brachytherapy". He published several international peer-reviewed papers and has been a speaker at several international meetings (ASTRO, AAPM, ABS, ESTRO). He was the author of two chapters in two different books with topics related to breast and prostate brachytherapy, radiobiology and training of radiation oncologists/medical physicists. He has provided training for Skin and Accelerated Partial Breast Irradiation (APBI) for several institutions in the United States and the Europe.