

3rd Summer School in Medical & Biosciences Research & Management
organized by the World Hellenic Biomedical Association

11th World Hellenic Biomedical Congress

May 21, 2014

Satellite Symposium

“From Drug Development to Pharmaceutical Industry Growth”

A joint effort of the World Hellenic Biomedical Association and the Bionian Academy

May 25, 2014



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Description

The World Hellenic Biomedical Association (WHBA) is a tax-exempt non-profit organization that was founded in the United Kingdom 20 years ago. Since 2010 the WHBA has transferred its domicile in the state of New York, USA, where it operates as a scientific tax-exempt entity. It consists of several medical and biosciences societies from around the world and has established direct or indirect (through societies) communication channels with approximately 3,000 physicians and bioscientists of Greek descent from approximately 40 countries in 5 continents.

The *Summer School in Biomedical Research & Management* is an annual educational activity of the WHBA. The program aims to expose prominent graduate and undergraduate students of medical and biosciences background, as well as postdoctoral researchers and clinical fellows and residents to knowledge given by 20 instructors and 2 plenary speakers, who are top-notch experts in the most advanced medical and biosciences research fields. In addition, the *Summer School in Biomedical Research & Management* aims to familiarize the students with “actual life” situations that scientists from Academia or the Pharmaceutical and Biotechnology industry deal with on daily basis. Moreover, a scientific symposium is also taking place during the summer school that will give an opportunity for interaction among instructors of the program on a scientific basis. The last part of the program, which is being organized in cooperation with the Bionian cluster, includes lectures on drug development, clinical trials and establishment of a pharmaceutical company.

The scientific board of the *Summer School in Biomedical Research & Management* selected ... students of undergraduate and graduate level among ... applicants from universities in Greece and abroad. The students were selected according to their academic record and potential to develop to prominent figures of Academia or pharmaceutical industry. The combination of students from Greek and foreign universities aims to generate a bridge of excellence among prominent young trainees from several places in the world, as well as to facilitate the establishment of future international networks of excellence.



Scientific board



Chairman
George P. Chrousos, MD, MACP, MACE, FRCP
(London)

University of Athens



Eleftherios Diamandis, MD, PhD

University of Toronto, Canada



Diomedes Logothetis, PhD

*Virginia Commonwealth
University, Richmond, USA*



Sakis Mantalaris, PhD

Imperial College London, UK



Nektarios Tavernarakis, PhD

University of Crete, Greece



Dimitris Monos, PhD

University of Pennsylvania, USA



Dimitris Kardassis, PhD

University of Crete, Greece



Steve Boyages MB BS PhD DDU FRACP FAFPHM

University of Sydney, Australia



Stavroula Kousteni, PhD

Columbia University, USA



Christos Tsatsanis, PhD

University of Crete, Greece



George Z. Mentis, PhD

Columbia University, USA



Charalampos Spilianakis, PhD

University of Crete, Greece



George P. Chrousos, MD, MACP, MACE, FRCP (London)

Professor and Chairman, First Dept of Pediatrics
UNESCO Chair on Adolescent Health Care & Chief of Endocrinology, Metabolism
and Diabetes - University of Athens Medical School, Greece

George P. Chrousos is Professor and Chairman of the First Department of Pediatrics at the University of Athens School of Medicine, Athens, Greece, and former Chief of the Pediatric and Reproductive Endocrinology Branch of the National Institute of Child Health and Human Development (NICHD), National Institutes of Health (NIH), Bethesda, Maryland. He also holds the UNESCO Chair on Adolescent Health Care at the University of Athens and held the 2011 John Kluge Distinguished Chair in Technology and Society at the Library of Congress, Washington DC.

Prof. Chrousos is internationally recognized for his research on the glucocorticoid signaling system of the cell, on the diseases of the hypothalamic-pituitary-adrenal axis, and on the physiological and molecular mechanisms of stress. His work has opened new horizons in our understanding of a spectrum of human complex disorders, including depression, the eating disorders, the metabolic syndrome and the inflammatory autoimmune and allergic diseases. His contributions span a range of medical disciplines, including Medicine, Pediatrics, Endocrinology, Psychiatry, Rheumatology, Allergy, Surgery, Oncology and Reproductive Medicine.

Dr. Chrousos has written over 700 original scientific papers and over 500 book chapters and journal reviews and his work has been cited in more than 67,000 other scientific articles. He is one of the 250 most cited scientists internationally (ISI highly cited) included not only in the list of Clinical Medicine, but also in that of Biology and Biochemistry, and the highest cited endocrinologist and pediatrician in the world. With an H index of 130, Dr. Chrousos is a top cited Clinician and Clinical Researcher.

Dr. Chrousos has received numerous national and international awards and has given many lectures around the world. His awards include the 1987 Richard E. Weitzman Memorial Award, US Endocrine Society, the 1992 Superior Service Award, U.S. Public Health Service, the 1997 Clinical Investigator Award, US Endocrine Society, the 1997 Hans Selye Award, Hans Selye Foundation, Montreal, Canada, the 1999 Pharmacia-Upjohn International First Prize for Excellence in Published Clinical Research, US Endocrine Society, the 1999 Novera Herbert Spector Award, International Society for Neuroimmunomodulation, Lugano, Switzerland, the 2000 Henning Andersen Prize, European Society for Pediatric Endocrinology, Brussels, Belgium, the 2002 Sir Edward Sharpey-Schafer Medal, British Endocrine Societies, the 2004 Lifetime Achievement Award, International Society for Psycho-Neuro-Endocrinology, Glasgow, UK, the 2007 Henning Andersen Prize, European Society for Pediatric Endocrinology, Helsinki, Finland, and the 2008 Geoffrey Harris Prize in Neuroendocrinology, European Society of Endocrinology, Berlin, Germany. Among others, he is a Doctor Honoris Causa of the University of Liege, Liege, Belgium (2003), Universita Politecnica delle Marche, Ancona, Italy (2006) and University of Patras, Patras, Greece (2011). He is an honorary professor of the University of Warwick, Coventry, UK. He was honored with the 2011 Aristeion Bodossaki Award, the highest distinction for accomplishment in the Sciences in Greece. In 2012, he received the Albert Struyvenberg Medal of the European Society of Clinical Investigation (ESCI). He is a distinguished visiting scientist of NICHD, NIH, Bethesda MD, USA. He served as President of ESCI from 2008 to 2011.

Dr Chrousos was inducted as a Master of both the American College of Endocrinology and the American College of Physicians and a Fellow of the Royal College of Physicians, London, UK. He is an elected member of the American Society for Clinical Research, the Association of American Physicians, the Institute of Medicine of the National Academy of Sciences, Washington DC, USA, and the Academia Europaea, London, UK

Prof. Chrousos run one of the best endocrine training programs in the world and fostered the careers of over 60 distinguished, award-winning, world-class physician-scientists. After a 25 year distinguished career in the Intramural Program of the NIH, where he made seminal original contributions and trained a generation of international leaders in Endocrinology, Dr. Chrousos returned to his country and has assumed leadership roles at the University of Athens and in Greek and European Medicine and Academia.

<http://scholar.google.com/citations?user=rMgCyBUAAAJ&hl=en&oi=ao>



Eleftherios P. Diamantis, MD, PhD

Professor of Clinical Biochemistry, University of Toronto, Ontario, Canada

Dr. Diamantis currently serves as Division Head of Clinical Biochemistry at Mount Sinai Hospital and Biochemist-in-Chief at the University Health Network and is Professor & Head, Clinical Biochemistry, University of Toronto, Ontario, Canada. His research activities evolve around discovery and validation of cancer biomarkers, proteomics, mass spectrometry and translational research. Dr. Diamantis received his B.Sc. in Chemistry, Ph.D. in Analytical Chemistry and M.D. from the University of Athens, Greece and a Diploma in Clinical Biochemistry from the University of Toronto, Canada. He is a Certified Clinical Chemist by the Canadian Academy of Clinical Biochemistry and the American Board of Clinical Chemistry.

The research interests of Dr. Diamantis include: Kallikrein Biology and Pathophysiology, Proteomics, Tumor Markers, Mechanisms of Carcinogenesis and Metastatic Progression, Translational Research, Cancer Therapeutics, Male Infertility, Pathobiology and Biomarkers of Autoimmune Diseases and Neurodegeneration.

Dr. Diamantis is a Member of 31 Journal Advisory Scientific and Editorial Boards. He has received numerous awards from both national and international organizations. These include: American Association for Clinical Chemistry Award for Outstanding Scientific Achievements by a Young Investigator (1985); Annual Research Excellence Award of the Canadian Society of Clinical Chemists (1995); Excellence in Teaching Award, Department of Clinical Biochemistry, University of Toronto (1997); Distinguished Scientist Award, Clinical Ligand Assay Society (CLAS) (1999); American Association for Clinical Chemistry Award for Outstanding Contributions to Clinical Chemistry in a Selected Area of Research (1999); Van Slyke Award, the New York Metro Section of the American Association for Clinical Chemistry (1999); Distinguished Scientist Award, National Academy of Clinical Biochemistry (NACB) (2000); Miriam Reiner Award from the Capital Section of the American Association for Clinical Chemistry (2001); Abbott Award from the International Society for Oncodevelopmental Biology and Medicine (ISOBM) (2002); Annual Education Excellence Award of the Canadian Society of Clinical Chemists (2003); Frey-Werle Commemorative Gold Medal from the Frey-Werle Foundation (2007); The Morton K. Schwartz Award for Significant Contributions in Cancer Research Diagnostics from the American Association for Clinical Chemistry (AACC) (2007); Outstanding Contributions to Clinical Biochemistry Award from the Ontario Society of Clinical Chemists (OSCC) (2008); The International Federation of Clinical Chemistry and Laboratory Medicine (IFCC)/Abbott Award for Significant Contributions to Molecular Diagnostics (2009); Excellence in Biomedical Research Nemitsas Prize in Medical Sciences, Takis and Louki Nemitsas Foundation (2010); Dr. Diamantis is highlighted for his citation record in: The Provincial Government of Ontario document entitled "Ontario's Innovation Agenda" (2010), [www.ontario.ca/innovation; page 11].

Other major distinctions of Dr. Diamantis include his election as Corresponding Member of the Academy of Athens, Greece (2005), Member of the Royal Society of Canada (2008), Elected Fellow of the American Association for the Advancement of Science (2011) and Fellow of the Canadian Academy of Health Sciences. He has published 95 review papers, 493 research papers and co-authored 4 books and 22 book chapters. He is the inventor of 28 issued and 21 pending patents and supervised 19 MSc. and 22 PhD theses.



Nektarios Tavernarakis, PhD

Professor of Molecular Systems Biology, Medical School, University of Crete

Caenorhabditis elegans molecular genetics group

Institute of Molecular and Biology and Biotechnology, Heraklion, Crete, Greece

Nektarios Tavernarakis earned his PhD degree at the University of Crete, studying gene expression regulation in yeast, and received training in *C. elegans* genetics and molecular biology at Rutgers University, New Jersey, USA. He is the recipient of a European Research Council (ERC) Advanced Investigator grant award, a European Molecular Biology Organisation (EMBO) Young Investigator award, an International Human Frontier in Science Program Organization (HFSP) long-term award, the Bodossaki Foundation Scientific Prize for Medicine and Biology, the Alexander von Humboldt Foundation, Friedrich Wilhelm Bessel research award, and is member of EMBO.

The Tavernarakis' lab is part of the Institute of Molecular Biology and Biotechnology (IMBB), which is one of the 6 Institutes of the Foundation for Research and Technology-Hellas (FORTH), the largest research institution of Greece. It is also affiliated with the Medical School of the University of Crete. The group was the first to commence *C. elegans* research in Greece, in mid-2001. The Tavernarakis' lab uses the soil-dwelling, nematode worm *Caenorhabditis elegans*, to investigate the molecular mechanisms of neuronal function and dysfunction. With its extremely well described nervous system of just 302 neurons, the worm offers a unique platform for such studies. One particular advantage of *C. elegans* that often goes unappreciated is the ability to obtain viable mutants with severely impaired neuronal function, or with extensive neuronal loss. Furthermore, these mutants can be studied genetically, thus increasing - sometimes decisively - the suitability of this organism towards dissecting neuronal development and function.

Dr. Tavernarakis has organized the International Conference on the Functional Genomics of Ageing in 2004, the bi-annual European *C. elegans* Meeting in 2006, the annual meeting of the European Neurosciences Institutes Network in 2009, and the European *C. elegans* Neurobiology Meeting in 2010. He is also organizing the EMBO Workshop on the Cell Biology of the Neuron in 2011 and the Gordon Conference on the Biology of Ageing in 2013. He has coordinated the European Commission, Sixth Framework Programme Consortium NemaGENETAG, aiming to generate a genome-wide collection of transposon-tagged mutants. This valuable resource, useful to *C. elegans* and non-*C. elegans* researchers alike, is available worldwide. He has also participated in the Sixth Framework Programme Consortium TransDeath, with the central strategy of following a trans-kingdom approach to cell death mechanisms. The lab serves as national coordinator for the Network of European Neuroscience Institutes, an association fostering neuroscience research in Europe, and is a founding member of the European Research Institute for Integrated Cellular Pathology (ERI-ICP). In addition, the lab is one of the partners of the Marie Curie CELLIMAGE, FAMED, NONLIMBA, and Molecular Imaging Early Stage Training and Transfer of Knowledge projects.



Dimitris Monos, PhD

Director, Immunogenetics Laboratory

*Professor of Pathology and Laboratory Medicine,
Perelman School of Medicine at the University of Pennsylvania*

Dr. Monos is an internationally recognized expert on histocompatibility (HLA) molecules. His work covers a wide spectrum of HLA-related issues that pertain to both the molecular (structure/function) aspects of HLAs, as well as the genetics of the major histocompatibility complex, that includes the genes encoding the HLA molecules.

Dr. Monos has established, and is the Director, of the Immunogenetics Laboratory in the Department of Pathology and Lab Medicine of The Children's Hospital of Philadelphia. The lab interacts with the clinical Divisions of Bone Marrow Transplantation, Oncology, Hematology, Nephrology, Cardiology, Gastroenterology, Rheumatology, Neurology, Immunology and Infectious Diseases. The Immunogenetics laboratory supports all the transplantation programs at the Children's Hospital of Philadelphia and any clinical programs that need HLA typing for their patients. Dr. Monos's research interests cover a wide spectrum of HLA-related topics. His lab, in conjunction with other laboratories, has pioneered the DNA-based methodologies for HLA typing. He has worked on a number of structure/function relationships of HLAs, which are very important for the immune response and he has identified associations of HLAs with several diseases, including Type 1 Diabetes, Pemphigus Vulgaris, Tuberculoid Leprosy, Berylliosis, Sarcoidosis, Guillain Barre Syndrome, Ovarian Carcinoma and Crohn's Disease.

His work has also contributed on the development of the very key concept that the strong linkage disequilibrium observed within the MHC does not simply reflect the significance of several genes within this genomic region for the physiological functioning of the immune system but also for the observed disease associations with the HLAs. Genes within the MHC in coordination or independently of particular HLA alleles generate the disease phenotype. The realization that there are additional genes, besides HLAs within the MHC for predisposing to disease susceptibility has been the guiding principle for the recent intense efforts to fully characterize this genomic region and investigate disease associations with a dense set of SNPs.

He also collaborates with the Stem Cell Transplant team, the Nephrology, Cardiology and Gastroenterology Divisions at CHOP and perform research on a number of clinically related projects, where support from the Immunogenetics lab is necessary. His work has been funded by NIH, ADA, JDRF, NMDP and other external sources.



Dimitrios T Boumpas, MD, FACP, FACR
Professor of Medicine, University of Athens

Dimitrios T Boumpas graduated with honours from the Medical school of the University of Ioannina in 1983. Following a fellowship in Molecular Immunology at National Institutes of Health (NIH), Bethesda, MD he trained in Internal Medicine at Georgetown University, Washington DC and in Rheumatology-Clinical immunology at ARB, NIAMS, NIH. Upon the completion of his training, he was appointed an Investigator at ARB, NIAMS, NIH and he served as Deputy and Acting Clinical Director at NIAMS, before he repatriated to the University of Crete to lead the Departments of Rheumatology, Clinical immunology and Allergy, and Internal Medicine. In Crete, Professor Boumpas has served as Associate Dean for the Undergraduate Studies and Directs the Graduate Program on the Molecular Basis of Human Diseases at the Medical School. He is also a member of the Institute of Molecular Biology and Biotechnology, FORTH Greece and the Institute for Biomedical Research of the Academy of Athens. In 2009 was elected professor of Medicine at the Medical school, University of Athens.

His primary clinical and research interests are in the areas of human autoimmunity with emphasis on systemic lupus erythematosus (SLE) and inflammatory arthritis. His work on the treatment of lupus nephritis has shaped immunosuppressive therapy for autoimmune rheumatic diseases internationally. Dr Boumpas work on the pathogenesis of SLE has elucidated the role of peripheral tolerance and innate immunity in the disease and the contribution of polymorphisms of genes associated with disease susceptibility through functional genetics and construction of gene networks for the disease by the use of high-throughput technology and validation in animal models and humans with SLE. He has published over 240 peer-reviewed scientific papers and books chapters, and has edited a monograph on SLE.

Dr Boumpas is the Chair of the Training and Education Committee for the European League against Rheumatism and Chair of European Task force on SLE that develops guidelines for the management and coordinates clinical trials and research on SLE. He is Associate Editor of Annals of Rheumatic Diseases and serves on the Editorial Board of Arthritis and Rheumatism, J Autoimmunity, Kidney International and Clinical Experimental Rheumatology. He is Chair of the the European Research Council Panel for Advanced Grants on Diagnostics Tools, Therapies and Public Health and has served on the EU ESRFI Committee for Translational Research Infrastructures.



Emmanouil Dermitzakis, PhD

University of Geneva Medical School, Switzerland

Emmanouil Dermitzakis is currently a Louis-Jeantet Professor of Genetics in the Department of Genetic Medicine and Development of the University of Geneva Medical School. He is a member of the executive board of the Institute of Genetics and Genomics in Geneva (iGE3), and a group leader at the Swiss Institute of Bioinformatics. His current research focuses on the genetic basis of cellular phenotypes and complex traits. He has authored and coauthored more than 100 papers in peer-reviewed journals and many of them in journals such as Nature, Science and Nature Genetics. His papers have been cited more than 20000 times and his H-index is 50. His research is supported by the Louis-Jeantet Foundation, the Wellcome Trust, the Swiss National Science Foundation, the European Commission, the Juvenile Diabetes Foundation and the US National Institutes of Health (NIH). He is also the recipient of a European Research Council (ERC) grant. He has been invited to give talks and keynote lectures in most of the prestigious genetics meeting and is the organizer of training courses including the Wellcome Trust HapMap course and founder and organizer of the Leena Peltonen School of Human Genomics. He is currently an analysis co-chair in the GTEx project and has served as an analysis co-chair in the pilot phase of the ENCODE (ENCyclopedia of Dna Elements) consortium and member of the analysis group of the Mouse Genome Sequencing Consortium and the International HapMap project. He had a leading analysis role in the HapMap3 project and is a member of the analysis group of the 1000 genomes project. He has served in the Board of Reviewing Editors of Science (2006-2011), and as a Senior Editor in PLoS Genetics (2006-2012) and is currently a member of the Board of Reviewing editors for the new scientific journal eLIFE. He is also in the advisory board of DNAnexus.



Steven C. Boyages MB BS PhD DDU FRACP FAFPHM

*Clinical Professor, Department of Endocrinology, Sydney Medical School,
The University of Sydney, Australia*

Professor Boyages is a Clinical Professor, in the Department of Endocrinology, Sydney Medical School at the The University of Sydney. He was the former Head of Department of Endocrinology at Westmead Hospital from 1990 to 1999. He received his Bachelor of Surgery and Bachelor of Medicine (MB BS) from the University of Sydney in 1980. Residency and Fellowship programs were completed in 1987.

He completed his PhD doctoral thesis in 1989. His thesis explored the impact of iodine deficiency on humans by studying the physical and psychological sequelae on neurological and somatic development. It led to new insights in the nature and timing of iodine deficiency as a consequence of thyroid hormone deficiency on brain development; that the effect of iodine deficiency on brain development is a continuous effect and leads to a shift in the IQ distribution curve of the population to the left; it explored new mechanisms for iodine deficiency damage on the thyroid and led to new strategies for fortification of food to prevent iodine deficiency disorders.

His research has assisted in reducing the global impact of iodine deficiency disorders on the human population. Subsequent research has defined the mechanisms of action of iodine on thyroid cell growth and the deleterious effects of high iodine compounds such as amiodarone on thyroid cell function and morphology. His thyroid research has been internationally recognised and he was awarded the prestigious Daiichi Prize by the Asia Oceania Thyroid Association in 1997.

His research interests are extensive including the study of growth hormone deficiency and excess, other pituitary disorders, the psychological co morbidities of diabetes mellitus, preventing vascular risk in diabetes mellitus as well as understanding system determinants of chronic disease management. Most recently, his major area of interest has been in the area of vitamin D deficiency resulting in a better understanding of its prevalence and its potential impact.

In addition to his clinical and research expertise, Professor Boyages has extensive leadership and management experience. At the same time as being a clinician and researcher he became the Chief Executive of a regional area health service. The operating budget was \$2000 million per annum and was responsible for 20,000 staff. He was the Foundation director for the Clinical Education and Training Institute, the States director for Clinical Research and Policy and most recently the Medical director for eHealth. Professor Boyages is a world authority on the design and implementation of electronic health systems and is Vice Chairman of the Health Information Management Software Society for the Asia Pacific Region.

Professor Boyages' scientific investigations have been published in over 153 original manuscripts and he has 2800 citations. He has trained 12 Graduate students and he has given over 100 national presentations and 50 international presentations.



Diomedes E. Logothetis, PhD

*Professor & Department Head, Physiology and Biophysics
Virginia Commonwealth University, Richmond, USA*

Diomedes E. Logothetis received his undergraduate degree in Physics in 1980 and a Master's degree in Psychology in 1981 from Northeastern University in Boston. He received his Ph.D. in Physiology and Biophysics in 1987 from Harvard University under the mentorship of David Clapham. After completing postdoctoral training in the laboratories of Drs. Bernardo Nadal-Ginard and Peter Hess at Harvard Medical School, Dr. Logothetis joined the faculty at Mount Sinai School of Medicine in New York City at 1993 and the VCU faculty in 2008.

His research focuses on elucidating intracellular as well as cell-to-cell signaling mechanisms. His laboratory aims to understand the function of signaling systems making use of the information depicted in the three-dimensional structure of the macromolecules involved (proteins and lipids) and their interrelationships. His group has focused on signaling mechanisms leading to the control of the activity of Ion Channel proteins. These transmembrane proteins underlie the proper rapid communication of our brain cells allowing processes such as thinking and memory to occur, the control of the rhythmic contraction of our hearts, the release of insulin from our pancreas, the proper transfer of solutes in our kidneys. When they malfunction they lead to devastating diseases, such as epilepsy, fatal cardiac arrhythmias, diabetes and hypertension. Understanding in molecular detail how their activity is regulated is essential if we aspire to develop therapeutic agents to control their function during disease.

Dr. Logothetis has always enjoyed teaching. At both of his previous two institutions, Harvard Medical School and Mount Sinai School of Medicine, he lectured on Membrane Excitability / Ion Channels and Cardiovascular Physiology and directed laboratory exercises in Medical Physiology. At Mount Sinai he directed the Medical Physiology course for two years and also a Core Cell Biology course for five years. In addition, he organized and directed a graduate level course on "Ion Channels" for over 10 years and a "Methods in Biomedical Sciences" course for two years. He also participated in several other courses in Neurobiology, Pharmacology, Physiology, Biophysics and Cell Biology.

Dr. Logothetis has received several awards including the following:

- 2008: The Outstanding Mentor Award, Mount Sinai School of Medicine
- 2005: Student Council Appreciation Award, Mount Sinai School of Medicine
- 2000, 2001, 2002: Excellence in Teaching Award, first year graduate students, Mount Sinai School of Medicine; 1992: Excellence in Teaching Award, first year medical students, Harvard Medical School
- 1986-1987: Albert J. Ryan Fellow, Division of Medical Sciences, Harvard Medical School
- 1980: Avrom Aaron Leve Award, Outstanding Psychology Student, Northeastern University

Source: Virginia Commonwealth University



Vasilis Ntziachristos M.Sc. Ph.D.

Professor and Chair for Biological Imaging

Director, Institute for Biological and Medical Imaging

Technische Universität München & Helmholtz Zentrum München

School of Medicine and School of Electrical Engineering

Vasilis Ntziachristos Ph.D. is a Professor and Chair for Biological Imaging at the Technische Universität München and the Helmholtz Zentrum München and the director of the Institute for Biological and Medical Imaging. Prior to this appointment he has been faculty at Harvard University and the Massachusetts General Hospital. He has received his masters and doctorate degrees from the Bioengineering Department of the University of Pennsylvania and the Diploma on Electrical Engineering from the Aristotle University of Thessaloniki, Greece.

Professor Ntziachristos serves as chair in international meetings and councils and in the editorial boards of several scientific journals has received numerous awards and distinctions, including the Leibnitz prize, the Erwin Schrödinger prize and was named one of the world's top innovators by the Massachusetts Institute of Technology (MIT) Technology Review in 2004. His main research interests involve the development of optical and opto-acoustic methodologies for probing physiological and molecular events in tissues using non-invasive methods.



Charalampos (Babis) Kalodimos, PhD
Professor, Center for Integrative Proteomics Research
Rutgers University, USA

Babis Kalodimos' lab works on two main objectives: first, the determination of the structural and dynamic basis for the function and assembly of large protein machineries; and second, the determination of the role of the internal protein dynamics in regulating protein activity and allosteric interactions. Their goal to tackle large and complex systems is arguably a very challenging one. However, obtaining simultaneously structural and dynamic information on these complex systems while at work will pave the way for ultimately understanding how they function. NMR spectroscopy is best suited for providing such invaluable information; nevertheless, its application has been mostly limited to smaller size proteins. They have recently been able to push the envelope by applying NMR to large and very complex biological systems, with the promise to gain unprecedented knowledge of their sophisticated mechanisms of action.

AWARDS & HONORS

Stig Sunner Young Investigator Award, 2013.

Biophysical Society Michael and Kate Bárány Young Investigator Award, 2011.

New York Academy of Sciences Blavatnik Young Investigator Award, 2011.

Protein Society Young Investigator Award, 2010.

Johnson & Johnson Discovery Award, 2004.



Athanasios (Sakis) Mantalaris, PhD

*Professor of BioSystems Engineering, Department of Chemical Engineering,
Imperial College London, London, UK*

Sakis Mantalaris is Professor of BioSystems Engineering in the Department of Chemical Engineering at Imperial College London. He graduated from Athens College in 1986 and received his B.Sc. (Hon) from the University of Western Ontario and his M.Sc. and Ph.D. (2000) in Chemical Engineering from the University of Rochester. In 2000, he joined Imperial as the Governor's Lecturer being promoted to Reader in 2007 and Professor in 2010.

His expertise is in modelling of biological systems and bioprocesses with a focus on mammalian cell culture systems, stem cell bioprocessing, and tissue engineering. He is part of the Centre for Process Systems Engineering (<http://www.ps.ic.ac.uk>) where he has established the Biological Systems Engineering Laboratory (<http://www.imperial.ac.uk/bsel>). He has been instrumental in developing a systematic framework that links modelling to experiments facilitating model-based design of experiments and model-based control and optimisation. He has published over 150 original manuscripts, co-edited one book, and holds several patents with several more pending. He has trained 24 PhD students and 15 post-doctoral fellows. He has given numerous keynote, plenary and invited lectures and serves in many Editorial Boards.

Prof Mantalaris has received the Junior Moulton Award for best paper by the Institute of Chemical Engineers (IChemE) in 2004, the Rector's Award for Research Excellence in 2007, the Live Demo Award at ISCAS in New Orleans, USA in 2007, as well as the 1st Prize at the 65th Annual Meeting of the Hellenic Association of Orthopaedics Surgery & Traumatology, Thessaloniki, Greece in 2009. In 2012, he was elected Fellow of the American Institute for Medical & Biological Engineering and in 2013 he was awarded a European Research Council (ERC) Advanced Award.



Dimitris Kardassis, PhD

Professor of Biochemistry, Faculty of Medicine, University of Crete, Greece

Dr Dimitris Kardassis obtained his BSc degree from the Department of Biology of the Aristotelian University of Thessaloniki in 1985 and his PhD degree from the Department of Biochemistry of Boston University Medical Center (BUMC) in 1991. He was a post-doctoral fellow in the Section of Molecular Genetics of the Whitaker Cardiovascular Institute of BUMC in 1992. In 1993-1998 he was Research Associate in the Department of Basic Sciences of the University of Crete Medical School. In 1994, he was awarded an EMBO short term fellowship to work in the laboratory of Dr Miguel Beato in the Institute of Molecular Biology and Tumor Science in Marburg, Germany. Dr Kardassis was elected Assistant Professor of Biochemistry at the University of Crete Medical School in 1998, Associate Professor in 2004 and Full Professor in 2010. He was the Chairman of the Department of Basic Sciences of the University of Crete Medical School in 2009-2010. Since 1998, Dr Kardassis has been a faculty member of the Institute of Molecular Biology and Biotechnology of the Foundation for Research and Technology of Hellas in Heraklion.

Dr Kardassis is actively involved in Undergraduate and Graduate teaching at the University of Crete Medical School. He was a founding member of the Graduate Program “The Molecular Basis of Human Disease” and is currently the Director of this program. He is also the Director of Graduate Studies of the University of Crete Medical School and a member of the Quality Assurance Committee of the University of Crete.

Dr Kardassis has been working in the field of lipoprotein regulation and function since 1986. His studies have focused on the characterization of the regulatory elements and factors that control the expression of several apolipoprotein genes. He played a major role in the elucidation of the role of hormone nuclear receptors in apolipoprotein gene regulation. In recent years, the focus of his research is on the genetic basis and the molecular mechanisms of atherosclerosis. More specifically, he is interested in: a) Understanding the mechanisms that control the expression of key genes of High Density Lipoproteins (HDL) metabolism in the liver, epithelial cells and macrophages under basal or inflammatory conditions. b) Understanding how the structure and the functions of HDL are affected by inflammation using animal models of arthritis and IBD; c) Identifying novel genes of HDL metabolism and novel HDL-based biomarkers; d) Developing novel humanized mouse models of dyslipidemias; e) Characterizing natural mutations in the coding regions and the promoters of HDL genes in patients with increased risk for ischemia and myocardial infarction; f) Studying the molecular basis of the metabolic syndrome using systems biology approaches

Dr Kardassis is the Chairman of COST Action BM0904: “HDL: from biological understanding to clinical exploitation” (2010-2014), a scientific network of top HDL investigators from 15 European countries. He is also a member of the Hellenic Society of Lipidology, Atherosclerosis and Vascular Disease (HSLAVD) and a member of the Organizing Committee of the European Lipoprotein Club (ELC) for the period 2013-2017. He has organized several International scientific meeting, workshops and summer schools on HDL. In 1999 he received the Young Investigator Award from the European Atherosclerosis Society. He is a fellow of the American Heart Association (FAHA). Dr Kardassis has received funding from Greek or International agencies for his work on the regulation of HDL. He has published more than 70 original and review articles on lipoprotein structure, function and gene regulation.



Spyros Kollias, MD

*Professor of Radiology and Neuroradiology
University of Zurich, Switzerland*

Spyros Kollias is Professor of Radiology with specialization in Neuroradiology at the University of Zurich, Switzerland and Chief of the MRI section at the Institute of Neuroradiology of the University Hospital. He was trained in neuroradiology in US from 1990 to 1993, initially for one year at the University of California San Francisco (UCSF) and subsequently for two years at the Children's Hospital Medical Center (CHMC), University of Cincinnati OH. He is a member of the Neuroscience Center Zurich (ZNZ) (<http://www.neuroscience.ethz.ch/>) and group leader in the section of Biomedical Technology and Imaging.

He authored more than 200 peer reviewed publications, reviews, letters and book chapters. He is co-editor of three books in the field of high resolution medical imaging. He is invited as a lecturer and faculty member in several international scientific conferences every year in the field of neuroradiology and medical imaging. He has trained 12 Graduate students and more than 30 post-doctoral fellows in clinical medicine and basic neuroscience. His main interest is the applications of advanced magnetic resonance (MR) imaging technology in the diagnosis of neurologic diseases.

Main research focuses include: **i) Structural imaging of neural tissue and neurovascular anatomy:** a) high-resolution imaging of the white matter using DTI for the investigation of brain and spinal myeloarchitecture with clinical applications in neuro-oncology, vascular disease, trauma, and MS, b) clinical applications of advanced imaging techniques including MRS, DTI, Perfusion MRI, for increasing the specificity of MR technology in brain tumors, vascular disease and neurodegeneration, c) high-resolution vascular imaging and investigations of hemodynamics in cerebral aneurysms using advanced computational applications **ii) Functional brain mapping using fMRI:** several methodological and clinical projects have been pursued over the last years including procedural advancements and clinical applications. Specific on-going projects: a) functional organization of the sensorimotor system and its postlesional reorganization in patients with intracranial lesions (tumors, stroke), b) functional analysis of brain plasticity and recovery of function in paraplegia, c) reorganization of language function in aphasic patients, d) preoperative cortical mapping for treatment planning. **iii) Advanced imaging of the spinal cord:** including high-resolution anatomical imaging for accurate definition of gray and white matter, MR spectroscopy and fMRI for obtaining metabolic and functional information, and DTI for obtaining quantitative microstructural information on tissue composition with applications in oncological, vascular traumatic and neurodegenerative pathologies affecting the human spinal cord.

His research is funded by competitive third-party funds from the Swiss National Foundation (SNF), the Swiss MS Society, several neuroscience foundations, and the industry.

More info and link to relevant publications under:

www.neuroscience.ethz.ch/research/biomedical_technology/kollias



Leonidas Stefanis, MD, PhD

*Associate Professor of Neurology and Neurobiology
University of Athens Medical School
Director, 2nd Department of Neurology, Hospital Attikon, Athens, Greece
Director of Laboratory of Neurodegenerative Diseases
Division of Basic Neurosciences,
Biomedical Research Foundation of the Academy of Athens*

Dr. Stefanis obtained his MD from the University of Athens Medical School in 1987. He subsequently obtained his PhD from the same University in 1992, with work related to the molecular basis of thalassemia. In 1991, he moved to the US, where he trained as Resident in Neurology at Columbia University in New York. In 1995, he embarked on a post-doctoral fellowship in the laboratory of Dr. Lloyd Greene, in the Dept. of Pathology, while in parallel he completed a two-year fellowship on Neurobehaviour, in the Dept. of Neurology at Columbia University. His work during this time centered on mechanisms of neuronal cell death. In 1998 he was appointed Assistant Professor of Neurology in the Center for Neurodegenerative Diseases in the Dept. of Neurology at Columbia University, position which he held up till 2003. During this time, he focused his interest more on the pathogenesis of neurodegenerative disorders, with an emphasis on Parkinson's Disease (PD). In 2003 he moved back to Greece as Researcher Level B at the Biomedical Research Foundation of the Academy of Athens (BRFAA), and set up a laboratory focusing on mechanisms of neurodegeneration, in particular in relation to protein degradation systems, alpha-synuclein and PD. Since 2006 he has assumed the appointment of Associate Professor of Neurology and Neurobiology in the University of Athens Medical School, while he continues his work at BRFAA as an affiliated investigator. Currently, Dr. Stefanis is investigating various areas of PD pathogenesis, ranging from the bench to the bedside. He is examining the genetic underpinnings of the disease in the Greek population, not only in the rare familial, but also in sporadic cases. He is involved in studies that aim to examine the utility of using alpha-synuclein as a disease biomarker. He is examining pathways of neurotoxicity induced by aberrant alpha-synuclein, with an emphasis on the involvement of protein degradation pathways, such as Chaperone-Mediated Autophagy. He is also investigating the molecular underpinnings of the link of other genetic alterations linked to PD, such as those in UCH-L1, LRRK2 and GBA.

Source: Biomedical Research Foundation of the Academy of Athens



Stavroula Kousteni Ph.D.

*Associate Professor, Departments of Medicine and
Physiology & Cellular Biophysics
Columbia University, New York, USA*

Dr Kousteni joined the Division of Endocrinology at the College of Physicians and Surgeons in July 2006. She received her Ph.D. degree from the University of Wales, followed by postdoctoral training at the School of Molecular and Medical Biosciences in Wales, UK, and the Hellenic Pasteur Institute in Athens, Greece. She held a faculty appointment as a Research Assistant Professor of Medicine at The Center for Osteoporosis and Metabolic Bone Diseases at The University of Arkansas for Medical Sciences from 1999 - 2006.

The purpose of the research in her laboratory is to understand the influence of the skeleton on various physiological processes. The long term goal is to uncover the pathogenesis of degenerative diseases and to suggest novel and adapted therapies for them. Along these lines Dr Kousteni's lab is studying the function of bone as an endocrine organ regulating glucose metabolism and energy homeostasis. In this aspect, her research is showing that osteoblasts, the bone forming cells, express transcription factors and secrete a hormone that affects glucose metabolism, insulin secretion and sensitivity and suppresses appetite. In addition, they are examining the role of osteoblasts in hematopoiesis with particular emphasis in myelodysplasia (MDS) and acute myeloid leukemia (AML). In current work, her lab has discovered a function of the skeleton, as an inducer of leukemogenesis by identifying a mutation in osteoblasts that disrupts hematopoiesis leading to leukemogenic transformation of hematopoietic stem cells (HSCs) and establishment of AML in mice. The disease is cell autonomous and associated with clonal evolution as indicated by the presence of common chromosomal aberrations and the somatic mutations, one of which is found prominent in AML patients. Dr Kousteni's lab delineated the molecular signaling pathway that induces AML and identified the same mutation and signaling pathway in more than a third of patients with MDS and AML. Lastly, within the context of a cross-talk between the skeleton and other organs, the lab is investigating mechanisms through which distant organs such as the brain and the intestine regulate bone mass accrual.

Dr Kousteni is a member of the American Society for Bone and Mineral Research (ASBMR); Endocrine Society; American Society of Hematology; New York Academy of Sciences;. She served at the ASBMR Publications and Education Committees; is the 2014-2017 Chair of the Education Committee, and serves at the ASBMR program committee. She has received several awards that include The Schilizzi Foundation in UK, The General Secretariat of Research and Technology of the Greek Department of Industry and Development; The ASBMR Travel Award; Charles W. Bohmfalk Prize, Columbia University; the Irma T. Hirsch Research Award for highly meritorious medical research conducted at Columbia University College of Physicians & Surgeons and the ASBMR 2013 Fuller Albright Award in recognition of meritorious scientific accomplishment in the bone and mineral field. She has served as a Scientific Reviewer for The Wellcome Trust, London, UK; The Nathan Shock Center and the Claude Pepper Center for the Independence of Older Americans, The Natural Sciences and Engineering Research Council of Canada. She is also an Ad-hoc reviewer for NIA (National Institute of Aging) applications and NIAMS (National Institute of Musculoskeletal Research) special emphasis panel reviewing R03 applications.



Constantinos Anagnostopoulos, M.D, Ph.D

Investigator - Associate Professor

Nuclear Medicine, PET/CT - Clinical Research Center

Biomedical Research Foundation, Academy of Athens

Constantinos Anagnostopoulos M.D, Ph.D, FRCP, FRCR, FESC is an investigator-B (Level, Associate Professor). He is a Faculty member of BRFAA and works at the Clinical Research Centre leading its Division of Nuclear Medicine with focus on development of the Cardiovascular Imaging programme and coordination of the Institute's strategy on translational imaging. He received his Medical Degree (M.D) from the University of Thessaloniki in 1985. He trained in Nuclear Medicine at the Theagenio Hospital of Thessaloniki and completed his post-graduate training at the Royal Marsden and Royal Brompton Hospitals in England and the Brigham and Women's Hospital, Boston, US. During his post-graduate training he acquired expertise in Nuclear Cardiology and hybrid imaging (PET/CT and SPECT/CT).

He received his Certificate for Completion of Specialist Training (CCST), London UK, in 1996 and his Ph.D from the University of Athens in the same year after completing a joint research program between the latter and the National Heart and Lung Institute, Imperial College, London UK. He has been awarded the Fellowship of the European Society of Cardiology (FESC) in 2000, and also the Fellowships of the Royal College of Radiologists (FRCR) and the Royal College of Physicians (FRCP) in 2003 and 2006 respectively.

He was Senior Lecturer in Nuclear Medicine at the Institute of Cancer and the William Harvey Research Institute of Barts and The London School of Medicine, where he was also Head of the Nuclear Medicine-PET/CT Department (2008-2010). Before this post, he had a joint appointment at the Royal Brompton and the Chelsea and Westminster Hospital as Consultant in Nuclear Medicine and Hon. Senior Lecturer at the Imperial College (from 1998 to 2008). He was also Hon. Senior Lecturer at the University College London, UK from 2006 to 2011.

Dr Anagnostopoulos has served as President of the British Nuclear Cardiology Society of and Council member both of the British Cardiovascular Society and the British Nuclear Medicine Society (2002 and 2003) and also of the European Society of Cardiology working group in Nuclear Cardiology and Cardiac CT (2002-2010). He has been advisor to the Department of Health, UK, through the National Institute for Clinical Excellence (NICE) on scoping the document; "Appraisal of Myocardial Perfusion Imaging" and external expert of the appraisal committee. He is member of the editorial board of leading specialty journals and he has also served as Guest Editor of HEART. He is chair and member of UK and European Guidelines Committees respectively and also book editor (Non Invasive Imaging of Myocardial Ischemia, Springer) and leading author or co-author of numerous book chapters and papers.

Dr Anagnostopoulos has an extensive range of national and international teaching activities. He collaborates with a number of European centres. His research interests focus on development, optimization, validation and application of nuclear and hybrid imaging techniques to study atherosclerosis and its consequences to the vessel wall and the myocardium, as well as on development of imaging strategies to support translational research. His pioneering work on comparative assessment of left ventricular function by novel radionuclide techniques and cardiac MRI, heart failure imaging, and more recently, on absolute perfusion quantification using PET/CT with Rubidium-82 has been cited extensively in the literature.



Nikos Scarmeas, M.D.

*Associate Professor of Neurology, Columbia University
New York, USA*

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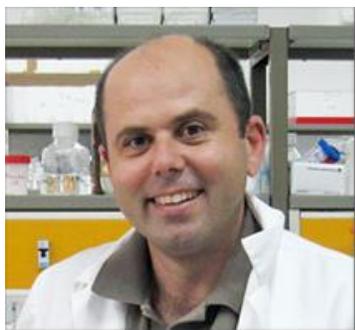
Assistant Professor of Neurology, University of Athens, Greece

Dr. Nikos Scarmeas was born and raised in Athens Greece. After obtaining an M.D. degree from the University of Athens he moved to the US and had Neurology residency training and then a 2-year clinical fellowship in Aging and Dementia at Columbia University Medical Center. He also completed a Master's degree in Biostatistics – Epidemiology at the Mailman School of Public Health at Columbia University.

Dr Scarmeas joined the faculty of Columbia University in 2002. He is currently an Associate Professor of Neurology and shares his time between research and clinical work at Columbia University and in University of Athens. His clinical work includes seeing elderly patients with dementias and cognitive dysfunction, supervising and teaching of Medical students and Neurology residents.

His research interests have started from the topic of cognitive reserve (i.e. how higher IQ, education, more demanding occupational attainments, or more engagement in cognitive-social-physical leisure - lifestyle activities can help elderly cope better with the damage caused to their brains by Alzheimer's disease and aging and therefore reduce their risk for dementia and slow down their rates of cognitive and functional decline). More recently, he has developed a special interest in the contribution of diet (in particular composite dietary patterns such as a Mediterranean-type diet and others) and physical activity in dementias and healthy aging.

Dr Scarmeas is the Principal Investigator in studies funded by either the Alzheimer's Association (IIRG) or the NIH-NIA (RO1) and a Co-Investigator in multiple others. His research work has resulted in more than 100 original publications in highly esteemed journals (>4300 citations, H-index = 38) and multiple presentations in internationally acclaimed scientific conferences - meetings. He reviews for more than 100 international scientific journals and international funding agencies including the Alzheimer's Association, the US National Institute of Health, the European Union Marie Curie programs etc.



Christos Tsatsanis, PhD

*Associate Professor of Clinical Chemistry, Dept. of Laboratory Medicine,
Medical School, University of Crete*

Christos Tsatsanis received his BSc in Biology from the University of Athens in 1991. Between 1991 and 1995 he worked in the laboratory of Prof. J.C. Neil at the Beatson Institute for Cancer Research, Glasgow, Scotland and the Dept. of Veterinary Pathology, University of Glasgow, Scotland and received his PhD in collaboration with the University of Crete in 1995, in the field of Molecular Oncology-Virology. From 1995 until 1999 he was a Postdoctoral fellow in the laboratory of Prof. P. Tsiichlis at Fox Chase Cancer Center, Philadelphia, PA and the Department of Microbiology and Immunology, Kimmel Cancer Center, Thomas Jefferson University, Philadelphia, PA, studying the role of Tpl2 kinase in T-cells and macrophages. Following military service, he was appointed Lecturer in Clinical Chemistry at the Medical School, University of Crete in 2001. He is currently Associate Professor at the Medical School, University of Crete and the Clinical Chemistry Laboratory of the University Hospital of Heraklion, Crete. During his employment he has received sabbatical training at Lawrence Berkeley Labs, University of California, Berkeley, CA (2002), and at Tufts Medical School, Boston, MA (2004 and 2008-2009).

His work focuses on studying the molecular mechanisms of macrophage activation and inactivation and their role in inflammatory diseases including metabolic inflammation. Recently he has identified Akt kinases as major participants in regulating inflammatory miRNAs and the polarization of macrophages to pro-inflammatory (M1) or anti-inflammatory (M2). His lab is currently studying the crosstalk of metabolic factors and signaling molecules in the innate immune system to understand the pathogenesis of metabolic inflammation, using genetically modified mice. In collaboration with biotech companies he is working towards the characterization of novel targets and the development and evaluation of siRNA and miRNA delivery systems for the treatment of inflammatory diseases. The potential of signaling molecules and miRNAs as biomarkers is also investigated.

Dr Tsatsanis is actively involved in training Medical students and MD residents in topics of Laboratory Medicine. He is actively involved in the organization and teaching of the Graduate programs “Molecular Basis of Human Diseases” and “Molecular Biology-Biomedicine” and he is member of the steering committee of both programs. He has supervised four PhD students and another four PhD theses are currently in progress.

His research at the University of Crete has been funded by international competitive programs such as the Association for International Cancer Research, the US Department of Defense Medical Research Program and the EU under the FP7 program, as well as by national funding programs, including the “Aristeia (Excellence)” grant. He is co-author of 73 peer-reviewed publications and four book chapters.



George Z. Mentis, PhD

*Assistant Professor of Pathology & Cell Biology,
Columbia University New York, USA*

George Mentis received his BSc in Physiology and his MSc in Neurological Science from University College London (UCL) and his PhD from Imperial College School of Medicine in the UK. He then worked as a postdoctoral fellow and staff scientist at the National Institutes of Health (NIH) in Bethesda, Maryland. At the end of 2009 he was recruited as Assistant Professor to the Center of Motor Neuron Biology and Disease in the Dept. of Pathology and Cell Biology at Columbia University in New York.

The research in his laboratory focuses on two major topics in the field of spinal cord development and disease.

1. The development and function of spinal motor circuits involved in the genesis and maintenance of locomotor activity.
2. The pathogenesis of Spinal Muscular Atrophy (SMA), a fatal, inherited neuromuscular disease caused by the degeneration of motor neurons.

His group's studies have shown that there are significant defects in the sensory-motor circuitry prior to any motor neuron loss. The reduced synaptic responses in spinal motor neurons raises the possibility that degeneration of pre-motor neurons may contribute to the progression of SMA, and so provide a novel cellular target for therapeutic development.

He has over 30 peer-review publications in top Neuroscience journals and has received the 2006 Fellows Award for Research Excellence at the NIH and the 1st Audrey Lewis Young Investigator Award from Families of SMA in 2010.



Charalampos (Babis) G. Spilianakis, PhD

*Assistant Professor, Department of Biology, University of Crete
Affiliated researcher, Institute of Molecular Biology & Biotechnology*

Dr Spilianakis is currently a tenured Assistant Professor of Biochemistry at the Department of Biology of the University of Crete and an Affiliated Researcher at the Institute of Molecular Biology and Biotechnology of the Foundation for Research and Technology (IMBB-FORTH) in Crete, Greece. He received his BSc in Biology from the University of Crete and his MSc and PhD from the same Department in collaboration with the IMBB-FORTH. He then moved to the Department of Immunobiology at Yale Medical School where he performed his postdoctoral studies as a Cancer Research Institute fellow under the supervision of Professor Richard A. Flavell. In 2008 he returned to Greece and accepted a Research Assistant Professor position at IMBB-FORTH where his laboratory is still hosted. In 2009 he was elected an Assistant Professor of Biochemistry at the Department of Biology of the University of Crete.

His research interests involve the molecular elucidation of the epigenetic mechanisms involved in the transcriptional regulation of the immune system. The main objective of his current laboratory is to apply a combination of biocomputing, molecular, biochemical, imaging and genetic approaches in order to identify and characterize protein complexes that generate and/or maintain long range chromosomal interactions in cell populations of the innate and adaptive immune system. His ultimate goal is to provide substantial information on how the genome is shaped as a whole and how the nuclear structure patterns in the context of distinct subnuclear microenvironments regulate global gene expression.

His research team has been funded the last six years from both national (GSRT) and international (EU, USA) funding sources. Among others he was awarded a CRI-USA investigator award and a GSRT excellence grant. His published research has been cited more than 1300 times and he had trained numerous graduate and undergraduate students.

Clio P. Mavragani, MD, PhD

*Assistant Professor in Experimental and Applied Physiology,
National and Kapodistrian University of Athens, Athens, Greece*



Dr. Mavragani is Assistant Professor in Experimental and Applied Physiology in the Department of Physiology at the University of Athens. She is also Attending Rheumatologist in the Department of Pathophysiology, Laikon General Hospital.

She received her MD and PhD degrees, both with honors, from the National University of Athens, Greece, in 1995 and 2001 respectively. In 2000, she also received a Diploma Degree in Internal Medicine from Imperial College, University of London with distinction. From 2000 to 2004, she was trained in Rheumatology at the Department of Pathophysiology, University of Athens under the mentorship of Prof. HM Moutsopoulos. Following her clinical fellowship, from 2004 until 2008, she joined the lab of Peggy Crow at the Hospital for Special Surgery in New York as a Post-Doctoral Research Fellow. Upon her return to Greece, she served as an Attending Rheumatologist in the General Hospital of Athens “G.Gennimatas” until 2010, when she was appointed as a lecturer at University of Athens. Recently, she served as a visiting investigator at the Hospital for Special Surgery/ Weil Cornell Medical College for a period of two months. Her research focuses on the clinical expression of systemic autoimmune disorders, the underlying triggers and clinical implications of the type I interferon/BAFF axis system in systemic autoimmunity, as well as the implication of genetic and epigenetic contributors of Sjogren’s syndrome related lymphomagenesis. Dr. Mavragani has published more than 60 peer reviewed journals and book chapters and has given more than 40 presentations at national and international meetings. She received a S.Niarchos international exchange fellowship award, a prize for academic performance from Imperial College, School of Medicine and several awards from the Greek Rheumatology Society for her work on Sjogren’s syndrome and rheumatoid arthritis.



Sophie Mavrogeni, MD, FESC

Consultant Cardiologist, Onassis Cardiac Surgery Center, Athens, Greece

Born in Greece. Diploma in Medicine (Greece, 1985). Specialist in Cardiology (Greek Board, 1991). CMR training at Royal Brompton Hospital (London, 1991-1993). CMR sabbatical at University of Alabama at Birmingham (1993). Married with an endocrinologist and mother of a 18yrs old boy, who will start his studies in Medicine next year.

Member of AHA Cardiovascular Radiology council (1996), SCMR (1998, founding member number 7)) and ESC CMR WG (1999). European Diploma in Cardiology (2000). Fellow of the European Society of Cardiology (FESC, 2000). CMR Credentialing (Level 3) by SCMR (2003). CMR Credentialing (European exams) by EUROCMR (2003).

Reviewer for several journals, including JCMR (2001), Stroke (2003), CAIM (2005), Eur Heart J (2007), Heart (2005), Int J Cardiol (2002), JMRI (2008), JACC (2007), Circulation (2007), Arthritis Care and Research (2008), Annals of Internal Medicine (2009).

Founder and 1st President of the Greek CMR WG (1999-2002). Nucleus member of the European Society of Cardiology CMR WG, responsible for CMR education topics (2004-2008). Current position: Cardiologist at Onassis Cardiac Surgery Center (Athens), in charge for CMR teaching, routine scans and research activities. Organizer of the annual international CMR Workshop in Athens (from 2000 until now), accredited by EBAC and SCMR and currently in charge for the **International CMR Registry in Rheumatic Diseases**.

Research interests include non-ischemic cardiomyopathy and specifically CMR in Internal Medicine (Thalassemia, Dystrophinopathies, myocarditis and rheumatic diseases). Published over 100 original articles and authored chapters in several books related to cardiovascular imaging and CMR.

Dr. Mavrogeni's motto is **"High tech is important; however, people behind the machines make the difference"**



Maria Papatriantafyllou, PhD

Science Writer and Editor

Maria Papatriantafyllou is a Science Writer and Editor, with significant experience in Science Publishing. She has worked at the Nature Publishing Group from 2011 to 2013. During that time, she served as an Associate Editor on Nature Reviews Immunology and on Nature Reviews Molecular Cell Biology. Since August 2013, she is a freelance Science Writer and Editor, collaborating with prestigious life science and clinical journals, including Nature Reviews Immunology, Nature Reviews Endocrinology and Nature Reviews Neurology. Moreover, she has freelanced for Science Communication Agencies, such as Macmillan Science Communication. Maria has written around 100 science-related articles, and has edited numerous primary research manuscripts, review articles and grant proposals.

Before launching a career in Science Communication, Maria had established a strong background in biological research. She obtained a Degree in Biology from University of Athens (2004) and a PhD in Immunology from University of Heidelberg (2008). From 2008 to 2011, she worked as a postdoctoral researcher at the German Cancer Research Centre (DKFZ) in Heidelberg, Germany. Her research focused on the characterization of molecular mechanisms in immune regulation using experimental models of cancer, autoimmunity and cardiovascular disease. Part of the main findings of this work was published in PNAS in 2012. Her research was funded by the Helmholtz alliance for Cancer Immunotherapy.

Maria is fluent in English, German and Greek, and in her free time she experiments with creative writing in all three languages. She has lived and worked in three European countries and relishes information and cultural exchange in the international science community. For further information, you can check out her professional profile on LinkedIn: <http://lnkd.in/bQPGCWX>.



Program

Summer School Program

Saturday – May 17, 2014

6:00 – 8:30

Opening session

Welcoming remarks

President of the World Hellenic Biomedical Association

6:15 – 7:15

Distinguished lecture

Professor Georgios P. Chrousos

Chairman of the Scientific Board of the Summer School

“Welcoming Address: In Search of Wisdom”

and

“The Profound Impact of Stress on Human Biology”

Break

7:30 – 8:30 pm

Keynote lecture

Aris Patrinos, PhD

Deputy Director for Research

Center for Urban Science & Progress, New York University



Sunday, May 18, 2014			
	Undergraduate students	Graduate students	
8:30 – 9:45	Dimitris Monos <i>The Ag-specific immune response and the role of HLA molecules in this process</i>	Eleftherios Diamandis <i>Proteomic Strategies for Discovering Novel Cancer Biomarkers</i>	
10:15 - 11:30	Cleo Mavragani <i>Overview of the immune response-Clinical implications</i>	Christos Tsatsanis <i>Signal transduction pathways as central modulators of macrophage function</i>	
1:30 - 2:45	Eleftherios Diamandis <i>The Kallikrein Gene Family: Physiology, Pathobiology and Clinical Applications</i>	Dimitris Monos <i>The use of High Throughput Sequencing technologies for the characterization of the HLA/MHC genomic region. Diagnostic and research applications</i>	
3:00 - 4:15	Christos Tsatsanis <i>Contribution of innate immunity in inflammatory diseases: from mechanisms to therapies</i>	Cleo Mavragani <i>Epigenetics and autoimmunity- Lessons from Sjogren's syndrome and systemic lupus erythematosus</i>	
Evening session (5:15 – 7:00 pm) - Meet with the professors			
	Dimitris Monos Table 1	Eleftherios Diamandis Table 2	Christos Tsatsanis Table 3
			Cleo Mavragani Table 4
Morning session (8:15 am - 11:00 am)			
Neurology-Neuroscience			
	Residents & Clinical Fellows	Postdoctoral Researchers	
8:30 – 9:45	Spyros Koliass <i>Stroke: from early diagnosis to timely therapy</i>	Nikos Scarmeas <i>Overview of Dementias</i>	
10:15 - 11:30	George Mentis <i>Current therapeutic approaches towards amelioration of Spinal Muscular Atrophy</i>	Leonidas Stefanis <i>Lysosomal pathways in neurodegeneration</i>	
1:30 - 2:45	Nikos Scarmeas <i>Overview of Dementias</i>	Spyros Koliass <i>Imaging biomarkers for Neurorehabilitation</i>	
3:00 - 4:15	Leonidas Stefanis <i>Pathogenesis of Parkinson's Disease</i>	George Mentis <i>Spinal Muscular Atrophy: emerging evidence as a neurodegenerative disease of motor circuits</i>	
Evening session (5:15 – 7:00 pm) - Meet with the professors			
	George Mentis Table 1	Nikos Scarmeas Table 2	Spyros Koliass Table 3
			Leonidas Stefanis Table 4



Monday, May 19, 2014			
	Undergraduate students	Graduate students	
8:30 – 9:45	George Mentis <i>The motor unit and spinal reflexes</i>	Nikos Scarmeas <i>Overview of Dementias</i>	
10:15 - 11:30	Spyros Kolias <i>Connectivity of the human brain in-vivo using Diffusion Tensor Imaging (DTI)</i>	Nektarios Tavernarakis <i>Models of neurodegeneration and necrotic cell death</i>	
1:30 - 2:45	Nikos Scarmeas <i>Overview of Dementias</i>	George Mentis <i>Neuronal circuit dysfunction in neurodegenerative diseases: the case of Spinal Muscular Atrophy</i>	
3:00 - 4:15	Nektarios Tavernarakis <i>Ageing and Protein Homeostasis</i>	Spyros Kolias <i>In-vivo mapping of brain function</i>	
Evening session (5:15 – 7:00 pm) - Meet with the professors			
	George Mentis Table 1	Nikos Scarmeas Table 2	Spyros Kolias Table 3
	Nektarios Tavernarakis Table 4		
	Residents & Clinical Fellows	Postdoctoral researchers	
8:30 – 9:45	Charalampos Spilianakis <i>3D nuclear organization as an epigenetic determinant for physiological processes and disease</i>	Eleftherios Diamandis <i>Pancreatic Cancer and Our Quest for Discovery Novel Biomarkers for Early Detection</i>	
10:15 - 11:30	Dimitris Boumpas <i>Systemic autoimmunity in humans: Lessons learned from systemic lupus erythematosus</i>	Christos Tsatsanis <i>Metabolic inflammation: signaling molecules and miRNAs</i>	
1:30 - 2:45	Eleftherios Diamandis <i>Whole Genome Sequencing as a Diagnostic Test: Challenges and Opportunities</i>	Charalampos Spilianakis <i>Nuclear organization of the eukaryotic genome</i>	
3:00 - 4:15	Christos Tsatsanis <i>Signaling molecules and miRNAs as biomarkers and therapeutic targets in inflammatory diseases</i>	Dimitris Boumpas <i>Immune regulation and restoration of immune tolerance in systemic autoimmunity</i>	
Evening session (5:15 – 7:00 pm) - Meet with the professors			
	Babis Spilianakis Table 1	Eleftherios Diamandis Table 2	Dimitris Boumpas Table 3
	Christos Tsatsanis Table 4		



Tuesday, May 20, 2014	
Joint Undergraduate & Graduate Students Session	
8:30 – 9:15	Multiple choice test on Inflammation/Immunology & Neurology/Neuroscience
9:30 - 12:30	Inflammation & Immunology project presentations Each group of students (4-5 people) will present a pre-assigned topic and will respond to questions made by the instructor, who assigned the topic.
2:00 - 5:00	Neurology/Neuroscience project presentations Each group of students (4-5 people) will present a pre-assigned topic and will respond to questions made by the instructor, who assigned the topic.
Evening session (5:30 – 7:00 pm) How to prepare for interview for a training position (graduate studies and clinical training)	
Joint Postdoctoral Researchers & Residents/Clinical Fellows Session	
8:30 – 9:15	Multiple choice test on Inflammation/Immunology & Neurology/Neuroscience
9:30 - 12:30	Neurology/Neuroscience project presentations Each group of students (4-5 people) will present a pre-assigned topic and will respond to questions made by the instructor, who assigned the topic.
2:00 - 5:00	Inflammation/Immunology project presentations Each group of students (4-5 people) will present a pre-assigned topic and will respond to questions made by the instructor, who assigned the topic.
Evening session (5:30 – 7:00 pm) How to prepare for interview for a job in research or health care industry	



Wednesday – May 21, 2014

11th World Hellenic Biomedical Congress - Clinical & Translational Medicine

Venue TBA

Cardiovascular Medicine & Biology

- 9:00 – 9:25 “Cardiovascular magnetic resonance imaging in the evaluation of heart involvement in Rheumatic diseases. Interaction between Internal Medicine, Rheumatology, Cardiology and Basic sciences”
Sophie Mavrogeni, MD, FESC - Onassis Cardiac Surgery Center, Athens, Greece
- 9:25-9:50 “The role of High Density Lipoprotein Genes in Cardiovascular Disease”
Dimitris Kardassis, PhD - University of Crete, Greece

Inflammation & Immunology

- 10:05 – 10:30 “Next Generation Genomics in Clinical Medicine”
Eleftherios Diamandis, MD, PhD – University of Toronto, Canada
- 10:30 – 10:55 “Transcriptomic analysis of systemic autoimmunity in humans”
Dimitris Boumpas, MD, PhD – University of Athens, Greece
- 10:55 – 11:20 “A multi-disciplinary approach for the understanding of DNA sequences and organization: Where Genetics meets Physics and the High Throughput Sequencing technologies meet Complexity theory”
Dimitris Monos, PhD – University of Pennsylvania, USA
- 11:20 – 11:45 “Homologous pairing and long non-coding RNAs regulate Tnfa allelic expression”
Charalampos Spilianakis,, PhD - University of Crete, Greece
- 11:45 – 12:10 “Crosstalk of innate immunity and metabolism in inflammatory diseases”
Christos Tsatsanis, PhD - University of Crete, Greece

Bone and myeloid biology

- 2:15 – 2:40 “Development of a Novel, Three-Dimensional Hollow Fibre Bioreactor for the Production of Normal and Leukaemic Blood”
Sakis Mantalaris, PhD – Imperial College London, UK
- 2:40 – 3:05 “Novel Extra-Skeletal Functions of the Skeleton”
Stavroula Kousteni, PhD - Columbia University, New York, USA
- 3:05 – 3:30 TBA
Steve Boyages, MB BS PhD DDU FRACP FAFPHM - University of Sydney, Australia

Neurology & Neuroscience

- 3:45 – 4:10 “Intrinsic mechanisms protecting against neurodegeneration: The heat stroke paradigm”
Nektarios Tavernarakis, PhD – University of Crete, Greece
- 4:10 – 4:35 “The role of SMN in the sensory-motor circuit”
George Mentis, PhD – Columbia University, USA
- 4:35 – 5:00 “Imaging investigations of spinal cord structure, function and physiology”
Spyros Kollias, MD - University of Zurich, Switzerland
- 5:00 – 5:25 “Dietary patterns and cognition: Epidemiology and Mechanisms”
Nikos Scarmeas, MD – University of Athens. Greece & Columbia University, USA

Thursday, May 22, 2014			
	Undergraduate students	Graduate students	
8:30 – 9:45	Stavroula Kousteni <i>Skeletal biology and physiology</i>	Sophie Mavrogeni <i>"Role of cardiovascular magnetic resonance imaging in the evaluation of Cardiomyopathies"</i>	
10:15 - 11:30	Agi Grigoriadis Title: TBA	Dimitris Kardassis <i>Regulation of genes involved in lipoprotein metabolism</i>	
Students core - Afternoon session (1:30 pm - 4:15 pm)			
1:30 - 2:45	Sophie Mavrogeni <i>"Role of cardiovascular magnetic resonance imaging in Cardiology clinical practice"</i>	Stavroula Kousteni <i>Skeletal biology and physiology</i>	
3:00 - 4:15	Dimitris Kardassis <i>The molecular and genetic basis of atherosclerosis</i>	Agi Grigoriadis Title: TBA	
Evening session (5:15 – 7:00 pm) - Meet with the professors			
Dimitris Kardassis Table 1	Stavroula Kousteni Table 2	Agi Grigoriadis Table 3	Sophie Mavrogeni Table 4
Novel approaches in science			
Postgraduate core - Morning session (8:15 am - 11:00 am)			
	Residents & Clinical Fellows	Postdoctoral researchers	
8:30 – 9:45	Manolis Dermitzakis <i>Sick genomes, healthy people</i>	Vasilis Ntziachristos <i>Biological imaging re-defined with optoacoustic methods</i>	
10:15 - 11:30	Sakis Mantalaris Title: TBA	Steve Boyages Title: TBA	
Postgraduate core - Afternoon session (1:30 pm - 4:15 pm)			
1:30 - 2:45	Vasilis Ntziachristos <i>Clinical translation of optical molecular imaging</i>	Manolis Dermitzakis <i>Personalized and population genomics</i>	
3:00 - 4:15	Steve Boyages Title: TBA	Sakis Mantalaris Title: TBA	
Evening session (5:15 – 7:00 pm) - Meet with the professors			
Manolis Dermitzakis Table 1	Vasilis Ntziachristos Table 2	Sakis Mantalaris Table 3	Steve Boyages Table 4

Friday, May 23, 2014			
	Undergraduate students	Graduate students	
8:30 – 9:45	Diomedes Logothetis <i>Fundamentals of Membrane Excitability and Ion Channel Diseases</i>	Steve Boyages Title: TBA	
10:15 - 11:30	Sakis Mantalaris <i>Introduction to Stem Cells: From Embryonic to Adult</i>	Manolis Dermitzakis <i>Functional genomic variation and its role to phenotypic variability</i>	
1:30 - 2:45	Steve Boyages Title: TBA	Diomedes Logothetis <i>Membrane Delimited Modulation of Potassium Channel Activity</i>	
3:00 - 4:15	Manolis Dermitzakis <i>The nature and function of variability of the human genome</i>	Sakis Mantalaris <i>Stem Cell Applications: Bridging Engineering, Science & Medicine</i>	
Evening session (5:15 – 7:00 pm) - Meet with the professors			
	Manolis Dermitzakis Table 1	Diomedes Logothetis Table 2	Sakis Mantalaris Table 3
Postgraduate core - Morning session (8:15 am - 11:00 am)			
	Residents & Clinical Fellows	Postdoctoral Researchers	
8:30 – 9:45	Dimitris Kardassis <i>HDL, inflammation and atherosclerosis</i>	Stavroula Kousteni <i>Osteoblasts, Not Only Bone Forming Cells</i>	
10:15 - 11:30	Constantinos Anagnostopoulos <i>Radionuclide imaging: clinical applications and research potential in Cardiovascular Medicine</i>	Babis Kalodimos <i>Structure and dynamics of large protein machineries</i>	
1:30 - 2:45	Stavroula Kousteni <i>Endocrine Functions of Bone</i>	Dimitris Kardassis <i>Understanding lipoprotein metabolism using animal models</i>	
3:00 - 4:15	Babis Kalodimos <i>Structure-function relationships in proto-oncogenes</i>	Constantinos Anagnostopoulos <i>Nuclear Cardiology: an interphase between pathophysiology and clinical cardiology</i>	
Evening session (5:15 – 7:00 pm) - Meet with the professors			
	Dimitris Kardassis Table 1	Stavroula Kousteni Table 2	C. Anagnostopoulos Table 3
			Babis Kalodimos Table 4

Saturday, May 24, 2014	
Joint Undergraduate & Graduate Students Session	
8:30 – 9:15	Multiple choice test on Metabolic Biology & Novel Technologies
9:30 - 12:30	Metabolic Biology project presentations Each group of students (4-5 people) will present a pre-assigned topic and will respond to questions made by the instructor, who assigned the topic.
2:00 - 5:00	Novel technologies project presentations Each group of students (4-5 people) will present a pre-assigned topic and will respond to questions made by the instructor, who assigned the topic.
Evening session (5:15 – 7:15 pm) How to write well and get published – Maria Papatriantafyllou	
Postgraduate core - Morning session (8:15 am - 11:00 am)	
8:15 – 9:15	Multiple choice test on Metabolic Biology & Novel Technologies
9:30 - 12:30	Novel technologies project presentations Each group of students (4-5 people) will present a pre-assigned topic and will respond to questions made by the instructor, who assigned the topic.
Postgraduate core - Afternoon session (1:30 pm - 4:15 pm)	
2:00 - 5:00	Metabolic Biology project presentations Each group of students (4-5 people) will present a pre-assigned topic and will respond to questions made by the instructor, who assigned the topic.
Evening session (5:15 – 7:15 pm) How to write well and get published - Maria Papatriantafyllou	
Sunday, May 25, 2014	
Satellite Symposium “From Drug Development to Pharmaceutical Industry Growth” <i>A joint effort of the World Hellenic Biomedical Association and the Bionian Academy</i>	
  <p>www.whba1990.org</p>	
10:00 – 11:30	Pascal Apostolidis (Abbvie Hellas) <i>Drug development: From scientific discovery to pharmaceutical industry</i>
11:45 - 1:15	Aristides Lytras (Biomedical Research Foundation of the Academy of Athens) <i>Basic concepts and design of clinical trials</i>
3:15 - 4:45	Nicholas Anagnou (University of Athens) <i>Successful and unsuccessful attempts in clinical trials</i>
5:00 – 6:15	Ioannis Vlontzos (Merck Greece) <i>Pharma/Biotech company establishment</i>
6:30 – 7:30	Kostas Kokkinoplitis (General Secretariat for Research & Technology) <i>Clustering biotech and pharma companies as a tool for the development of biotechnology industry</i>