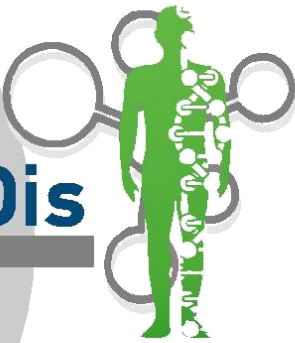




GeNeDis





The Congress

The **3rd World Congress** on *Genetics, Geriatrics and Neurodegenerative Diseases Research (GeNeDis 2018)* will be held in **Toronto Canada**, from **25 to 28 of October 2018** (www.genedis.eu).

For the third time three of the most modern and popular scientific areas are brought together in a congress, the **3rd World Congress on Genetics, Geriatrics and Neurodegenerative Disease research** with the title: ***“Health Aging and Mental Wellness in the new digital era”***. Leading scientists and researchers from all over the world will discuss the recent developments in the above disciplines, ranging from research progress and the latest scientific discoveries to the clinical and pharmaceutical applications.

GeNeDis 2018 will focus on a strong scientific program combined with teaching, training and live workshops to inform and educate scientist on the latest major challenges in scientific research, the new drug targets, the development of novel biomarkers, the new imaging techniques and the novel protocols for early diagnosis of neurodegenerative diseases, and several other scientific advances. **GeNeDis 2018** will feature an internationally recognized widely diverse program, that will contribute in attracting delegates to attend this major event.



The goal of the **3rd World Congress GeNeDis 2018** is to strengthen and broaden the international network by sharing the recent advancements in Genetics, Geriatrics and Neuroscience and by establishing good contacts with all relevant stakeholders – all pursuing the excellence in research, development, education and training with the aim of better and safe health aging.

The conference is organized by the Bioinformatics and Human Electrophysiology Laboratory, (BiHELab), Department of Informatics, Ionian University, Greece, in collaboration with CARGO lab at Wilfrid Laurier University, Ontario, Canada. The Scientific Organizing committee consists of experts from several countries who understand the educational and information business needs of scientists in the research area.

While the European Union aim to strength the research and innovation towards Horizon 2020, the transnational research for genetics, health aging and neurodegeneration will remove any barrier on multi-disciplinary collaboration. Novel approaches include biomarkers, stem cell therapy, protein misfolding, immunotherapy, as well as developments in our understanding of the genetics, the molecular mechanisms and signaling pathways contributing to neuronal dysfunction, nanotechnological products and innovate computational methods will offer new research directions and strategies on future preclinical and clinical studies on neurodegenerative diseases and related disorders, as well as improving of quality services on rehabilitation and health education.





Advanced information technologies will be discussed concerning the various research, implementation, and policy, as well as European and global issues in the funding of long term care and medico-social policies regarding elderly people.

The congress aims to inform as well as to promote discussions and networking among scientists and stakeholders from worldwide medical field such as researchers, professors, doctors, nursing staff, hospitals, health and diagnostic centers, pharmaceutical companies etc.

*The conference proceedings will be published by **Springer** in the well-known Series: **Advances in Experimental Medicine and Biology (AEMB)**, I.F.: 1.825.*





The **major goals** of the 3rd World Congress on Genetics, Geriatrics and Neurodegenerative Disease Research, **GeNeDis 2018** are the following:

- To promote the scientific and research results to the research community through sharing and exchanging ideas, experiences and expectations focusing on Genetics, Health Aging and Mental Wellness in the new digital era.
- To explore the beneficial (and not only) impact of scientific and technological achievements and future challenges, that may affect the Health Aging and Mental Wellness process.
- To enhance the co-operation and the exchange of experiences and resources among organizers of events and the research community, increasing further the European dimension and added value of the activities of the Europe 2020 and HORIZON 2020
- To increase the interest of all the stakeholders in contributing to the research in the field as Mental health is a basic human right, and is fundamental to all human and social progress. It is a prerequisite to a happy and fulfilled life for individual citizens, starting at birth, for functioning families and for societal cohesion.





Expected outputs and results

The fundamental aim of GeNeDis 2018 is to highlight different visions for the *“Health Aging and Mental Wellness in the new digital era”* unveiling to the research community as well as the general public new horizons that are created thanks to the contribution of scientific and technological developments performed in the international research area in various fields within the specific sectors.

GeNeDis 2018 intends not only to recognize previous successes and ongoing work in neurodegenerative diseases and related disorders, but also to point out new research directions and strategies on future preclinical and clinical studies in this area.

Particularly, the expected outputs and results of the Congress could be summarized as follows:

- The latest major challenges in Genetics, Health Aging and Mental Wellness
- Novel biomarkers and new drug targets
- Novel protocols for early diagnosis of neurodegenerative diseases
- Better understanding of molecular etiology and signaling pathways contributing to neuronal dysfunction
- New effective strategies and interventions such as stem cell therapy, protein misfolding, immunotherapy
- Novel imaging techniques
- Innovative nanotechnological techniques and products
- Improving of quality services on hospitalization, rehabilitation and health education

**The President of the Scientific Program
Committee**

Professor Panayiotis Vlamos

**‘Ageing must be healthy in order to achieve
mental wellness and quality of life’**





The Venue

The 3rd World Congress on Genetics, Geriatrics and Neurodegenerative Disease Research will be held at the

With all modern amenities including Wi-Fi internet, modern audiovisual equipment and automatic interpretation systems can meet any expectation of professional conference or event.

Main Topics

- Geriatrics
- Cognition and memory
- Neurodegenerative Diseases
- Sleeping disorders
- Mental Health
- System Biology
- Brain Physiology
- Genome engineering
- Clinical Neurophysiology
- Computational biology
- Big data and genome medicine
- Diagnostic protocols and tests
- Nanotechnology
- Stem cell research and development
- Neuroimaging
- Clinical genetics and genomics
- Diagnostic of human disease biomarkers
- Gene expression analysis
- Neuropharmacology
- Pharmacogenetics





Organizers



Bioinformatics and Human Electrophysiology Lab (BiHELab),

Ionian University, research is focused on recent advances in geriatrics and neurodegeneration, ranging from basic science to clinical and pharmaceutical developments.

BiHELab's goal is to build bridges from **data to models** and from **models to drug discovery and precision medicine** by fostering collaborations and developing original quantitative and qualitative approaches to biological and clinical problems.

Exploiting the power of a range of model organisms and the latest molecular, imaging and electrophysiological and computational technologies in neuroscience, BiHELab scientists explore some of the **key processes underlying neuronal function and behavior**. Faculty research interests are relevant for understanding neurological diseases including Alzheimer's, Parkinson's, ALS, autism spectrum disorders, depression, anxiety, epilepsy and insomnias.

BiHELab's interests lie within educational, research and development activities in the following main axes:

- Mitochondrial Biogenesis- Disruption of Mitochondrial Dynamics
- Amyloid- β Interaction and Metal Ions
- Evaluation of Mitochondrial Population as a Dynamic System
- Frequencies and Electromagnetic Analysis in the Mitochondrial population
- Cell Signalling and Autophagy
- Metal Ions Metabolism and mtDNA Analysis
- Regulation of Cancer Signalling Pathways





Cellular Protein Network Collapses- Protein Misfolding and Aggregation Roles in Neurodegenerative Diseases

- Molecular Mechanisms and Signalling Pathways contributing to Neuronal Dysfunction

The electrophysiological laboratory's equipment consists of a variety of hi-teck instruments for intra and extracellular recordings in vivo and in vitro, for behavioral studies and for both tethered and telemetric field potential recording.

The modern biophysics seems to offer powerful tools that are not yet been applied in bioengineering and molecular biology. The future of neuroscience relies **on novel approaches and technological advancements** in order to develop new drug targets, and novel protocols for early diagnosis of neurodegenerative diseases. At BiHELab, we are building on the information garnered from genomics and computational modelling analysis to **develop a systems approach to complex biological processes**

CO-ORGANIZERS

- CARGO lab, Wilfrid Laurier University, Waterloo, Ontario, Canada
<http://www.cargo.wlu.ca/>
- Fields Institute for research in mathematical sciences
<http://www.fields.utoronto.ca/>
- GryPHone Lab, Ontario, Canada
(<http://www.uoguelph.ca/~petros/Gryphonelab/>)





Keynote & Invited Speakers

George Paxinos, Scientia Professor of Medical Sciences at Neuroscience Research Australia and the University of New South Wales

Nektarios Tavernarakis, Chairman of the Board of Directors, Foundation for Research and Technology - Hellas (FORTH) Research Director, Institute of Molecular Biology and Biotechnology, FORTH, Prof. of Molecular Systems Biology, Medical School, Univ. of Crete

Christos Yapijakis, Assistant Professor of Neurogenetics 1st Department of Pediatrics, School of Medicine National and Kapodistrian University of Athens Athens, Greece

Ilias Kotsireas, Professor, Physics & Computer Science, Department of Physics and Computer Science, Wilfrid Laurier University, Ontario, CANADA

Dimitrios Kapogiannis, Medical Doctor, Clinical Investigator, Laboratory of Neurosciences, National Institute on Aging (NIA/NIH)

Stavros Taraviras, Professor Department of Physiology at the Medical School, University of Patras, Director Stem Cell Laboratory

Clifford kentros, Professor, NTNU, Kavli Institute for Systems Neuroscience, Kentros Research Group, Norway

Nikolaos Robakis, Professor of Psychiatry, Neuroscience and experimental therapeutics First A.P. Slaner family Professor for Alzheimer disease research. Icahn School of Medicine at Mount Sinai

Benjamin Wolozin M.D., Ph.D. Depts. Of Pharmacology and Neurology, Boston University School of Medicine

Joseph De Souza, Associate Professor Systems Neuroscience, York University, Toronto





Constantine Lyketsos MD, MHS, Elizabeth Plank Althouse Professor, Director, Memory and Alzheimer's Treatment Center, Chair, Bayview Department of Psychiatry and Behavioral Sciences, Johns Hopkins Medicine

Panagiotis Roussos Associate Professor of Psychiatry and Genetics and Genomic Sciences at the Icahn School of Medicine at Mount Sinai

Christos Plakiotis Unit Head, Aged Persons Mental Health Service, Monash Health, Adjunct Senior Lecturer, Department of Psychiatry, Monash University

Kristine Newman, Associate Professor at Ryerson University in the Faculty of Community Services, Daphne Cockwell School of Nursing in Toronto, Ontario, Canada

Vasiliki Machairaki, Associate Professor of Neurology, Johns Hopkins Medicine

Eva Kehayia, Associate Professor, School of Physical and Occupational Therapy, Faculty of Medicine, McGill University Scientific Director, Centre for Interdisciplinary Research in Rehabilitation

Ioannis Tarnanas, Senior Researcher at the University of Bern, Switzerland, Gerontechnology and Rehabilitation group at the ARTORG Center for Biomedical Engineering Research

Provata Astero. Research Director, Institute of Nanoscience & Nanotechnology, NCSR Demokritos, Vice-Chairman of the Complex Systems and Applications (COSA) Network

Exarchos Themis, Assistant Professor, Department of Informatics, Ionian University, Greece

Petros Spachos, Assistant Professor at the School of Engineering, University of Guelph, Head of GryPPhone Lab





Spyridon Doukakis, Educator Mathematics, Computer Science, ICT, Neuroeducation, Distance Learning, Teacher Education and Training Villanova University, University of the Aegean

Michaele Harney MS Bioinformatics, Sr. Data Architect, Health Catalyst, Salt Lake City, Utah

Mylonas Phivos, Associate Professor, Department of Informatics, Ionian University

Hadjinicolaou Maria, Professor of Applied Mathematics, School of Science and Technology, Hellenic Open University

Anderson Greg, Dean Office of Applied Research & Graduate Studies at Justice Institute of British Columbia

Styliani Geronikolou, PostDoc Researcher at Biomedical Research Foundation of the Academy of Athens. First Dep. Pediatric, Un. Athens Med School Agia Sophia Hospital, Un. Res Inst.for Malignant Dis in childhood



CONFERENCE PROGRAM

THURSDAY AFTERNOON October 25, 2018

Venue	
16:00-18:00	Presentation of Research Center on Computational Biomarkers (RCCBM)
16:00-16:30	Vlamos Panayiotis , Professor and Head of the Department of Informatics, Ionian University
16:30-17:00	Tarnanas Ioannis , Senior Researcher at the University of Bern, Switzerland, Gerontechnology and Rehabilitation group at the ARTORG Center for Biomedical Engineering Research
17:00-17:30	Kotsireas Ilias , Professor in Physics & Computer Science, Wilfrid Laurier University-Waterloo, Ontario, Canada
17:30 - 18:00	Welcome Coctail

FRIDAY MORNING October 26, 2018

Workshop on Mathematical Modeling Methodologies in Computational Neurodegeneration	
Venue	Fields Institute
PART I- Neurodegenerative disease mathematical modelling	
09:00-09:30	Vlamos Panayiotis , Professor and Head of the Department of Informatics, Ionian University Title: <i>Mathematical Modeling in Computational Neurodegeneration</i>
09:30-10:00	Provata Astero , Research Director, Institute of Nanoscience & Nanotechnology, NCSR Demokritos, Vice-Chairman of the Complex Systems and Applications (COSA) Network Title: <i>Chimera states in the dynamics of neuron networks</i>
10:00-10:30	Hadjinicolaou Maria , Professor of Applied Mathematics, School of Science and Technology, Hellenic Open University Title: <i>Mathematical aid for understanding cardiovascular diseases related to aging</i>



10:30-11:00	Questions-Discussion
11:00-11:30	Coffee Break
PART II -Applied information processing and visualization	
11:30-12:00	Exarchos Themis , Assistant Professor, Department of Informatics, Ionian University, Greece Title: <i>Decision support systems in neurodegenerative diseases diagnosis, treatment and management</i>
12:00-12:30	Anderson Greg , Dean Office of Applied Research & Graduate Studies at Justice Institute of British Columbia Title: <i>Neural basis of movement education</i>
12:30-13:00	Questions-Discussion
13:00-14:00	Lunch Break
PART III -Digital health and mixed realities	
14:00-14:30	Tarnanas Ioannis , Senior Researcher at the University of Bern, Switzerland, Gerontechnology and Rehabilitation group at the ARTORG Center for Biomedical Engineering Research Title: <i>Predicting progression from normal cognition to mild cognitive impairment for individuals at 5 years</i>
14:30-15:00	Petros Spachos , Assistant Professor at the School of Engineering, University of Guelph, Head of GryPHone Lab. Title: <i>Smartphones, wearables and mHealth: Doctor in your pocket</i>
15:00-15:30	Questions-Discussion
15:30-16:00	Coffee Break
PART IV -Data Mining, Metaheuristics, High-performance Computing	
16:00-16:30	Mylonas Phivos , Associate Professor, Department of Informatics, Ionian University Title: <i>The convergence of data analytics techniques in medical applications</i>
16:30-17:00	Kotsireas Ilias , Professor in Physics & Computer Science, Wilfrid Laurier University-Waterloo, Ontario, Canada Title: <i>Data Mining Techniques in Neurodegeneration</i>
17:00	Closing



FRIDAY AFTERNOON October 26, 2018

Venue	
11:00-17:00	Registration
11:00-17:00	Registration
17:00-17:30	Opening Ceremony Welcome message from
17:45-18:00	<p style="text-align: center;">Key Note address Chair:</p> <p>Paxinos George Professor, AO DSc FASSA FAA, NHMRC Australia Fellow, Neuroscience Research Australia, Barker St and Hospital Rd, Randwick, Sydney</p> <p>Title: <i>Brain & Mind: Who is the puppet and who the puppeteer?</i></p>
18:00-18:45	<p style="text-align: center;">Key Note address Chair:</p> <p>Lyketsos Constantine, MD, MHS, Elizabeth Plank Althouse Professor, Director, Memory and Alzheimer's Treatment Center, Chair, Bayview Department of Psychiatry and Behavioral Sciences, Johns Hopkins Medicine</p> <p>Title: <i>"Treatment development for Alzheimer's disease: How are we doing?"</i></p>
19:00	Welcome Coctail

SATURDAY October 27, 2018

Venue	Wilfrid Laurier University
	PART I
09:00-09:30	Key Note address Chair:



	<p>Eva Kehayia, PhD Associate Professor School of Physical and Occupational Therapy McGill University</p> <p>Title: <i>What psycholinguistics, neurolinguistics and the real environment can tell us about language, communication and mobility in aging</i></p>			
09:30-10:00	<p>Key Note address Chair:</p> <p>Vasiliki Machairaki M.Sc., Ph.D. Assistant Professor of Neurology, Johns Hopkins Medicine</p> <p>Title: To be announced soon</p>			
10:00-10:30	<p>Key Note address Chair:</p> <p>Panagiotis Roussos, Associate Professor of Psychiatry and Genetics and Genomic Sciences at the Icahn School of Medicine at Mount Sinai</p> <p>Title: <i>“Big Data Analysis and Genetic Liability to Neuropsychiatric Disease”</i></p>			
10:30-11:00	Coffee Break			
	PART II			
11:00-13:00	<u>Session</u> Chair Room	<u>Session</u> Chair Room	<u>Session</u> Chair Room	<u>Session</u> Chair Room
11:00-11:30	<p>Styliani Geronikolou, PostDoc Researcher at Biomedical Research Foundation of the Academy of Athens. First Dep. Pediatric, Un. Athens Med School Agia Sophia Hospital, Un. Res Inst.for Malignant Dis in</p>			
11:30-12:00				
12:00-12:30				
12:30-13:00				



	childhood Title: Mobile Phone Use Effect on Autonomic Nervous and Cardiac Systems			
13:00-14:00	Lunch Break			
14:00-14:30	Key Note address Chair: Christos Plakiotis Unit Head, Aged Persons Mental Health Service, Monash Health, Adjunct Senior Lecturer, Department of Psychiatry, Monash University Title: <i>What does the literature tell us about the welfare of psychiatrists in training?</i>			
14:30-15:00	Key Note address Chair: Spyridon Doukakis , Educator Mathematics, Computer Science, ICT, Neuroeducation, Distance Learning, Teacher Education and Training Villanova University, University of the Aegean Title: <i>To be announced</i>			
15:00-15:30	Key Note address Chair: Michale Harney MS Bioinformatics, Sr. Data Architect, Health Catalyst, Salt Lake City, Utah Title: <i>The Effects of Quantum Entanglement on Chromatin and Gene Expression</i>			
15:30-16:00	Lunch Break			
PART III				
16:00-17:30	<u>Session Chair Room</u>	<u>Session Chair Room</u>	<u>Session Chair Room</u>	<u>Session Chair Room</u>



16:00-16:30				
16:30-17:00				
17:00-17:30				
17:30	Closing			

SUNDAY October 28, 2018

Venue	ROYAL ONTARIO MUSEUM (ROM)
	PART I
09:00-09:30	<p style="text-align: center;">Key Note address Chair: Wolozin Benjamin, MD, PhD, Professor, School of Medicine, Boston University Title: <i>Membrane-less organelles and RNA binding proteins: The biological underpinnings of neurodegeneration</i></p>
09:30-10:00	<p style="text-align: center;">Key Note address Chair: Kentros Clifford, Professor, NTNU, Kavli Institute for Systems Neuroscience, Kentros Research Group, Norway Title: <i>Molecular genetic dissection of the neural circuitry of memory</i></p>
10:00-10:30	<p style="text-align: center;">Key Note address Chair: Robakis Nikolaos, Professor of Psychiatry, Neuroscience and experimental therapeutics First A.P. Slaner family Professor for Alzheimer disease research. Icahn School of Medicine at Mount Sinai Title: To be announced</p>
10:30-11:00	Questions-Discussion
11:00-11:30	Coffee Break
	PART II
11:30-12:00	<p style="text-align: center;">Key Note address Chair: Tavernarakis Nektarios, Chairman of the Board of Directors, Foundation for Research and Technology - Hellas (FORTH), Research Director, Institute of Molecular Biology and Biotechnology, FORTH, Professor of Molecular</p>



	Systems Biology, Medical School, University of Crete Title: <i>Regulation and roles of autophagy in the brain</i>
12:00-12:30	Key Note address Chair: Kapogiannis Dimitrios , Clinical Investigator, Laboratory of Neurosciences, National Institute on Aging; Associate Professor, Department of Neurology, Johns Hopkins University <i>Title: Exosome biomarkers revolutionize preclinical diagnosis of neurodegenerative diseases and assessment of treatment responses in clinical trials</i>
12:30-13:00	Questions-Discussion
13:00-14:00	Lunch Break
PART III	
14:00-14:30	Key Note address Chair: Yapjakis Christos Assistant Professor of Neurogenetics 1st Department of Pediatrics, School of Medicine National & Kapodistrian University of Athens, Greece <i>Title: Regulatory role of microRNAs in brain development and function</i>
14:30-15:00	Key Note address Chair: Taraviras Stavros Prof. Department of Physiology at the Medical School, University of Patras, Director Stem Cell Laboratory <i>Title: Getting insights into human hydrocephalus from mouse model</i>
15:00-15:30	Questions-Discussion
15:30-16:00	Coffee Break
PART IV	
16:00-16:30	Key Note address Chair: Joseph DeSouza , Associate Professor Systems Neuroscience, York University, Toronto <i>Title: To be announced</i>
16:30-17:00	Key Note address Chair: Kristine Newman , Associate Professor at Ryerson University in the Faculty



	of Community Services, Daphne Cockwell School of Nursing in Toronto, Ontario, Canada Title: <i>Engaging social interest and creating awareness for the behavioral and psychological symptoms of dementia</i>
17:00	Closing ceremony



Scientific Program Committee

Conference chair

Panayiotis Vlamos, Department of Informatics, Ionian University, Greece

Almeida J. Quincy, Professor of Kinesiology & Physical Education / Director, MDRC,
Wilfrid Laurier University

Anagnostopoulos Dimosthenis, Professor in the Department of Informatics and
Telematics, Harokopeio University of Athens, Greece

Anderson Greg, Dean Office of Applied Research & Graduate Studies at Justice
Institute of British Columbia

Andronikos Theodore, Assistant Professor, Department of Informatics, Ionian
University, Greece

Bamidis D. Panagiotis, Associate Professor, Medical Education Informatics Lab of
Medical Physics Medical School, Aristotle University of Thessaloniki

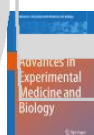
Behrakis Panagiotis, MD, PhD, FCCCP Pulmonologist-Intensivist Director “Institute of
Public Health”-American College of Greece, Investigator “Biomedical Research
Foundation Athens Academy”

Chrissikopoulos Vassileios, Professor, Department of Informatics – Rector, Ionian
University, Greece

Chania Maria, Head Nurse, General Hospital of Sparti, Greece

Demetzos Costas, Professor of Pharmaceutical Nanotechnology, Director of the
Laboratory of Pharmaceutical Technology, Faculty of Pharmacy, University of Athens,
Greece

D’Mello Santosh R., Professor of molecular and cell biology, University of Texas, USA



Exarchos Themis, Assistant Professor, Department of Informatics, Ionian University, Greece

Fotiadis Dimitrios, Professor Dept of Materials Science and Engineering University of Ioannina, Greece

Geronikolou Stella, Clinical, Experimental Surgery, Translational Research Center, Biomedical Research Foundation, Academy of Athens

Ghulam Md Ashraf, Assistant Professor, King Fahd Medical Research Center, King Abdulaziz University, Saudi Arabia

Giacobini Ezio, Professor, Department of Rehabilitation and Geriatrics, University of Geneva Medical School in Geneva, Switzerland. Adjunct Professor of Pharmacology, Psychiatry and Neurology at Southern Illinois School of Medicine Springfield ,IL. USA.

Giannakopoulos Panteleimon, Professor, Chairman of the Department of Mental Health and Psychiatry, University Hospitals of Geneva, Switzerland

Gkigkitzis Ioannis, Departments of Mathematics and Biomedical Physics, East Carolina, USA

Gonidi Maria, Cytologist, President of Corfu Medical Association

Gonos Efstathios, Director of Research IUBMB Executive Committee Member for Congresses and Conferences National Hellenic Research Foundation Institute of Biology, Medicinal Chemistry and Biotechnology, Institute of Biology, Medicinal Chemistry and Biotechnology

Hadjinicolaou Maria, Professor of Applied Mathematics, School of Science and Technology, Hellenic Open University, Greece

Haranas Ioannis, VDG Research and Development in Electromagnetic Theory Applications, Department of Mathematics, East Carolina University, USA

Hogervorst Eef, Professor of Biological Psychology Loughborough University Leicestershire, UK



Ifantis Ilias, Hellenic Naval Academy, Piraeus, Greece

Jones Jeffry, Professor of Psychology, Wilfrid Laurier University, Director of the Laurier Centre for Cognitive Neuroscience

Kariotou Foteini, Assistant Professor of Applied Mathematics, School of Science and Technology, Hellenic Open University, Greece

Kontogeorgis Georgios, Professor, DTU Chemical Engineering Department of Chemical and Biochemical Engineering. Technical University of Denmark

Korczy D. Amos, Professor Emeritus, Department of Neurology, Tel Aviv University

Kotsireas Ilias, Professor in Physics & Computer Science, Wilfrid Laurier University-Waterloo, Ontario, Canada

Lefkimmiatis Konstantinos, Department of Physiology Anatomy and Genetics, University of Oxford

Liozidou Athanasia, BPsych, MPsych. MPHc, Research Associate Biomedical Research Foundation of Athens Academy, Secretary General of the Hellenic Neuropsychological Society

Logothetis Nikos, Max-Planck-Institute for Biological Cybernetics, Tubingen, Germany

Mylonas Phivos, Associate Professor, Department of Informatics, Ionian University

Oertel Wolfgang, Professor for Neurology, Director of the Department of Neurology, Philipps University Marburg, Germany

Pateli Adamantia, Associate Professor, Department of Informatics, Ionian University, Greece

Psiha Maria, Department of Informatics, Ionian University, Greece

Sakka Paraskevi, Chairman of Athens Alzheimer's Association, Dementia Society, Greece



Sioutas Spyros, Associate Professor, Department of Informatics, Ionian University, Greece

Tarnanas Ioannis, Senior Researcher at the University of Bern, Switzerland, Gerontechnology and Rehabilitation group at the ARTORG Center for Biomedical Engineering Research

Tiligadis Konstantinos, Assistant Professor, Department of Audio and Visual Arts, Ionian University, Greece

Travlos K. Antonios, Associate Professor, Sport Psychology & Motor Learning, Head of The Department of Sports Organization and Management at the Faculty of Human Movement and Quality of Life Sciences, University of Peloponnese

Tsantili-Kakoulidou Anna, Professor, Department of Pharmaceutical Chemistry. National & Kapodistrian University Athens Greece

Tsolaki Magda, Professor, Aristotle University of Thessaloniki, Chair of Greek Federation of AD

Tzortzi Anna, MD, FCCP, Pulmonologist Associate Director "Institute of Public Health"- American College of Greece, Scientific Director "George D Behrakis RESEARCH LAB"-Hellenic Cancer Society

Yapijakis Christos, Assistant Professor of Neurogenetics University of Athens Medical School

Zalonis Ioannis, Assistant Professor National and Kapodistrian University of Athens, President of the Hellenic Neuropsychological Society

Zouganelis George, Lecturer in Biochemistry, Bournemouth and Poole College, United Kingdom

Zyga Sofia, Associate Professor in Fundamentals of Nursing, Nursing Department, University of Peloponnese





CV's Key Note and Invited speakers

Nektarios Tavernarakis is the Chairman of the Board of Directors at the Foundation for Research and Technology-Hellas (FORTH), Research Director at the Institute of Molecular Biology and Biotechnology (IMBB), and Professor of Molecular Systems Biology at the Medical School of the University of Crete, in Heraklion, Greece. He is the Director of the Graduate Program on Bioinformatics at the Medical School of the University of Crete, and is also heading the Neurogenetics and Ageing laboratory of IMBB. He is an elected member of the Scientific Council of the European Research Council (ERC), the European Molecular Biology Organization (EMBO), and Academia Europaea. He has also served as the Director of the Institute of Molecular Biology and Biotechnology. He earned his Ph.D. degree at the University of Crete, and trained as a postdoctoral researcher at Rutgers University in New Jersey, USA. His research focuses on the molecular mechanisms of necrotic cell death and neurodegeneration, the interplay between cellular metabolism and ageing, the mechanisms of sensory transduction and integration by the nervous system, and the development of novel genetic tools for biomedical research. He has received several notable scientific prizes, including two ERC Advanced Investigator Grants, and an innovation-supporting ERC Proof of Concept Grant. He is also the recipient of the EMBO Young Investigator award, the Alexander von Humboldt Foundation, Friedrich Wilhelm Bessel research award, the Bodossaki Foundation Scientific Prize for Medicine and Biology, the Empeirikeion Foundation Academic Excellence Prize, the Research Excellence award of the Foundation for Research and Technology-Hellas, the BioMedical Research Award of the Academy of Athens, the Galien Scientific Research Award, and the Helmholtz International Fellow Award. For more information, please visit: <http://www.elegans.gr/>.

Christos Yapijakis, D.M.D., B.S., M.S., Ph.D. is Assistant Professor of Neurogenetics at the 1st Department of Pediatrics, School of Medicine, National and Kapodistrian University of Athens at "Agia Sophia" Children's Hospital, Director of Cephalogenetics Center, and Advisor Board Member of the Research Laboratory of Applied Philosophy at the School of Philosophy of the University of Athens. He has been the first in Greece establishing pioneer of university and private laboratories of Molecular Neurogenetics and Orofacial Genetics. His research involves the molecular mechanisms of neurological and craniofacial hereditary disorders, in addition to genetic counseling and molecular diagnosis. He has performed prenatal testing for more than ten genetic disorders, including some for



the first time worldwide. He has co-authored more than 170 publications in international journals and books, and currently he has Scopus h-index 27. His group has received various national and international funding grants, and he has served as an editorial board member in international journals of several fields.

https://el.wikipedia.org/wiki/%CE%A7%CF%81%CE%AE%CF%83%CF%84%CE%BF%CF%82_%CE%93%CE%B9%CE%B1%CF%80%CE%B9%CF%84%CE%B6%CE%AC%CE%BA%CE%B7%CF%82

Dimitrios Kapogiannis is a Clinical Investigator at the Laboratory of Neurosciences at the National Institute on Aging (NIA) and Associate Professor at the Department of Neurology at Johns Hopkins University. He earned his Medical Degree from the National University of Athens, Greece, and completed his Neurology residency training at Harvard University/Massachusetts General /Brigham and Women's Hospitals, followed by a clinical fellowship at the National Institute of Neurological Disorders and Stroke/National Institutes of Health. He is ABPN-certified in Neurology and UCNS-certified in Behavioral Neurology. Dr. Kapogiannis leads a Lab at the National Institute on Aging conducting translational and clinical studies on various neurodegenerative diseases, with a primary focus on biomarkers and therapeutics of Alzheimer's disease. He has been a pioneer in deriving exosomes enriched for neuronal and astrocytic origin from blood and using them as a source of biomarkers for neurologic diseases.

Benjamin Wolozin, MD, PhD is Professor, Department of Pharmacology & Experimental Therapeutics and Neurology. He completed his undergraduate education at Wesleyan University in Middletown, CT. He earned his M.D. and Ph.D. degrees from Albert Einstein College of Medicine, as part of the Medical Scientist Training Program. His postdoctoral fellowships were spent at Mt. Sinai Medical Center (1988-9) and the National Institute of Mental Health (1989-96). He joined Loyola University Medical Center in 1996 as an Associate Professor and rose to the rank of tenured full professor. He joined the Boston University School of Medicine's Department of Pharmacology in 2004 as a Professor and is currently obtaining an adjunct position in the Dept. of Neurology. Dr. Wolozin has extensive research experience in the field of neurodegenerative disease. His research investigates the pathophysiology of several neurodegenerative diseases, including Alzheimer's disease, Parkinson's disease and amyotrophic lateral sclerosis. His research examines molecular and cellular aspects of disease, and utilizes a variety of transgenic models including mice, C. elegans, primary neurons and cell lines. Dr. Wolozin is also experienced in the study of human brain samples or cell lines from patients. His specific research interests emphasize the role of protein aggregation in neurodegenerative disease as well as metabolic consequences of stress linked to protein aggregation or cellular damage. Dr. Wolozin's research on the role of stress granules in neurodegenerative diseases is a major focus of his laboratory. A growing body of evidence, including work from the



Wolozin laboratory, increasingly highlights the important contributions of RNA binding proteins (RBPs) and translational regulation in the pathophysiology of neurodegenerative disease. This field of research has occupied a correspondingly increasing footprint on the Wolozin laboratory research portfolio. This work has prompted concepts that are changing our understanding of protein association and disease processes; terms such as “regulated protein aggregation” (Wolozin), “membraneless organelles” (Brangwynne) or “liquid-liquid phase separation” (Alberti), provide a theoretical framework for understanding the biology of neurodegenerative disease, as well as new directions for therapeutic intervention for tauopathies and other neurodegenerative diseases. Dr. Wolozin has developed methods to analyze the pathological RNA granules and stress granules that accumulate in brain diseases. His laboratory is applying advanced proteomics to identify the networks of proteins that regulate RNA granules in health and disease. In addition, the Wolozin and Bryant laboratories are applying these technologies to investigate the biology of RNA granules in models of synaptic plasticity and drug addiction.

Kristine Newman is an Associate Professor, Tenured Track, Daphne Cockwell School of Nursing, Ryerson University. She obtained her Bachelor of Nursing Science (2003) and Master of Science in Nursing (2005) from Queen’s University. Dr. Newman completed her PhD in Nursing Science (2012) from the University of Toronto and a Knowledge Translation Canada: Strategic Training Initiative in Health Research Post-Doctoral Fellowship (2013) at McMaster University. She holds her Canadian Nurses Association Rehabilitation Nursing Certification (2007-2022) and is an Associate Member with the Gilbreath Centre for Studies in Aging at McMaster University. Her nursing background is in Geriatric Rehabilitation and Complex Continuing Care, Nursing Education and Nursing Professional Practice. Dr. Newman’s program of research relates to Informatics – individual and collaborative information-seeking, Problem-Solving, Knowledge Translation and Gerontechnology. She is a founding member of the World Young Leaders of Dementia (WYLD) and is an advisor to the WYLD Steering Group Committee.

Panos Roussos is an Associate Professor of Psychiatry and Genetics and Genomic Sciences at the Icahn School of Medicine at Mount Sinai. He is a member of Icahn Institute – Genomics and Multiscale Biology and Friedman Brain Institute. He is also a VA/MIRECC Research Physician at the James J. Peters VA Medical Center. He received his medical and doctorate degrees from the University of Crete in Greece and he completed his residency in Psychiatry (research track) at Icahn School of Medicine at Mount Sinai followed by a MIRECC research fellowship in schizophrenia. His research focuses on the integration of high-dimensional data, such as genomic, epigenomic and transcriptomic, using advanced biostatistical methods in order to identify some of the mechanisms through which risk genetic variants increase the risk for neuropsychiatric diseases.



Themis Exarchos was born in Ioannina, Greece in 1980. He is an Assistant Professor of Data Modeling and Decision Support Systems in the Dept. of Informatics, Ionian University, Corfu, Greece. He holds an Engineering Diploma, from the Dept. of Computer Engineering and Informatics of University of Patras and a PhD in Medical Informatics from the Medical School of the University of Ioannina. He has more than 60 publication in journals, more than 80 publications in conference proceeding and more than 15 publications in books. He has worked for more than 10 years in research and development projects, funded by EU and other bodies. He is collaborating with various institutes and universities in Greece and abroad, including University of Ioannina, National Technical University of Athens, University of Patras, Foundation for Research and Technology Hellas. He is also a visiting professor in Faculty of Mechanical Engineering, University of Kragujevac, Serbia. His research interests include data modeling and mining, healthcare decision support systems, big data analytics and biomedical informatics. He is the managing editor of the IEEE Biomedical and Health Informatics Journal.

George Paxinos mapped the brain of humans and the principal experimental animals. He studied psychology at Berkeley, McGill and Yale and was a visiting scientist at Cambridge, Oxford, Stanford and UCLA. He is Scientia Professor of Medical Sciences at Neuroscience Research Australia and The University of New South Wales. He published 52 books on the brain of humans and experimental animals (see Amazon.com). His first book, *The Rat Brain in Stereotaxic Coordinates*, has sold over 50,000 copies and is the third most cited book in all of science following *Molecular Cloning* and *The Diagnostic and Statistical Manual of Mental Disorders*. His *Atlas of the Human Brain* won the Association of American Publishers Award for Excellence (1997) and the *British Medical Association Illustrated Book Award (2016)*. Most scientists working on the relation between the human brain and neurologic or psychiatric diseases, or animal models of these diseases, use his maps and concepts of brain organization. He was president of the Australian Neuroscience Society and the IBRO World Congress of Neuroscience. Most of the 800,000 web page entries for “Paxinos” are related to his work. He has published also a novel in Greek “Kat’ Eikona” that deals with the environment. Wikipedia Entry http://en.wikipedia.org/wiki/George_Paxinos

Nikolaos Robakis is the First A.P. Slaner Family Professor for Alzheimer’s disease research and director of the Center for Molecular Biology and Genetics of Neurodegeneration, at the Mount Sinai School of Medicine of New York University. He obtained his undergraduate training in chemistry at the University of Thessaloniki, Greece, and his PhD in Biochemistry at New York University. He completed his postdoctoral training at the Roche Institute of Molecular Biology, Nutley NJ. He has worked on the gene expression of bacterial systems, on prion disorders, and on the neurodegeneration and genetics of Alzheimer’s disease. His laboratory has been awarded numerous



competitive research grants totaling millions of dollars from the National Institutes of Health (NIH), pharmaceutical companies, and non-profit organizations. He has been invited to lecture at many academic institutions and as main speaker at numerous national and international meetings. He has been on the editorial board of professional journals and on the Scientific Advisory Board of private organizations that fund AD and Aging research. Dr Robakis has received many awards including the NIH MERIT award, The McKnight Neuroscience Development award, the Zenith Award of the Alzheimer's Association, and the Distinguished Scientist Award of the Hellenic Medical Association of New York. He has served as research advisor to pharmaceutical companies including Merck Sharp and Dohme Research Laboratories (1992-1993) and Bristol-Myers Squibb Co (1991-1995). Many scientists trained in Dr. Robakis laboratory are currently faculty members in universities and other academic institutions or group leaders in pharmaceutical companies in USA and Europe. Robakis and co-workers have been working on the molecular biology and genetics of AD for more than 20 years. His group was among the first to clone the APP gene that encodes the A β peptides and in 1987 they published the first report on the localization of APP on chromosome 21. His laboratory showed that APP is mainly cleaved by secretases intra-cellularly in post-Golgi vesicles and that APP also occurs in proteoglycan forms. In 2003 his group published an extensive study where it was shown that most presenilin familial AD (FAD) mutations cause a loss of gamma-secretase cleavage function at the epsilon site of gamma-secretase substrates, a process that produces biologically significant intracellular signal peptides. More recently his and other groups showed that many presenilin FAD mutants are unable to directly increase production of A β peptides suggesting that increased neuronal production of these peptides may be secondary to the primary neurodegenerative effects of the PS FAD mutants. His data suggest that the primary neurodegenerative effects of FAD mutations may be directly on neuronal survival pathways including the PI3K/Akt cell signaling pathways.

Astero Provata obtained her Bachelor Degree in Physics from the University of Athens in 1985. In the same year she joined the Physics Department of Boston University, where she obtained a Masters degree in Physics in 1987 and a PhD degree in Statistical Physics in 1991. After completing her PhD she continued on a postdoctoral position at the Université Libre de Bruxelles, where she worked for 4 years in the group of Prof. G. Nicolis. In 1995 he jointed the Institute of Physical Chemistry of NCSR "Demokritos" as a Junior Researcher. In 2004, she started a new activity within the Institute, the "Statistical Mechanics and Complex Dynamical Systems Laboratory (STAT-DYN)", which conducts basic and applied research in the fields of Non-linear Dynamics, Statistical Physics and Complex Systems with applications in the domains of Brain Dynamics, Complex Networks, Bioinformatics, Reactions-Diffusion Systems, Fractals and Long Range Correlations. Currently she holds the position of Research Director at the Institute of Nanoscience & Nanotechnology, NCSR "Demokritos", is the Director the STAT-DYN laboratory and is vice-chairman of the Complex Systems and Applications (COSA) Network,



a multidisciplinary network of the Greek scientists working in the field of Complex Systems. She is the author/co-author of over 90 publications in peer reviewed journals, 20 publications in conference proceedings and book chapters and is editor to 3 collected volumes. She has organized 8 international conference and workshops and holds open external collaborations with the Université Libre de Bruxelles, Universities of Athens & Crete, Technische Universiteit Eindhoven and Tokyo Institute of Technology.

Phivos Mylonas was born in Athens in 1978. He received his Diploma in Electrical and Computer Engineering from the National Technical University of Athens (NTUA) in 2001, his Master of Science (M.Sc.) in Advanced Information Systems from the National & Kapodestrian University of Athens (UoA) in 2003 and earned his Ph.D. degree (with distinction) at the former University (NTUA) in 2008. He is currently a tenured Associate Professor by the Department of Informatics at the Ionian University, Corfu, Greece and collaborates as a Senior Researcher with the Intelligent Systems, Content and Interaction Laboratory, School of Electrical and Computer Engineering, Department of Computer Science of the National Technical University of Athens, Greece. His research interests include content-based information retrieval, visual context representation and analysis, knowledge-assisted multimedia analysis, issues related to multimedia personalization, user adaptation, user modeling and profiling. He has published articles in 24 international journals and 28 book chapters, he is the author of 75 papers in international conferences and workshops, he has edited 10 books and is a guest editor of 12 international journals, he is a reviewer for 36 international journals and has been actively involved in the organization of more than 100 international conferences and workshops. He is a member of the Technical Chamber of Greece since 2001, a member of the Hellenic Association of Mechanical & Electrical Engineers since 2002 and a member of W3C since 2009, whereas he is a past member of IEEE (1999-2010) and ACM (2001-2010).

Ioannis Tarnanas is a neuroscientist, currently working as a senior research associate at the ETH Zurich, Health Information Systems (Health-IS Lab, <http://www.health-is.ch>). The Health-IS Lab is a joint initiative of ITEM-HSG and MTEC-ETHZ that combines technology and behavioral sciences in the healthcare sector. The research group builds consumer-centric “digital health” technologies and studies their potential for diagnostic purposes as well as to improve outcomes and to reduce costs of healthcare interventions. Ioannis Tarnanas’s research focuses on using new technologies to understand the ageing pathological processes and establish prevention methods that decrease the risk to develop dementia or delay the onset of the disease. He has published on high impact factor journals on computer-processable disease model approaches that integrate computerized, real-life, complex activities of daily living data collection, such as a novel computerized screening marker, which collects spatial navigation and movement trajectory profiles (e.g., Tarnanas et al., 2013, 2014,



2015a;b;c). He has recently developed such a behavioral based, inexpensive and accurate system that can spot the first neurological effects of AD, with 94% accuracy, up to six years before symptoms appear (Tarnanas et al., 2015c). The technology, named Altoida AR, is an accurate predictive tool based on cognitive and non-cognitive early-onset biomarkers.

Styliani Geronikolou is a Public and Environmental Health expert with postgraduate studies in Hazard Analysis Critical Control Points, Environmental Health, Biomedicine. Her PhD in Athens University Med School was on endocrine and autonomic responses to mobile phone call in children and adolescents. She is an Editor Frontiers in Bioscience journal, in a special issue and a book in Springer, has already published 10 books, 11 chapters in books, 12 journal articles, presented 123 works in National and International Congresses. She is member of 14 National and International Scientific Societies whilst in 3 member of the Board. She had founded and presented for 4 years a Public Health Non Profit Organization. The tools she is profiting is classical and environmental epidemiology, systems science, meta-analysis, clinical and translational research Her research interests extend from endocrine and ANS physiology to chronic diseases and epidemiological modelling.

Panos Roussos is an Associate Professor of Psychiatry and Genetics and Genomic Sciences at the Icahn School of Medicine at Mount Sinai. He is a member of Icahn Institute – Genomics and Multiscale Biology and Friedman Brain Institute. He is also a VA/MIRECC Research Physician at the James J. Peters VA Medical Center. He received his medical and doctorate degrees from the University of Crete in Greece and he completed his residency in Psychiatry (research track) at Icahn School of Medicine at Mount Sinai followed by a MIRECC research fellowship in schizophrenia. His research focuses on the integration of high-dimensional data, such as genomic, epigenomic and transcriptomic, using advanced biostatistical methods in order to identify some of the mechanisms through which risk genetic variants increase the risk for neuropsychiatric diseases.

Constantine G. Lyketsos, MD, MHS, DFAPA, FACLP, FACNP: A native of Athens, Greece, Dr. Lyketsos graduated from Northwestern University and Washington University Medical School in St. Louis. He completed residency and chief residency in psychiatry at Johns Hopkins, followed by fellowship in clinical epidemiology. He currently serves as Chair of the Department of Psychiatry and Behavioral Sciences at Johns Hopkins Bayview and as the Elizabeth Plank Althouse Professor in Alzheimer's Disease Research at Johns Hopkins University. An active clinician, teacher, and researcher Dr. Lyketsos' clinical and research work are integrated in the [Johns Hopkins Memory and Alzheimer's Center](#) which he founded as a collaborative partnership between three departments to offer comprehensive evaluation and innovative treatment for a range of conditions that affect cognition





and memory. A world expert in the care and treatment of patients with Alzheimer's and related dementias (AD), Dr. Lyketsos has carried out pioneering work on the epidemiology and treatment of AD. His team is developing biomarkers to accelerate treatment development for AD while designing and implementing innovative clinical trials. He leads efforts, as well, to ensure the provision of state-of-the-art dementia care for people with dementia in the community. Dr. Lyketsos is the recipient of multiple major awards including the American College of Psychiatrists 2018 *Geriatric Research Award*. He has authored over 350 peer-reviewed articles, as well multiple chapters, commentaries, and five books. Castle-Connolly has named Dr. Lyketsos as one of *America's Top Doctors* every year since 2001.

Clifford Kentros is Professor of Medicine and leader of the **Kentros research group** at the Kavli Institute of Systems Neuroscience, NTNU. After his doctoral work on Potassium channels with Bernardo Rudy at NYU, Cliff Kentros investigated the relationship between place cells and memory during his postdoctoral work with Robert Muller at SUNY Downstate and Eric Kandel at Columbia University. His laboratory takes advantage of his dual molecular and neurophysiological background by combining the anatomical specificity of molecular genetics with *in vivo* electrophysiological recordings and anatomical analysis, first at the University of Oregon and now at the Kavli Institute of Systems Neuroscience at NTNU in Trondheim, Norway, where he is Professor of Medicine. More specifically, the lab uses mice capable of driving the expression of transgenes in particular subsets of neurons in brain areas involved in learning and memory to determine their precise connectivity and to modulate their neural activity while recording from other cell types. In this way, his lab investigates the anatomical and functional circuitry underlying learning and memory.

Dr Chris Plakiotis has research interests in brain stimulation therapies and depression. After completing his undergraduate Bachelor of Medicine and Bachelor of Surgery degree through Monash University, Chris Plakiotis undertook specialist training in Psychiatry through Monash Health. In addition to attaining Fellowship of the Royal Australian and New Zealand College of Psychiatrists, he has completed Advanced Training in Adult Psychiatry and Psychiatry of Old Age as well as completing a Master of Psychological Medicine degree through Monash University. In parallel to his clinical training and work, Chris has worked as a Research Fellow for Monash University, completing a Master's degree in Clinical Research and submitting a Doctor of Medicine thesis (by publication) whilst in this position. His thesis is based on a series of papers regarding electroconvulsive therapy. As well as being an Adjunct Senior Lecturer in the Department of Psychiatry, School of Clinical Sciences at Monash Health, Chris is a practicing Consultant in Adult and



Old Age Psychiatry. He is currently the Acting Clinical Head of the Aged Persons Mental Health Service at Monash Health. Chris has recently attained Associate Fellowship of the Royal Australasian College of Medical Administrators and is undertaking ongoing study towards a Master's degree in Medical Leadership.





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