



NKUA Medical School welcomes its new Dean and Associate Dean



University of Athens Medical School Alumni Gerasimos Siasos becomes the 143rd Dean of the University of Athens Medical School



Gerasimos Siasos was elected Dean of the Athens Medical School in June of 2021 with a record breaking 76% of the total Faculty votes. Prof Siasos, is the youngest Dean of the National and Kapodistrian University of Athens Medical School. He is a Professor of Cardiology and Molecular Cardiology and the Director of the Heart and Diabetes Clinic at the 3rd Department of Cardiology, "Sotiria" General Hospital in Athens, Greece. Dean Siasos is an Athens Medical School alumnus. During his undergraduate medical studies, he received awards for Exemplary Student Achievements such as the highest academic score as a 5th year medical student. He holds two Master Degrees in Cardiovascular ICU from the National and Kapodistrian University of Athens Medical School and in Health Care Management from Hellenic Open University

and a Ph.D. in Cardiology with Honors from the University of Athens Medical School, 1st Department of Cardiology, Hippokration General Hospital. Upon completion of his Internal Medicine training, he went on for his Cardiology Fellowship at the Hippokration University Hospital in Athens.

Dean Siasos joined the faculty of the Medical School of the National and Kapodistrian University of Athens in 2008 and was elected unanimously in all academic levels (Lecturer, Assistant Professor, Tenure track Assistant Professor, Associate Professor, Full Professor). In 2013 he was awarded the Young Investigator Award from the American College of Cardiology. He then went on to join the Vascular Profiling Research Group (Director Prof. P.H. Stone) at Brigham and Women's Hospital, Harvard Medical School (HMS). In 2015, he was appointed Visiting Assistant Professor of Medicine at HMS at the Cardiovascular Division of Brigham and Women's Hospital. He was elected member of the Research Oversight Committee at Brigham Research Institute in Brigham and Women's Hospital, HMS and a research affiliate in the Harvard-MIT Biomedical Engineering Center, investigating the impact of endothelial shear stress on coronary atherosclerosis. He currently maintains his position as a research affiliate in the Vascular Profiling Research Group, Cardiovascular Division at Brigham and Women's Hospital, HMS.

In 2019 he was elected Associate Dean of University of Athens Medical School and he has served as the President of the Uni-

University of Athens Medical School Alumni Nikos Arkadopoulos is elected as the new Associate Dean of the University of Athens Medical School

Nikos Arkadopoulos

was elected Associate Dean of the Athens Medical School in June of 2021. Born in 1968, Dr Arkadopoulos graduated from the Athens Medical School in 1991 with an "Excellent" grade. He completed his residency in General Surgery at Aretaieion University Hospital and his fellowship at Cedars Sinai Medical



Center, UCLA School of Medicine in USA. Associate Dean Arkadopoulos joined the faculty of the Medical School of the National and Kapodistrian University of Athens in 2002 as a Lecturer, and was elected unanimously in all academic levels, becoming Full Professor in 2018. In the same year he was elected Director of the 4th Department of Surgery in Attikon University Hospital.

On a clinical level, his focus is on oncological surgery mainly Breast, Hepato-Pancreato-Biliary (HPB), Gastrointestinal and complex intra-abdominal procedures. He has published with his team large series and innovative techniques in the field of HPB surgery, all performed in Greek academic centers (Aretaieion and Attikon Hospital). Over the past 20 years Dr Arkadopoulos has also organised an extensive experimental surgical research program and he is internationally known for his achievements in artificial liver

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versity Hospitals "Aretaieion" and "Aiginiteio" (2019 - 2021). During his presidency he increased the funding of these University Hospitals and recruited new staff for the development of new health structures.

His research work is focusing on molecular cardiology, diabetes, endothelium, vascular profiling, biomarkers in cardiovascular disease, with an emphasis on the mechanisms of atherosclerosis progression. He has published more than 300 papers in high impact peer review journals and he is currently Section Editor for Cardiovascular and Hematological Diseases in Current Medicinal Chemistry Journal. He is among the most cited researchers under the topic "Molecular Cardiology" and "Pathophysiology of Atherosclerosis".

When Dean Siasos was asked why he decided to become a dean he says: "Medicine faces a number of challenges that I could help address. With unity, cooperation and hard work we will improve the most historic Medical School in the country".

As a physician-scientist, Dean Siasos is aware of the challenges that are present from years of crisis, lack of faculty and staff, the growing demands for clinical care and their effect on the medical students' education. His vision is to create an academic environment similar to the major Boston Universities with which he collaborates.

He knows all the staff of the Medical School on a first name basis and is considered extremely friendly but at the same time efficient. His priorities are to expand the Medical School's research portfolio, increase the number of faculty members, develop new departments and focus on improving the working climate and student education. For these reasons he has already established the Education Office of the Medical School.

"I believe that we must maintain fundamental moral values and envision a great Medical School, and that requires hard work and creativity."

support, hepatocyte transplantation and pharmacological interventions in animal models of liver ischemia, post-hepatectomy liver failure and liver hemorrhage. For his research work Dr Arkadopoulos has received 38 national and international awards among which are the prestigious young investigator award of the American Association for the Study of Liver Diseases, the Stavros Niarchos International Guest Scholarship of the American College of Surgeons and others.

In 2019 Dr Arkadopoulos was elected Director of the Surgical Faculty of the National and Kapodistrian University of Athens Medical School. In 2020 he was appointed Director of the Surgical Staff of "Attikon" University Hospital. In September 2021 he took office as Associate Dean of the Medical School and President of the University Hospitals "Aretaieion" and "Aiginiteio".

Dr Arkadopoulos is an enthusiastic advocate of academic surgery, a concept that combines a robust and focused clinical program with research both clinical and experimental. When asked about his vision for the Medical School Associate Dean Arkadopoulos replied: "Academic excellence, reform of education and improvement of working conditions and opportunities for faculty members should be the top priorities. Hard work, innovation and a principled leadership embracing all faculty members are the tools to achieve our goals".

NKUA Medical School welcomes the incoming class of 2027



Associate Dean
Nikolaos Arkadopoulos,
Associate Rector of NKUA
Dimitrios Tousoulis and
Dean Gerasimos Siasos

Curiosity is the common element to the scientific and humanistic aspects of medicine. You should love medicine and develop critical thinking," said the Associate Rector of National Kapodistrian University of Athens Dimitris Tousoulis as the Medical School welcomed the students at its annual Ceremony.

This year's welcome events, which kicked off Oct 2021, were the first formal in-person gatherings on the campus since the beginning of the coronavirus pandemic in March 2020. "We are very proud to welcome students with the highest grades throughout Greece. Our task in medical school is to educate our students on how to think and gain new knowledge for the rest of their lives," said the Dean of Medical School Gerasimos Siasos, who welcomed first-year students and commended them for succeeding in getting into the Medical School. Associate Dean Nikolaos Arkadopoulos welcomed the students and said, "We will do everything in our power to nurture and support you throughout your career."

The Greek Fauci: Harvard-trained Tsiodras becomes Chief Scientific Advisor for the COVID-19 pandemic for the Hellenic CDC and the Greek Government



Sotiris Tsiodras is a Professor of Medicine and Infectious Diseases at the National and Kapodistrian University of Athens Medical School and the Chief Scientific Advisor for the COVID-19 pandemic for the Hellenic CDC and the Greek Government. He completed post graduate training in Internal Medicine and Infectious Diseases at Harvard Medical School in the USA. He is board certified in Internal Medicine and Infectious Diseases by the American and the Hellenic Boards of Internal Medicine.

Tsiodras also holds a master's degree in the Medical Sciences from Harvard Medical School and was a recipient of the Clinical Investigator Training Program fellowship conducted by Harvard Medical School and the MIT Division of Health Sciences and Technology both in Boston, MA. He has a doctoral degree in Medicine (PhD) from the National and Kapodistrian University of Athens Medical School.

He was the recipient of the Maxwell Finland award

by the Massachusetts chapter of the Infectious Diseases Society of America (IDSA) and he is currently an IDSA fellow. He is a member of the European CDC Advisory Forum (ECDC) since 2009 and is currently serving as the education officer of the European Society of Clinical Microbiology and Infection, Respiratory viruses study group.

In 2020, the Greek government appointed a group of experts to coordinate the country's management of the SARS-CoV-2 pandemic in Greece. Tsiodras was appointed as the chief scientific advisor and the government's communications liaison for the COVID-19 health crisis. The international press including New York Times and Le Figaro have described him as "one of the heroes of the coronavirus era". Tsiodras continues to serve on the group of scientific advisors to the European Commission with regards to the COVID-19 pandemic.

Tsiodras together with Professor Drakopoulos (Department of Data Sciences and Operations, Marshall School of Business, University of South-

ern California, Los Angeles, CA, USA) implemented a reinforcement learning system, nicknamed Eva, which was deployed across all Greek borders to limit the influx of asymptomatic travelers infected with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), and to inform border policies through real-time estimates of COVID-19 prevalence. In contrast to country-wide protocols, Eva allocated Greece's limited testing resources on the basis of incoming travellers' demographic information and testing results from previous travelers. By comparing Eva's performance against modelled counterfactual scenarios, the Greek-USA team showed that Eva identified 1.85 times as many asymptomatic, infected travelers as random surveillance testing, with up to 2-4 times as many during peak travel, and 1.25-1.45 times as many asymptomatic, infected travellers as testing policies that utilize only epidemiological metrics. The results of this study appeared in the Nature journal in November 2021.

NKUA pioneers in COVID-19 Research



The National and Kapodistrian University of Athens (NKUA) Guides New Drug Indication for COVID-19 Pneumonia

European Medicines Agency (EMA) approves anakinra based on NKUA study led by Professor Evangelos J Giamarellos-Bourboulis

On December 16, 2021 EMA human medicines committee (CHMP) recommended the extension of the indication of anakinra to include the treatment of COVID-19 in adult patients with pneumonia requiring supplemental (low or high flow) oxygen and who are at risk of developing severe respiratory failure.

Anakinra was until December 2021 authorized in the EU only for the treatment of various inflammatory conditions. Since December 2021, the medication is indicated to reduce the inflammation associated with COVID-19, decrease the lower airway tissue damage and prevent the development of severe respiratory failure.

The idea of Professor Giamarellos since the very beginning of the pandemic was that we need to identify early the patients at risk for severe respiratory failure and mechanical ventilation and treat them early. He then developed a biomarker that can serve for early risk identification.

In reaching its conclusion, the CHMP evaluated the results of one extensive clinical development program which was designed and conducted by Prof. Evangelos J. Giamarellos-Bourboulis. The program lasted from March 2020 until May 2021 and involved three stages. The first stage took place in March 2020 in three departments of NKUA and concluded with the discovery of the biomarker suPAR (soluble urokinase plasminogen activator receptor) which at blood levels 6 ng/ml or more can identify as early as 10 days before the patients who will progress to respiratory failure. The second stage took place from April 2020 until November 2020 and it was an open-label platform-like phase 2 trial with the acronym SAVE. Data from 717 patients showed that early start of treatment with the drug anakinra when suPAR was 6 ng/ml could prevent deterioration by 70% compared to patients receiving usual care.

In November 2020, Prof. Giamarellos presented the data at the Emergency Task Force for COVID-

19 of the European Medicines Agency (EMA) and received advice for the third stage of the development. This third stage was the multicenter double-blind randomized phase 3 clinical trial SAVE-MORE which was conducted in Greece and in Italy in 606 hospitalized adults with moderate or severe COVID-19 pneumonia and who had suPAR levels 6 ng per ml or more. These patients received anakinra or placebo once daily, in addition to standard of care (low or high flow oxygen and dexamethasone, and some also received remdesivir). The study showed 64% overall improvement of clinical symptoms in patients treated with anakinra plus standard of care compared with those who received placebo plus standard of care. This overall improvement can better be expressed as follows: 50% relative increase of cure rate; 50% relative decrease of remaining hospitalized in the general ward or in the Intensive Care Unit; and 55% relative decrease of mortality. The results of the SAVE-MORE trial are published at Nature Medicine <https://pubmed.ncbi.nlm.nih.gov/34480127/>.

It is remarkable to point out, that the study led by Professor Giamarellos-Bourboulis belongs to one of the 3 out of 7911 studies (0.038%) in COVID-19 hospitalized patients which led to EMA approvals in this indication.

"This success creates obligations and expectations for our international scientific continuity. We have proved that the difficulty of everyday life has never distracted us from the main goal for which we serve Medicine. Our mission is to help our suffering patients and the comprehensive clinical research effort has led to the possibility for our fellow human beings from all over the world, who are not our daily patients, to be able to receive treatment. I hope that the enthusiasm multiplies every day and that our research efforts continue with similar effectiveness" said Professor Giamarellos-Bourboulis.

The faces of the pandemic: NKUA Women in the forefront of the management of the pandemic



NKUA Professor of Pulmonary and Critical Care and Director of the Intensive Care Unit at Evangelismos Hospital **Anastasia Kotanidou** receives an award from the President of the Hellenic Republic Katerina Sakellariopoulou for her significant contributions to the fight against COVID-19 infection



NKUA Professor of Pulmonary and Critical Care and Director of the 1st Pulmonary Department at Sotiria Hospital **Antonia Koutsoukou** receives an award from Women for Oncology (W4O) Hellas



NKUA Professor of Critical Care at the First Department of Intensive Care at Evangelismos Hospital **Ioanna-Maria Dimopoulou**



NKUA Professor of Pulmonary and Critical Care at Evangelismos Hospital **Christina Routsis**



Professor of Paediatrics and Infectious Diseases Chair, Second Department of Paediatrics Director, Infectious Diseases Unit National and Kapodistrian University of Athens (NKUA) School of Medicine P. and A. Kyriakou Children's Hospital **Maria Tsolia**



NKUA Professor of Internal Medicine and Infectious Diseases at the 4th Internal Medicine Department at Attikon Hospital **Anastasia Antoniadou**



NKUA Professor of Pulmonology **Anna Karakatsani** 2nd Pulmonary Medicine General University Hospital "Attikon"



Associate Professor of Internal Medicine-Infectious Diseases at 2nd Department of Internal Medicine **Eleni Sambatakou**



NKUA Assistant Professor of Medicine at 3rd Department of Internal Medicine **Garyphalia Poulakou**. Her Department chaired by Professor Konstantinos Syrigos received Healthcare Business Award in 2020 for its contribution to the COVID-19 pandemic



NKUA Associate Professor of Internal Medicine and Infectious Diseases at the 1st Department of Internal Medicine at Laiko Hospital **Mina Psychogiou**



Professor of Paediatric Infectious Diseases of NKUA **Vana Spoulou**, Chief of the COVID Unit & Immunobiology-Vaccinology Research Laboratory at Agia Sophia Children's Hospital of Athens



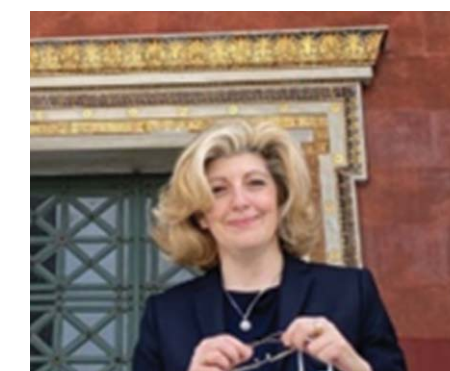
NKUA Associate Professor of Internal Medicine-Critical Care at the 1st Department of Intensive Care at Evangelismos Hospital **Eleni Magira**



Paraskevi Katsaounou NKUA Associate Professor of Pulmonary Medicine at the First Department of Intensive Care at Evangelismos Hospital



NKUA Professor of Pediatrics and Infectious Diseases and Director at the 3rd Department of Pediatrics at Attikon Hospital **Vana Papaevangelou** was appointed by the Ministry of Health to provide a daily update of the COVID-19 pandemic to the journalists and the public



NKUA Associate Professor **Efrosyni Manali** of the 2nd Pulmonary Medicine Department at General University Hospital "Attikon"



NKUA Assistant Professor of Pulmonary and Critical Care **Nikoletta Rovina** of the 1st Pulmonary Medicine Department at Sotiria Hospital

C COVID-19 is causing an extraordinary crisis that significantly impacts lives, health, economies, and societies. The pandemic is the biggest socio-economic shock since World War II. Once again, at the core center of this pandemic, health professionals were the first ones to show up and will be the last ones to slow down, and many of them are women. In the 210 countries and territories worldwide coping with this unprecedented health disaster, health care professionals have been the real heroes on the frontline of COVID-19.

Women constitute 70% of medical and support staff, 85% of nurses, and

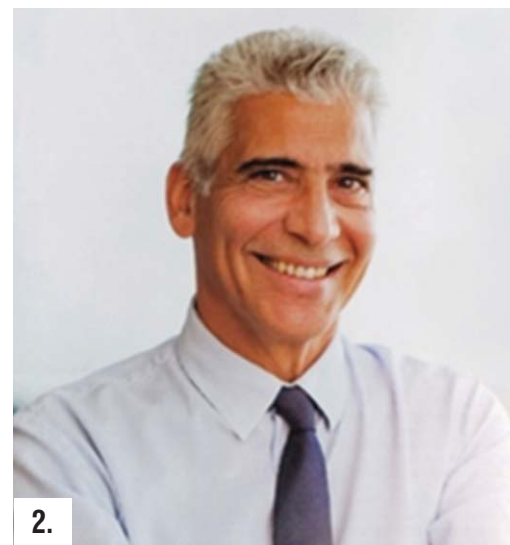
half of the doctors in the Organisation for Economic Co-operation and Development (OECD) countries.

The faculty of NKUA is playing significant contributions to the management of the crisis, and a substantial proportion of them are women. For example, Evangelismos, Sotiria, Laiko, and Attikon NKUA women professors manage patients with COVID-19 infection in the hospital wards and ICU providing high-level medical care while successfully conducting numerous COVID-19 research activities.

**NKUA
Rheumatology
Professors join
efforts and
receive
European
Alliance of
Associations
for
Rheumatology
(EULAR)
Centre of
Excellence
Designation**



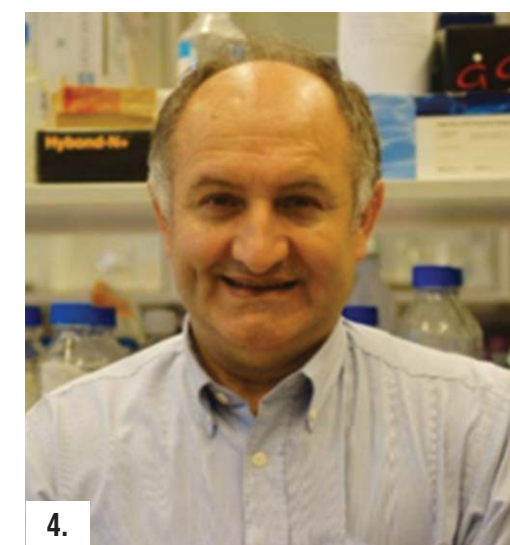
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Rheumatic and musculoskeletal diseases (RMDs) affect all ages and both genders. More than 200 different diseases have been identified, which affect the joints, tendons, ligaments, bones and muscles, while in systemic autoimmune diseases disorders also involve internal organs. Common symptoms are pain, swelling, and stiffness, common consequences are loss of locomotor function or organ damage and premature death in systemic immune mediated disorders. Many of the RMDs, such as arthritis and osteoporosis are among the most common diseases in Europe.

The Joint Academic Rheumatology Program (JARP) is a collaboration between the Rheumatology- Clinical Immunology Academic Units of the three University Hospitals of the NKUA wherein rheumatologic research and education has been brought together in one Organization. The coopera-

tion agreement was signed on September 12, 2015. This has resulted in the largest center for rheumatologic research and education in Greece. Within the JARP more than 60 researchers work on the origin and treatment of rheumatic and autoimmune disorders.

JARP was recently selected as a **EULAR Centre of Excellence in Rheumatology** for 5 years (2021-2026). European Alliance of Associations for Rheumatology (EULAR) collates a register of the top research centres in European rheumatology with a three-fold purpose: "To develop a group of first-class research centres for active researchers, to enable exchange of fellows' research projects, and to link with Brussels".

The criteria used for EULAR designation are the following: A research centre as main contributor should reach at least 350 impact factor points over the last 5-year pe-

riod (2016-2020) of original research papers related to rheumatology which have been published in journals with a current impact factor of > 4.00. Letters, editorials, review articles, consensus documents, recommendations, case reports, and commentaries are excluded.

JARP accomplished important milestones which led to EULAR designation. A joint appointment was documented by a mutual written collaboration contract, the location of rheumatology units in close proximity/one campus (School of Medicine, NKUA), and the high number of significant publications with shared authorships among the JARP members. Publications of JARP members as first or senior/corresponding authors in journals of impact factor of > 4.00 reached a total of 401.41 impact factor points over the last 5-year period (2016-2020) of original research papers related to rheumatology.

The JARP is led by an Executive Board consisting of:

- 1st Department of Propaedeutic Internal Medicine Department, "Laikon" General Hospital: prof. Petros Sfikakis, prof. Maria Tektonidou
- Department of Pathophysiology, "Laikon" General Hospital: prof. Athanasios Tzioufas, prof. Panagiotis Vlachoyiannopoulos
- 4th Department of Medicine, "Attikon" General Hospital: prof. Dimitrios Boumpas
- 2nd Department of Medicine, "Hippokraton" General Hospital: prof. Dimitrios Vassilopoulos

The executive board of JARP: 1. Maria Tektonidou, 2. Petros Sfikakis, 3. Dimitrios Vassilopoulos, 4. Dimitrios Boumpas, 5. Athanasios Tzioufas, 6. Panagiotis Vlachoyiannopoulos: Diseases that affect millions of patients worldwide are the focus of JARP which will nurture innovative research with the goal of finding safe and effective treatments

Dr Georgios Tsivgoulis, Professor of Neurology from the National and Kapodistrian University of Athens (NKUA) is being profiled in Lancet Neurology for receiving the European Stroke Organization (ESO) Scientific Excellence Award



practice. Dr Tsivgoulis is the first Greek scientist that has been selected by ESO for this distinction. He currently serves as ESO Vice-President and has also coauthored 4 recent ESO guidelines on acute stroke management including intravenous thrombolysis, acute blood pressure management, mobile stroke units and bridging reperfusion therapies with systemic thrombolysis and mechanical thrombectomy. His research on cerebrovascular complications of COVID-19 was also recognized in the 2021 European Stroke Science Work-

shop. Finally, Prof Tsivgoulis is actively involved in the development of novel stroke therapies for acute stroke treatment and secondary stroke prevention including third and fourth generation tissue plasminogen activators, Factor XI inhibitors and anti-inflammatory agents.

“This international distinction attests to the substantial progress of Greek Vascular Neurology in the past 20 years and is the product of team work and strong collaborations between the National Kapodistrian University of Athens (NKUA) with other academic institutions of Greece, Europe and North America. The comprehensive and multidisciplinary approach in patients with cerebrovascular diseases remains paramount to improve stroke care, reduce disability and save millions of lives at a global level. I had the privilege and honor to productively join forces with outstanding faculty members of NKUA in the field of Neurology, Cardiology, Internal Medicine, Diagnostic and Interventional Radiology, Neurosurgery, Vascular Surgery, Epidemiology and Psychiatry. The fruits of this long and constructive collaboration were the cornerstones of the international recognition of our research team in the Second Department of Neurology of NKUA in “Attikon” University Hospital said Professor Tsivgoulis.

The profile of Professor Georgios Tsivgoulis appeared on the December 2021 issue of the journal “Lancet Neurology” ([https://www.thelancet.com/pdfs/journals/laneur/PIIS1474-4422\(21\)00386-0.pdf](https://www.thelancet.com/pdfs/journals/laneur/PIIS1474-4422(21)00386-0.pdf)) that represents the most highly ranked scientific journal IF (44.2) in the field of Neurosciences. Lancet Neurology includes in each monthly issue the profile of a distinguished researcher who has made significant contributions in the field of Neurology since 2006. Prof Tsivgoulis is the first Greek Neurologist to date that was invited to be profiled due to his substantial academic contribution in promoting novel diagnostic and therapeutic approaches in the field of cerebrovascular diseases. He has also received the 2021 European Stroke Organization (ESO) Scientific Excellence award (<https://2021.eso-conference.org/awards/>) based on his research on acute stroke reperfusion therapies, neurosonology applications in the diagnosis and treatment of acute cerebral ischemia, implementation of novel secondary stroke prevention therapies in everyday clinical

Professor Despina Sanoudou selected to serve as a Member of the Nature Masterclass Expert Panel



Nature Masterclasses, part of the publisher Springer Nature, has provided professional development training to over 50,000 researchers from 180 countries to date. The Assoc. Professor Despina Sanoudou of the Medical School of NKUA was invited to serve as Member of the Nature Masterclasses Expert Panel for the development of a new international educational program on effective research networking, in collaboration with Senior Editors of the world’s leading science journal Nature.

Professor Sanoudou was specifically selected by the Senior Publishing Manager of Nature Research stating that “As an award-winning researcher in the area of cardiovascular disease with an impressive track record of publications in renowned journals with teams all over the world, your experience in building connections and collaborations would be incredibly valuable for early career researchers”.

<https://masterclasses.nature.com/despina--sanoudou/19825792>

Deciphering Cellular Senescence: Gorgoulis laboratory is leading the path

In response to certain types of stress, such as persistent oncogenic signaling or DNA damage, cells can enter a state of stable cell cycle arrest known as cellular senescence. Transient activation of senescence suppresses carcinogenesis. However, persistent senescent cells are associated with tissue dysfunction and chronic inflammation, and can promote the onset and progression of diverse age-associated disorders including atherosclerosis, neurodegeneration, osteoarthritis, type 2 diabetes and cancer. Identification, specification and quantification of senescent cells are essential and challenging tasks. In a pivotal publication in Nature Protocols, Gorgoulis laboratory described a detailed two-phase algorithmic assessment to evaluate senescence and quantify various senescence-associated parameters in the same specimen.

In another important publication in Molecular Cell, Gorgoulis laboratory identified a recurrent chromosomal inversion driving escape from oncogene-induced senescence and malignant transformation. The prospect that senescent cells can escape from their non-proliferative state may have far-reaching implications as they can be a potential source of recurrence.

Hence, targeting senescent cells can be of major clinical importance since their specific elimination (senolysis) or neutralization of their undesirable properties (senomorphics) can alleviate some of the associated pathologies and improve tissue function. In light of the expanding field of senotherapeutics this may inspire future therapeutic choices.



References

1. Kohli et al, Nat Protoc. 2021 May;16(5):2471-2498.
2. Gorgoulis et al, Cell. 2019 Oct 31;179(4):813-827.
3. Zampetidis et al, Mol Cell. 2021 Dec 2;81(23):4907-4923.e8.
4. Papaspyropoulos et al, EMBO Rep 2021 Dec 13:e51287.

NKUA study suggests that comparative immunogenicity of candidate anti-COVID19 vaccines with natural infection can be used as a tool for an early prediction of vaccine efficacy



The Pfizer-BNT162b2 vaccine has proven to be highly effective, but, until recently, there was a lack of data regarding the comparison between antibody response to vaccination and natural infection. Neutralizing antibodies are a strong correlate of vaccine efficacy, although a protection threshold has not been established. However, measuring neutralizing antibodies on a large scale is challenging. The development of binding assays directed against the spike protein of SARS-CoV-2 showed excellent correlation with neutralizing antibodies and provides an opportunity to assess the immunogenicity of SARS-CoV-2 vaccines overtime on a large scale. The assessment of vaccine immunogenicity to predict and monitor vaccine effectiveness is important in groups of individuals not included in clinical trials, such as patients with immunocompromising conditions.

A study led by NKUA Associate Professor of Internal Medicine and Infectious Diseases **Mina Psychogiou** reports on comparative immunogenicity data of BNT162b2 mRNA vaccine with a large cohort of individuals with natural COVID-19 infection and provided suggestions for the use of comparative immunogenicity of candidate vaccines with natural infection for an early prediction of vaccine efficacy. The study included 871 vaccinated healthcare workers (HCW) and 181 patients with natural infection. The ratio of anti-SARS-CoV-2 against the RBD

domain of the spike protein (anti-RBD) in vaccinated individuals versus those with natural infection varied from 1.0 to 19.4. Anti-RBD was higher in symptomatic and hospitalized individuals and patients with severe/critical COVID-19. In addition, post-vaccination high anti-RBD concentrations were associated with younger age, female sex, vaccination side-effects, and prior infection (Pr-CoV). The authors conclude that the use of anti-RBD or other antibodies against spike protein may accelerate the study of the pathogenesis of SARS-CoV-2 and provide valuable tools for assessing vaccine efficacy and their effectiveness over time. The study was published in Vaccines. In addition, Dr Psychogiou and co-workers found that Varicella Zoster Virus may be reactivated after Vaccination for SARS-CoV-2. A study led by NKUA Associate Professor Mina Psychogiou presents seven immunocompetent patients aged > 50 years old with herpes zoster (HZ) infection in a median of 9 days (range 7–20) after vaccination against SARS-CoV-2. The occurrence of HZ within the time window 1–21 days after vaccination defined for increased risk and the reported T cell-mediated immunity involvement suggest that COVID-19 vaccination is a probable cause of HZ. The awareness of this clinical condition encourages additional reporting and communication of HZ after vaccination. This study published in Vaccines was among the first in the literature regarding the reactivation of HZ following COVID-19 vaccination.

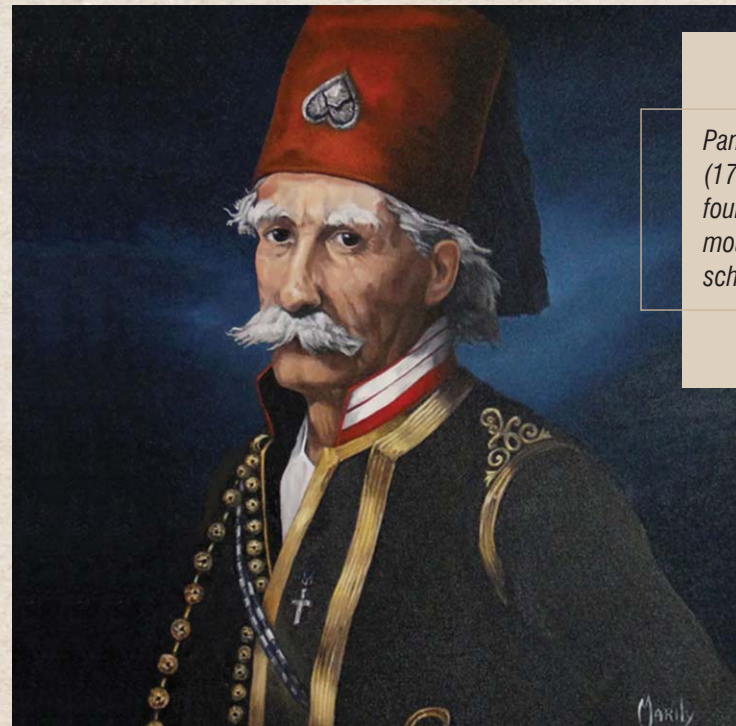
200 years of Greek Independence: Practicing medicine during Turkish rule



The death of Markos Botsaris at Kefalovryso Battle, painting by Ludovico Lipparini



The American physician Samuel Gridley Howe (1801-1876), painting by John Elliott.



Panagiotis Giatrakos (1781-1851), founder of the famous medical school in Mystras

200 years of Greek Medicine: Physicians and Medical Care in the 1821 Struggle for Freedom

Marianna Karamanou, MD, PhD

Professor of Epistemology, History and Ethics of Medicine, Department of History of Medicine and Medical Ethics, Medical School, NKUA

After the fall of Constantinople in 1453, a large number of intellectuals fled abroad. There were many of them who studied medicine at the universities of West with the typical example of Ioannis Kapodistrias (1776-1831), a graduate of the Medical School of Padua and Adamantios Korais (1748-1833), a graduate of the Medical School of Montpellier. However, few were the doctors who returned to Greece after the end of their studies to practice medicine. As a result, during the Turkish occupation, health care was absent.

As it results, shortly before the revolution, the number of doctors who served the needs of about 1,000,000 inhabitants did not exceed 90. Medicine used to be practiced by few scientific physicians, while there were empirical physicians who practiced traditional medicine. The knowledge of empirical physicians was passed down from generation to generation, and they could, among other things, either perform minor surgeries (medical surgeons) or prepare and sell medicines (medical pharmacists). At the same time, there were the "charlatans" originating from Epirus and especially from Ioannina. Empirical physicians derived their knowledge from home remedies general therapeutic aids based on the works of ancient Greek and Byzantine physicians and did not follow the scientific achievements of medicine. However, it is worth mentioning the operation of practical medical-pharmaceutical schools in Athens, Karpenisi, Sparta, and elsewhere, where relevant courses were taught.

During the revolution, many were the Greek and philhellene physicians that arrived in Greece in order to assist in the treatment of the population. However, the total number did not exceed 500, whereas the need for treatment was huge. The population was plagued by epidemics (plague, ty-

phoid, malaria, cholera, and smallpox) but also by famine. There was an additional need for care on the battlefields as well (Figure 1). The care provided to the wounded warriors was rudimentary: cleaning wounds with raki and care with a mixture of egg albumen mixed with oil and raki, hemostasis of large vessels with incandescent iron and suturing of wounds in addition to the classical technique with the use of a needle and thread, the use of ant heads as mentioned by General Makrygiannis in his "Memoirs." In April 1822, a makeshift hospital was set up in Messolonghi by order of the Philhellenes and the doctors Johann Daniel Elster (1796-1857) and Friedrich Johannsen, which initially operated with the sponsorship of the Philhellenes of Switzerland as well as Lord Byron's (1788-1824) and it remained in operation until the Exodus of Messolonghi, under the direction of the Swiss physician Johann Jakob Meyer (1798-1826). A similar makeshift hospital was located in the Monastery of Faneromeni in Salamina, under the direction of the German philhellene doctor Heinrich Treiber (1796-1882), as well as in Kitries where the American philhellene physician Samuel Gridley Howe (1801-1876) offered his services (Figure 2). Many physicians were close to the population, such as Petritsis Stamos (1758-1835), originating from Kefalonia who had studied medicine in Italy and was one of the pioneers of smallpox vaccination, Daniel Monachos, an experienced physician-surgeon of the Monastery of Vrachos in Argolida who founded a hospital in the Monastery and treated several injured people and the Giatrakou family from Mani with the prominent figure of Panagiotis Giatrakos (1781-1851) who founded the famous medical school in Mystras where many doctors were trained (Figure 3). Special mention should be made of the women who, as empirical

physicians, assisted in the treatment of fighters such as Perrezitsa Magripli and Altana Gryllianou Iglezou, wife of Dr. Meyer, who was killed with her husband and her children during the Exodus of Messolonghi.

Greek and philhellene physicians, during the revolution, offered their services selflessly, in many cases at the cost of their own lives, contributing, at the same time, to the liberation of the enslaved population and the creation of an independent Greek state.

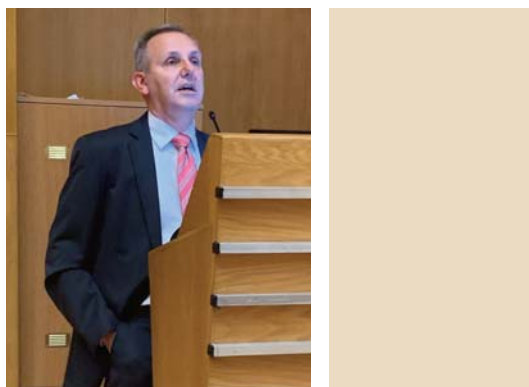
Figures

1. The death of Markos Botsaris at Kefalovryso Battle, painting by Ludovico Lipparini
2. The American physician Samuel Gridley Howe (1801-1876), painting by John Elliott.
3. Panagiotis Giatrakos (1781-1851), founder of the famous medical school in Mystras



Marianna Karamanou, Professor of History of Medicine NKUA

Seminar of the Medical School: Educate the Educators



The first educational Seminar for the Medical School Faculty members was held with great success on Wednesday 15-12-2021, at the Auditorium of Physiology of the Medical School of the National and Kapodistrian University of Athens (NKUA) with a simultaneous live broadcast.

The aim of the Seminar, organized by the Education Office of our School, was to emphasize on best practices that will improve the teaching quality of the faculty members for the most effective transfer of knowledge and skills to medical students.

The new leadership of the Medical School welcomed the Seminar. It highlighted the importance of faculty members' continuing education (CE) in innovative teaching strategies and techniques to improve the quality of student learning (a multidisciplinary education) and maintain the high evaluation score of the school.

Professor Mr. Boumbas, the coordinator of the Seminar and head of the Education Office, set the educational goals of the workshop and the future aims of the Education Office.

Professor Mr. Vassilopoulos discussed the content of the undergraduate educational program and the challenges we face with the high number of students, the high number of Clinics, and the current health conditions with the pandemic. He also pointed out the need to reinforce laboratory education, establish common educational goals between Clinics with similar academic subjects, and update and improve the clinical teaching methods. He also addressed the importance of two-way evaluation.

Associate Professor Samarkos described the basic principles of the theory of education and learning and the need for defined educational objectives based on the following criteria-tools: high quality and evaluation of knowledge, acquired practical skills, and appropriate behavior. Professor Stergiou highlighted the challenge of practicing medicine in parallel with students' education but also addressed the advantage of the high-learning potential and quality of the incoming students in Medical School. He also described the different teaching methods, pointing out the advantages of teaching in small student groups and especially the advantage of one-to-one education, as well as the im-



portance of "bedside teaching." Mr. Stergiou pointed out that knowledge is an interactive process that requires contact of the educator with the audience, monitoring of their attendance, use of examples and questions to stimulate their interest, as well as allowing time for discussion. Professor Stergiou also addressed the challenges of online education and the important current data.

Professor Skarmas described the important role of educators in Clinics, their availability, and the need to delimit their attitude towards students. He stressed the importance of effective student mentoring, especially for those who face difficulties (personalized education). He also pointed out the importance of feedback for the student's performance to increase communication and improve motivation.

Professor Gazouli discussed the teaching approaches from the theory to practice in preclinical courses. She pointed out the importance of cultivating scientific thinking and combining clinical practice with basic science knowledge and research principles. She highlighted the central role of practical teaching on top of lectures to reinforce medical knowledge and understanding. She suggested more practical courses with clinical applications, along with seminars and virtual laboratories, as well as interdisciplinary courses performed by clinical practitioners and basic scientists.

Professor Papaevangelou discussed the challenges of teaching from theory to practice in clinical sciences, focusing on the high number of students and the 'fragmentation' of medical educators in clinics. She pointed out the need for education with clinical scenarios, teaching in small groups, the use of new technologies with the possibility of self-assessment, and the practical training of students in small groups in the afternoons and on weekends.

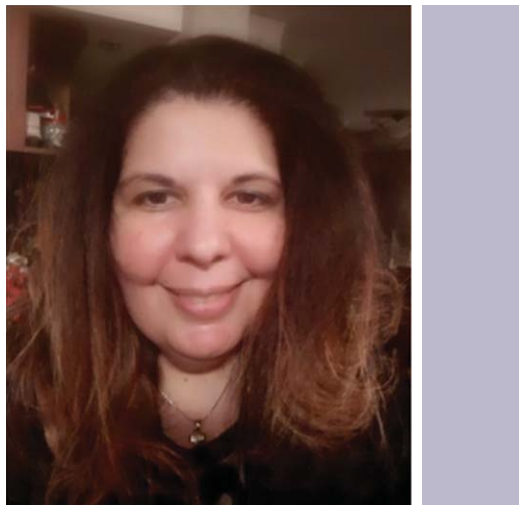
The Seminar ended with discussion and questions, with a commitment to continue in the near future.

The Seminar is available at the following link:

<https://drive.google.com/drive/folders/1gRbxb7zjhoxVJwK9dF4Kk4Q73xCuqeQ8?usp=sharing>



Meet New NKUA Medical School Faculty Members



Charis Bourgioti has been working as a clinical and research fellow and subsequently as a Consultant in the First Department of Radiology of the National and Kapodistrian University of Athens (UOA), Aretaieion Hospital, Athens, Greece, since 2012. Dr. Bourgioti has an academic interest in genitourinary radiology. Her current research interest includes female pelvis imaging, particularly pelvic MRI and obstetric imaging focused on placenta diseases. She is an active member of the Hellenic College of Radiology, the European Society of Urogenital Radiology (ESUR), and the European Society of Radiology (ESR). She is the lead author in a considerable number of publications in the field of the female pelvis and obstetrical imaging, and she has given numerous lectures in national and international congresses, including ECR, ESUR and RSNA, and multinational/multi-institutional consensus/ guideline meetings. Dr. Bourgioti finds teaching and sharing of knowledge, interacting with peers and future colleagues an extremely educational and rewarding experience.



Lampis Stavrinou studied at the Medical School of the University of Ioannina and then specialized in Neurosurgery at the 1st Neurosurgical Department of the University of Athens at "Evangelismos" hospital. From May 2011 to March 2015, he worked as a senior consultant at the Neurosurgical Department of the Bethel Neuroscience Center in Bielefeld, Germany, one of the largest neurosurgical centers in Germany. From April 2015 to March 2017, he worked as a Senior Consultant at the Neurosurgical Department of Schlosspark Hospital in Berlin, Germany. In April 2017, he took over the position of Vice Chairman of Neurosurgery at the same hospital. His areas of specialization are neurooncology, skull-base surgery, and minimally-invasive spine surgery. He has been a permanent member of the neurooncology board of the respective hospitals where he has worked, and in October 2020, he was appointed scientific director of the neurooncology board of the Park-Hospital-Group in Berlin. He holds a Diploma in Special Neurosurgical Oncology from the German Academy of Neurosurgery and a Master's Degree from the German Spine Society.

His priority in his new position as a faculty member of the Medical School of Athens at "Attiko" Hospital is the promotion of research through fundraising from respective European programs and scientific companies as well as the participation of the 2nd Neurosurgical Department of the University of Athens in multicenter studies, especially in the field of neurooncology. This is to be followed by multicenter studies under the coordination of his clinic. His priority is also the creation of country-wide neurosurgical digital databases. In regard to Medical School students, he aspires to strengthen student involvement in research projects and to actively support and guide them in their first steps in the field of scientific publications. At the clinical level, his first priority is the introduction of SOPs (Standards of Practice) in the treatment of neurosurgical diseases, the establishment of an interdisciplinary neurooncology board at "Attiko" hospital, and the expansion of the surgical spectrum, especially in the field of neurooncological surgery, epilepsy surgery and minimally invasive spine surgery.

Appointments and Promotions (Listed by the date of appointment)

Appointments

| | |
|-----------------------------|---|
| • George Velonakis | Assistant Professor of Radiology |
| • Alexandros Hatzimanolis | Assistant Professor of Biology, Behavioural Neurosciences and Genetics of Psychiatric Disorders |
| • Lampis Stavrinou | Assistant Professor of Neurosurgery |
| • Charis Bourgioti | Assistant Professor of Radiology |
| • Zisis Kratiras | Assistant Professor of Urology |
| • Despina Myoteri | Assistant Professor of Pathology |
| • Theodoros Kalampokas | Assistant Professor of Obstetrics and Gynecology |
| • Chrysallenia Sofokleous | Assistant Professor of Medical Genetics |
| • Konstantina Magklara | Assistant Professor of Pediatrics |
| • Evangelos Giotakis | Assistant Professor of Otolaryngology |
| • Dionysios Dellaportas | Assistant Professor of Surgery |
| • Konstantinos Bramis | Assistant Professor of Surgery |
| • Ioannis Hatzaras | Assistant Professor of Surgery |
| • Stefania Papatheodorou | Assistant Professor of Epidemiology and Preventive Medicine |
| • Panos Alexis Stathopoulos | Assistant Professor Neurology-Neuroimmunology |
| • Sofoklis Stavrou | Assistant Professor Obstetrics and Gynecology |
| • Vassiliki Nikolaou | Assistant Professor of Dermatology |
| • Vassiliki Lampropoulou | Assistant Professor of Medical Microbiology |

Promotions

14/10/2021

Dr Anna Aggelousi, received tenure in the rank of Assistant Professor of Internal Medicine

19-10-2021

Dr Olympia Papakonstantinou was promoted to the rank of Associate Professor of Radiology

30-11-2021

- Dr Konstantinos Dimitrakakis was promoted to the rank of full Professor of Obstetrics and Gynecology-Breast Diseases
- Dr Argyrios Tsantes was promoted to the rank of full Professor of Microbiology and Transfusion Medicine
- Dr Ioannis Vlamis was promoted to the rank of Associate Professor of Orthopedics

15-12-2021

1. Dr Alexandros Loukas Papalampros received tenure in the rank of Assistant Professor of General Surgery
2. Dr Antonios Vezakis was promoted to the rank of full Professor of General and Endoscopic Surgery
3. Dr Christos Bakogiannis was promoted to the rank of full Professor of Vascular Surgery
4. Dr Charalambos Syriatidis was promoted to the rank of full Professor of Obstetrics Gynecology and Reproductive Medicine
5. Dr Alexandros Delides was promoted to the rank of Associate Professor of Otolaryngology

23-12-2021

1. Dr Ioannis Adamakis was promoted to the rank of full Professor of Urology
2. Dr Vaia Lambadiari was promoted to the rank of full Professor of Internal Medicine-Endocrinology
3. Dr Athanasios Michos was promoted to the rank of full Professor of Pediatrics-Infectious Diseases
4. Dr Maria Gavriatopoulou was promoted to the rank of Associate Professor of Therapeutics-Oncology

29-12-21

Dr Dimitrios Filippiadis was promoted to the rank of Associate Professor of Radiology-Interventional Radiology

In Memoriam

Panagiotis Dimakakos (1940-2021)



On December 1, 2021, Professor **Panagiotis Dimakakos** passed away at the age of 82; he was one of the founders of Vascular Surgery in Greece and left the mark of an excellent surgeon and great Teacher.

Panagiotis Dimakakos came from the village of Kafiona in Eastern Mani. He was born in Piraeus and studied medicine and philosophy at the Universities of Heidelberg, Kiel, and Berlin. He was married to Catherine Dellaporta, with whom he had seven children.

He was an Emeritus Professor of Vascular Surgery at the University of Athens and was the Director of the 2nd Surgery Clinic of Aretaio Hospital. Thousands of pioneering surgeries have been recorded in his assets, while he had more than 600 publications and abstracts in the Greek and international medical press. He authored nine volumes of university textbooks, mainly on vascular surgery.

He was a founding member of the Hellenic Society of Vascular Surgery, of which he was Vice President and President, as well as a member of 28 national and international scientific societies.

He had repeatedly represented Greece abroad and had been honored many times by national and international scientific bodies and societies for his contribution to medicine and especially to vascular surgery.

He spent the last years of his life - following his spiritual calling - as a monk, Father Lucas, in the Holy Monastery of Vatopedi on Mount Athos, where he was buried.



Dimitrios Kelekis (1938-2021)



Dimitrios Kelekis is considered the "father" of Interventional Radiology in Greece, with a decisive contribution to establishing the specialization of Interventional Radiology in our country. As a pioneer of the field, he was the inspirer and mentor of many distinguished colleagues. In addition, he founded the Hellenic Society of Invasive Radiology, Vascular Radiology-Neuroradiology, and the Postgraduate Program "Invasive Radiology." Dimitris Kelekis was born in Thessaloniki in 1938, studied at the Department of Medicine of the Aristotle University of Thessaloniki, and specialized in Radiology & Nuclear Medicine at the University of Geneva.

He founded 10 (7 Public and 3 Private) Departments of Invasive Radiology and was "head" of the Radiology Laboratories of the University Hospitals Alexandra and Attiko and the Private Centers "Hygeia" and "Onassis." He was elected Professor of Radiology in 1989 at the University of Patras. Then (1991), he founded the University Department of Radiology at Eugenides Hospital as Professor of Radiology at the Nursing School of NKUA and later at the Medical School of NKUA.

He relocated the University Department of Radiology to Sismanogleio Hospital and then to the Second Radiology Department based at the University General Hospital "AT-TIKON." From 2005, he was an Emeritus Professor of Radiology at the Medical School of NKUA. He was a founding member of the European Society of Interventional Radiology with continuous contribution and service in international events. In 2012 he received the highest honorary distinction - a gold medal from the American Association of Interventional Radiology (the only Greek Radiologists awarded this distinction worldwide).



In Memoriam

Dimitrios Kremastinos (1942-2020)



Professor Dimitrios Kremastinos also dealt with politics. He served as Minister of Health from 1993-1996, where he expanded EKAB throughout the country, introduced telemedicine, founded four hospitals, created and staffed OKANA. He was elected Member of Parliament for the Dodecanese from 1996-2000 and from 2009-2019 and Vice President of the Hellenic Parliament from 2015-2019.

His wife, Professor Jenny Kourea-Kremastinou, was his supporter and companion in this glorious life.

On May 8, 2020, Professor **Dimitrios Kremastinos**, who was one of the most important cardiologists in Greece, passed away at the age of 78.

He was born in Halki, the Dodecanese, in 1942, grew up in Rhodes, and studied at the Medical School of NKUA.

He served at the Hippocraton Hospital was elected Director of Cardiology at the "Genimatas" hospital, where he served until 1993 when he became Director of Cardiology Clinic at the Onassis Cardiac Surgery Center. In 2004 he was elected Director of the 2nd University Cardiology Clinic at "Attikon," which he had founded as a Minister of Health. He was an Emeritus Professor of Cardiology at the University of Athens.

His research work covers the whole spectrum of modern Cardiology and basic research. He was particularly interested in the study of Thalassemia, the genetics of cardiomyopathy, atherosclerotic plaque, sudden death, and the protection of the myocardium. He contributed decisively to the reform of modern Cardiology with publications in the most prestigious scientific journals. His work has international recognition with thousands of bibliographic references in it.

His deep knowledge is reflected in his books and books that are addressed to the public and refer to diseases of the cardiovascular system. He wrote articles in the daily and periodical press raising awareness with regards to the prevention, the treatment, but also the future directions of the medical science.

He was a member of many international scientific societies, was President of the Hellenic Society of Cardiology, founded the Hellenic College of Cardiology, and was an elected member of the European Academy of Sciences and Arts.



Pavlos Toutouzas (1935-2021)

On November 26, 2021, Professor **Pavlos Toutouzas**, one of the founders of modern Hellenic Cardiology, passed away at the age of 86. Pavlos Toutouzas was born in Thebes in 1935 and was married to Eleni Toutouza Pantazopoulou, with whom he had three children and five grandchildren. He was an Emeritus Professor of Cardiology at the University of Athens and was the director of the Cardiology at Hippokrateion Hospital for a number of years. As the Director of Cardiology, he put emphasis on invasive Cardiology.

He was a founding member of the European Society of Cardiology.

He has been President of the Hellenic Society of Cardiology, President of the Hellenic Antihypertensive Society, and President of the Hellenic Society of Ultrasound. He is one of the founding members of the Hellenic Foundation of Cardiology (EL.IKAR.). He was also interested in noninvasive methods for the diagnosis of valvular diseases.

He had many highly cited publications many articles in Greek and international journals. He has been a member of the Editorial Board of highly prestigious European and American scientific journals, while he has been selected as a reviewer by international high-profile scientific journals, such as Lancet and others. He was a member of the National Society of Writers.

The honorary distinctions he received were many, such as Corresponding Member of the Serbian Academy of Sciences and Arts "Epiologos." He also received honorary distinctions from the Mayor of Athens and from the Educational Association.

