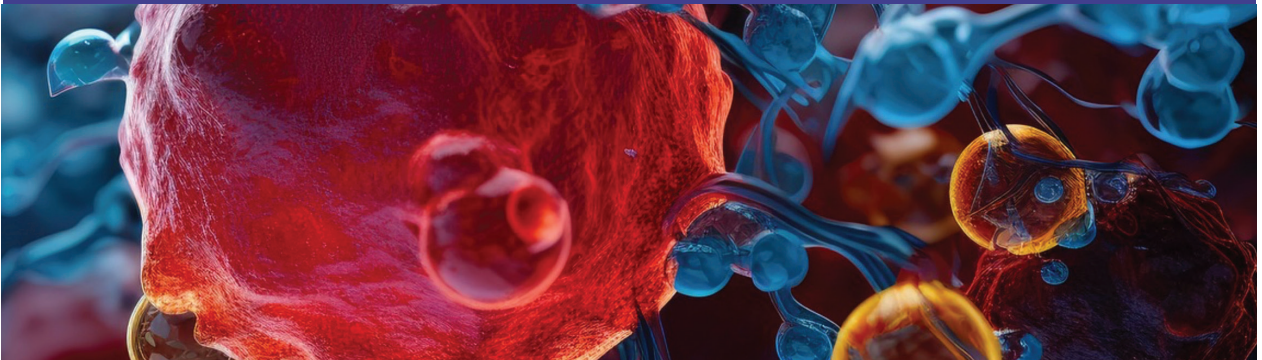




Graduate Program

# MOLECULAR BASIS OF HUMAN DISEASES

UNIVERSITY OF CRETE MEDICAL SCHOOL



[mscs.uoc.gr/mbhd/](http://mscs.uoc.gr/mbhd/)

[www.linkedin.com/in/molecular-basis-of-human-diseases-225b51340](https://www.linkedin.com/in/molecular-basis-of-human-diseases-225b51340)



# PROGRAM DESCRIPTION

## 1. OVERVIEW

The Graduate Program “Molecular Basis of Human Diseases” at the University of Crete is in its 21st year of operation! It originally started in 2003–2004 under the title “*Cellular and Genetic Etiology, Diagnosis and Therapy of Human Diseases*”. In 2013, after its first decade of operation, the name changed to the current title. The Program is continuously evolving following the needs of the graduate education, the recommendations of the External Evaluation Committees and following the laws governing graduate education of the Greek state.

The Program has been organized in accordance with international standards for graduate education and capitalizes on the knowledge that has been acquired from the progress in biomedical sciences, both at the basic and the clinical level. The major strength of the Program is its human potential (Faculty of the University of Crete Medical School and collaborating Institutions).

## 2. AIMS OF THE PROGRAM

The Program provides training opportunities in the field of biomedical sciences, accepting graduates from the Departments of Health and Biological Sciences as well as from other related scientific fields (Chemistry). The aim of the Program is to promote translational research by bridging the gap between basic scientists and clinical doctors. In order to pursue this aim, the Program is organized to provide basic and translational science training, emphasizing on the curriculum of the molecular/cellular basis of human diseases, as well as the current diagnostics and therapies. The Program combines clinical with basic science to investigate the molecular basis and the pathogenesis of human diseases and gives the opportunity to its graduate students to do high quality original research in top research laboratories of Greece and abroad, with significant contributions in research.

**3.  
IMPORTANCE  
- UNIQUE  
CHARACTER  
OF THE  
PROGRAM**

The discoveries of novel genes, molecular pathways and mechanisms implicated in the pathogenesis of human diseases have revolutionized medicine during the last 25 years. The knowledge acquired by the application of novel technology and scientific developments has generated new biomarkers and therapeutic approaches for many diseases. Personalized medicine and molecular signatures are now available for therapeutic decisions, improving the prognosis in many diseases. Nevertheless, still many unmet needs exist, both in the diagnostic/prognostic and therapeutic field, posing novel questions in the research field. From the start, the Program aimed at: a) Educating young physicians and biomedical scientists in the technological and research developments through lectures from experts in their fields; b) The practical training of students in state-of-the-art technologies; c) The conductance of original basic and translational research in the laboratories of the Medical School and the collaborating Faculty; and d) The training of the students in writing review papers and research proposals. To achieve these goals, the Program secured collaborations with prominent scientists in Greece and abroad and still remains amongst the few programs in Greece that allows the conductance of MSc thesis research in collaborating labs abroad. Our Program was the first and only Graduate Program in Greece that put emphasis on human diseases at the molecular/cellular level, with final aim to translate basic research as a tool to solve clinical problems. It was the first graduate program that used English as its official language.

**4.  
PROGRAM  
DEGREE -  
SUCCESS  
RATE**

The Program awards Master's degree in "Molecular Basis of Human Disease". From its start (2003-2004) to 2023-2024, 189 out of 191 enrolled students acquired a Master's degree (98%).

**5.  
PROGRAM  
INNOVATIONS**

- The Program combines clinical expertise with basic science in order to investigate the molecular basis of the pathogenesis of human diseases.
- The Program prepares its students for a successful career in Academia, Research or Pharma Industry in Greece and abroad and to compete for national or international funding.
- The students of the Program have the opportunity to select among 50 top research laboratories of Greece and abroad with significant contributions in research.
- The Program allows its graduate students to do high quality original research in selected laboratories abroad.
- The Program is evaluated by an External Evaluation Committee.

## 6. SKILLS

### **The graduate students of the Program are expected to acquire skills in:**

- Understanding the basic concepts of molecular medicine
- Understanding the basic principles of basic and clinical research methodologies and of biostatistics
- Reviewing the literature and writing review articles on specific subjects
- Applying biomedical data bases
- Laboratory safety and good laboratory practice
- Presenting original and review articles to an audience
- Following lectures and taking exams in the English language
- Writing a research proposal
- Conducting original research

## 7. INFRA- STRUCTURE

### **The infrastructure that is used by the Program is the following:**

- The auditoriums, the conferences rooms and the laboratories of the University of Crete Medical School
- The laboratories of collaborating investigators
- The facilities of the Institute of Molecular Biology and Biotechnology of Crete (IMBB-FoRTH)
- The facilities and the clinics of the University Hospital of Heraklion (total capacity: 700 beds)

## 8. DURATION OF STUDIES

The students are expected to complete all the requirements for the Master's degree within a period of 4 semesters (24 months). An extension of a maximum of two additional semesters can be granted based on a justified request by the student and the approval of the Coordinating Committee of the Program. All students that will be selected are anticipated to study on a full time basis.

## 9. PROGRAM EVALUATION

### **The Program is evaluated on a regular basis.**

**A. The graduate courses and their instructors are evaluated annually by the graduate students.** The Coordinating Committee meets with course coordinators in the beginning of each academic year to review the evaluation material and make adjustments and improvements.

**B. Internal evaluation:** the Program has been evaluated by the "University of Crete Internal Quality Assurance System (IQAS) (2024)

**C. External evaluation:** the Program is evaluated every five years by an External Evaluation Committee. The last evaluation was done in October 2024.

**10.**  
**SCHOLARSHIPS**  
**– FEES**

We grant scholarships to the top 3 ranked students recruited every year. Low level fees are invested yearly for:

1. Covering expenses of members of the Program traveling from USA or Europe.
2. Supporting scholarships for the best of the students.
3. Supporting research of the students during their rotation/thesis in the local laboratories.

**11.**  
**EVOLUTION**  
**– NEW FACULTY**  
**MEMBERS**

Biomedical research field is evolving and the Steering Committee continuously evaluates the needs of the Program in order to pursue its aims. Therefore, novel faculty members and research labs have been incorporated during the last years.

**12.**  
**EXTROVERSION**  
**– ACTIONS**  
**TAKEN**

From the early years, extroversion was in the core of the organization of the Program. Members from international Institutions was an asset, strengthening the curriculum with their unique quality and giving the opportunity to the students to work in laboratories in USA and Europe. This is now in accordance with the efforts of the Greek Ministry of Education which supports the “internationalization” of the graduate studies. Moreover, the last External Evaluation Committee recommended actions to “increase Program connections internationally”.

During the last 3 years and in order to further improve the extroverting character of the Program, we have supported and took part in the initiatives and advertising actions taken by the “Welcome Office of the University of Crete” in collaboration with “Study in Greece (SiG)” initiative of the Greek Ministry of Education. Furthermore, increasing the “visibility” and advertising the strong aspects of our Program, it will be necessary to recruit more and higher quality students from abroad.

We have intensively discussed with the most experienced and early supporters of the Program (Professors Zannis, Logothetis, Czech, Drosatos, Fisher) about actions to improve the international character and extroversion of the Program. This was also communicated to the UoC administration (office of Vice Rector). This initiative succeeded in signing a “Memorandum of Understanding” between Northeastern University (Boston) and the University of Crete. We are continuously discussing how we will successfully establish collaborations of the Program with Institutions abroad, expanding our established collaborations with several academic Institutions (faculty members and students exchange).

Our aims are to:

1. Officially establish bilateral agreements between MBHD and certain graduate programs.
2. Secure that mobility of the students and Faculty will be bilateral.

### 13. CURRICULUM

All lectures and exams are given in English by the Faculty of the University of Crete and collaborators from Europe or the United States. The students are writing their Master's theses in English.

The current curriculum of the Program is as follows:

MODULE	TITLE	ECTS
<b>1<sup>ST</sup> SEMESTER</b>		
<b>MBNA-101</b>	Metabolic and Cardiovascular Diseases	<b>9</b>
<b>MBNA-102</b>	Autoimmune / Inflammatory and Infectious Diseases	<b>6</b>
<b>MBNA-103</b>	Biostatistics, Clinical Methodology and Epidemiology	<b>6</b>
<b>MBNA-104</b>	Neoplastic Diseases	<b>4</b>
<b>MBNA-105</b>	Writing and Presentation of Original Papers and Research Proposals. Ethics and Laboratory Safety	<b>2</b>
<b>MBNA-106</b>	Neuropsychiatric Diseases	<b>3</b>
		<b>SUB-TOTAL 30</b>
<b>2<sup>ND</sup> SEMESTER</b>		
<b>MBNA-201</b>	Regenerative Medicine and Stem Cells	<b>3</b>
<b>MBNA-202</b>	Introduction to the Basic Research Methodology	<b>5</b>
<b>MBNA-203</b>	Graduate Laboratory Training	<b>2</b>
<b>MBNA-204</b>	1st Laboratory Rotation	<b>10</b>
<b>MBNA-205</b>	2nd Laboratory Rotation	<b>10</b>
		<b>SUB-TOTAL 30</b>
<b>3<sup>RD</sup> SEMESTER</b>		
<b>MBNA-301</b>	Original research	<b>30</b>
<b>4<sup>TH</sup> SEMESTER</b>		
<b>MBNA-302</b>	Original Research and Master Thesis Writing	<b>30</b>
		<b>TOTAL 120</b>

All requirements for the Master's degree can be considered fulfilled when the student:

- Completed all **4 semesters**
- Passed the exams and performed well in the two laboratory rotations (**average grade >7**)
- Completed a research project and wrote the Master's thesis (**grade >7**)
- Obtained a **minimum of 120 ECTS hours**.

The final grade of the Master's degree is calculated based on the following formula:

**Average grade in courses (40%)**  
**+ Average grade in the two rotations (20%)**  
**+ Master's thesis (40%)**

## 14. MODULE COORDINATORS

Each module is supervised by a module coordinator who is directly responsible for organizing the module, inviting external speakers and making sure that the module is running smoothly. Coordinators are supported by deputy coordinators in certain modules.

**The Faculty in each module are all experts in their fields.**

MODULE	TITLE	COORDINATOR
<b>MBNA-101</b>	Metabolic and Cardiovascular Diseases	<b>Dimitris Kardassis, PhD</b>
<b>MBNA-102</b>	Autoimmune / Inflammatory and Infectious Diseases	<b>Panagiotis Verginis, PhD</b>
<b>MBNA-103</b>	Biostatistics, Clinical Methodology and Epidemiology	<b>George Bertias, MD PhD</b>
<b>MBNA-104</b>	Neoplastic Diseases	<b>Aristidis Eliopoulos, PhD</b>
<b>MBNA-105</b>	Writing and Presentation of Original Papers and Research Proposals. Ethics and Laboratory Safety	<b>Christos Tsatsanis, PhD</b>
<b>MBNA-106</b>	Neuropsychiatric Diseases	<b>Ioannis Zaganas, MD PhD</b>
<b>MBNA-201</b>	Regenerative Medicine and Stem Cells	<b>Charalambos Pontikoglou, MD PhD</b>
<b>MBNA-202</b>	Introduction to the Basic Research Methodology	<b>Dimitris Anastakis, PhD</b>
<b>MBNA-203</b>	Graduate Laboratory Training	<b>Eirini Dermitzaki, PhD</b>

15.  
**MANAGEMENT  
COORDINATING  
COMMITTEE OF  
THE PROGRAM**



Director

**PRODROMOS SIDIROPOULOS, MD PhD**

Professor of Rheumatology

University of Crete Medical School



**PANAGIOTIS VERGINIS, PhD**

Professor of Biochemistry

University of Crete Medical School



**DIMITRIS KARDASSIS, PhD**

Professor of Biochemistry

University of Crete Medical School



**CHRISTOS TSATSANIS, PhD**

Professor of Clinical Chemistry

University of Crete Medical School



**GEORGIOS CHAMILOS, MD PhD**

Professor of Parasitology, Clinical Microbiology  
and Microbial Pathogenesis

University of Crete Medical School

## 16. PROGRAM MEMBERS

The Program consists of both core members (Faculty from the University of Crete Medical School) and external collaborators (Faculty from collaborating Institutions in Greece and abroad).

EXPERTISE	MEMBER	SCHOOL / DEPARTMENT
<b>Immunology</b>	Alissafi Themis	National & Kapodistrian University of Athens, Medical School
<b>Thoracic Medicine</b>	Antoniou Katerina	UoC Medical School/Internal Medicine
<b>Genetics</b>	Apidianakis George	Department of Biological Sciences, University of Cyprus
<b>Experimental Oncology</b>	Baritaki Stavroula	UoC Medical School
<b>Hematology</b>	Batsali Aristeia	UoC Medical School / Lab Medicine
<b>Biostatistics</b>	Bertsias Antonis	UoC Medical School / Lab Medicine
<b>Rheumatology</b>	Bertsias George	UoC Medical School / Internal Medicine
<b>Rheumatology</b>	Boumpas T. Dimitrios	National & Kapodistrian University of Athens, Medical School
<b>Infections and Immunity</b>	Chamilos George	UoC Medical School / Lab. Medicine
<b>Neuropharmacology</b>	Charalampopoulos Ioannis	UoC Medical School / Basic Sciences
<b>Material Science</b>	Chatzinikolaïdou Maria	UoC Department of Materials Science and Technology
<b>Immunology</b>	Chatzioannou Katerina	Biomedical Research Foundation of the Academy of Athens
<b>Molecular Medicine</b>	Corvera Silvia	UMass Chan Medical School. Boston, USA
<b>Diabetes</b>	Czech Michael	University of Massachusetts in Worcester
<b>Clinical Chemistry</b>	Dermitzaki Eirini	UoC Medical School/Lab Medicine
<b>Cardiovascular Diseases</b>	Drosatos Konstantinos	Temple University
<b>Histopathology</b>	Drakos Elias	UoC Medical School / Morphology
<b>Cancer</b>	Eliopoulos Aristidis	National & Kapodistrian University of Athens, Medical School
<b>Metabolic - Cardiovascular Diseases</b>	Filippatos Theodosios	UoC Medical School
<b>Atherosclerosis</b>	Fisher Edward	New York University
<b>Aging</b>	Garinis George	UoC Department of Biology
<b>Psychiatry</b>	Georgakopoulos Anastasios	Department of Psychiatry, Mount Sinai School of Medicine, New York NY, USA
<b>Biology</b>	Gizeli Ilektra	UoC Department of Biology

<b>Human Genetics</b>	Goulielmos George	UoC Medical School / Internal Medicine
<b>Neurology / Pediatrics</b>	Grafakou Olga	Venizelio General Hospital of Heraklion-Crete
<b>Neuropharmacology</b>	Gravanis Achilleas	UoC Medical School/ Basic Sciences
<b>Bioinformatics</b>	Iliopoulos Ioannis	UoC Medical School/Basic Sciences
<b>Developmental Neurobiology</b>	Karagogeos Domna	UoC Medical School / Basic Sciences
<b>Gene regulation / Metabolic diseases</b>	Kardassis Dimitris	UoC Medical School / Basic Sciences
<b>Nephrology / Autoimmune Diseases</b>	Kostopoulou Myrto	National & Kapodistrian University of Athens, Medical School
<b>Neurology</b>	Koutsis Georgios	National and Kapodistrian University of Athens, Medical School
<b>Gene regulation / Stem cells</b>	Kretsovali Androniki	Institute of Molecular Biology and Biotechnology-FORTH
<b>Informatics</b>	Latsoudi Lena	Foundation for Research and Technology Hellas
<b>Chanelopathies</b>	Logothetis Diomedes	Northeastern University
<b>Computational Biomedicine</b>	Manikis George	ICS, Foundation for Research and Technology (FoRTH)
<b>Cardiology</b>	Marketou Maria	UoC Medical School
<b>Immunology</b>	Mastellos Dimitris	National Centre for Scientific Research "Demokritos"
<b>Neurology</b>	Mastorodimos Vasilis	University Hospital of Heraklion-Crete
<b>Neurology / Neurogenetics</b>	Mathioudakis Lambros	UoC Medical School / Lab Medicine
<b>Cancer</b>	Mavrothalassitis George	UoC Medical School/Basic Sciences
<b>Hematology</b>	Papadaki A. Helen	UoC Medical School / Internal Medicine
<b>Cancer</b>	Papagianakopoulos Thalís	New York University
<b>Cancer</b>	Papakonstanti Evaggelia	UoC Medical School / Basic Sciences
<b>Molecular Biology</b>	Papamatheakis Joseph	UoC Department of Biology
<b>Nephrology</b>	Petrakis Ioannis	UoC Medical School / Internal Medicine
<b>Neuroscience/ Bioinformatics</b>	Poirazi Panayiota	IMBB-FoRTH, Foundation for Research and Technology FoRTH, Heraklion-Crete
<b>Hematology</b>	Pontikoglou Charalampos	UoC Medical School/Internal Medicine
<b>Hematopathology</b>	Rasidakis George	Karolinska Institute, Stockholm, Sweden

EXPERTISE	MEMBER	SCHOOL / DEPARTMENT
<b>Public Health</b>	Roumeliotaki Theano	UoC Medical School/Social Medicine
<b>Regenerative Medicine - Stem Cells</b>	Roubelaki Maria	National & Kapodistrian University of Athens, Medical School
<b>Pharmacogenomics</b>	Sanoudou Despina	University of Athens Medical School and Biomedical Research Foundation of the Academy of Athens
<b>Immunology</b>	Sevdali Eirini	UoC Medical School/Lab Medicine
<b>Rheumatology</b>	Sidiropoulos Prodromos	UoC Medical School / Internal Medicine
<b>Neurology</b>	Smirnakis Stelios	Harvard Medical School, Boston MA, USA
<b>Public Health</b>	Sotiropoulos Ioannis	School of Health and Life Sciences, University of Minho, Portugal
<b>Neurology</b>	Spanaki Klio	UoC Medical School / Neurology And Sensory Organs
<b>Gene regulation / Epigenetics</b>	Spilianakis Charalampos	UoC Department of Biology
<b>Gene regulation / Epigenetics</b>	Talianidis Iannis	Institute of Molecular Biology and Biotechnology-FORTH
<b>Neurodegeneration / Aging</b>	Tavernarakis Nektarios	UoC Medical School / Basic Sciences
<b>Genetics</b>	Tsagaratou Aggeliki	Department of Genetics, University of North Carolina at Chapel Hill, NC, USA
<b>Immunology</b>	Tsatsanis Christos	UoC Medical School / Lab. Medicine
<b>Intensive Care</b>	Vaporidi Katerina	UoC Medical School / Surgery
<b>Hematology</b>	Vasilopoulos George	University of Thessaly Medical School
<b>Clinical Chemistry</b>	Venychaki Maria	UoC Medical School / Lab. Medicine
<b>Immunology</b>	Verginis Panagiotis	UoC Medical School / Basic Sciences & Biomedical Research Foundation of the Academy of Athens
<b>Cellular - Molecular Biology</b>	Vidaki Marina	UoC Medical School / Basic Sciences
<b>Neurology</b>	Vingopoulos Filippos	Massachusetts Eye and Ear, Harvard Medical School, Boston, USA
<b>Neurology / Pediatrics</b>	Vorgia Pelagia	Venizelio General Hospital of Heraklion-Crete
<b>Endocrinology</b>	Xekouki Paraskevi	UoC Medical School/Lab Medicine
<b>Neurology</b>	Zaganas Ioannis	UoC Medical School/ Neurology And Sensory Organs
<b>Lipoproteins / Alzheimer's Disease</b>	Zannis I. Vassilis	UoC Medical School / Basic Sciences
<b>Human Molecular Genetics</b>	Zervou Maria	UoC Medical School/Lab Medicine

# NEW PROGRAM MEMBERS



## LAST 5 YEARS

### **Anastasakis Dimitris**

Ass. Prof. of Chemistry, University of Crete Medical School

### **Apidianakis George**

Assoc. Prof. of Genetics, Department of Biological Sciences, University of Cyprus, Nicosia, Cyprus

### **Banos Aggelos**

Ass. Prof. of Rheumatology, National and Kapodistrian University of Athens, Medical School

### **Baritaki Stavroula**

Assoc. Prof. of Experimental Oncology, University of Crete Medical School

### **Bazopoulou Daphne**

Ass. Prof., Biology Department, University of Crete

### **Gizeli Ilektra**

Prof. of Biology, Biology Department, University of Crete

### **Keklikoglou Ioanna**

Ass. Prof., Biology Department, University of Crete

### **Klontzas Michail**

Ass. Prof. of Radiology, University of Crete Medical School

### **Rasidakis George**

Hematopathologist, Senior Consultant, Karolinska Institute & University Hospital, Stockholm, Sweden

### **Vasarmidi Eirini**

Ass. Prof. of Pulmonology, University of Crete Medical School

### **Vidaki Marina**

Ass. Prof. of Cellular-Molecular Biology, University of Crete Medical School

## INSTRUCTORS FROM ABROAD

### **Dr Edward Fisher**

New York University Medical School, NY, USA

### **Dr Diomedes Logothetis**

Northeastern University, Boston, USA

### **Dr Michael Czech**

UMass Chan Medical School, Boston, USA

### **Dr Konstantinos Drosatos**

University of Cincinnati College of Medicine, Cincinnati, USA

### **Dr Silvia Corvera**

UMass Chan Medical School, Boston, USA

### **Dr Thalys Papagiannakopoulos**

New York University Medical School, NY, USA

### **Dr. George Saridakis**

Karolinska Institute, Stockholm, SWEDEN

### **Dr George Apidianakis**

University of Cyprus, Nicosia, CYPRUS

### **Dr Stelios Smirnakis**

Harvard Medical School, Boston, USA

### **Dr Anastasios Georgakopoulos**

Mount Sinai School of Medicine, NY, USA

### **Dr Filippos Vingopoulos**

Imperial College, London, UK

### **Dr Aggeliki Tsagaratou**

University of North Carolina at Chapel, NC, USA

### **Dr Ioannis Sotiropoulos**

University of Minho, Praga, PORTUGAL

17.

GRADUATE  
STUDENTS

ACADEMIC YEAR 2018 - 2019	NAME	STATUS
	<b>Isidoros AXIOTIS</b> Biology Department, University of Crete	PhD Student, Lab of Biochemistry, University of Crete Medical School
	<b>Andria VRYONI</b> Biology Department, University of Crete	Secondary Biology Teacher at TLC International Private School and Institute, Pafos, Cyprus
	<b>Martha GIKOLAI</b> Biology Department, University of Crete	
	<b>Konstantina DIMOULA</b> Biology Department, University of Crete	PhD Student, Department of Chemistry, National & Kapodistrian University of Athens
	<b>Ioanna LAPI</b> Biology Department, University of Crete	PhD Student, University of Crete Medical School
	<b>Xenofon MALLIOS</b> Biology Department, University of Crete	UniPharma Company, Athens
	<b>Erasmia-Ioanna MARAVGAKI</b> Biology Department, University of Crete	----
	<b>Stavroula BAIMPA</b> Biology Department, National & Kapodistrian University of Athens	PhD Student, University of Crete Medical School
	<b>Elpida NEOFOTISTOU-THEMELI</b> Biology Department, University of Crete	PhD Student, University of Crete Medical School
	<b>Vasilios NIDRIS</b> Biology Department, University of Crete	PhD Student, University of Crete Medical School
	<b>Iosif PAPAFRAGOS</b> Biology Department, University of Crete	PhD Student, University of Crete Medical School
	<b>Alexandros TSIMPOLIS</b> Biology Department, University of Crete	PhD Student, University of Crete Medical School
ACADEMIC YEAR 2019 - 2020		
	<b>Eleftheria KARAMOUSTOU</b> Biology Department, Aristotle University of Thessaloniki	Clinical Research Associate. Coronis Research Com
	<b>Marina-Ellada GOUNTZINOPOULOU</b> Biology Department, University of Crete	PhD Student, University of Crete Medical School
	<b>Evgenia EMMANOULIDOU</b> University of Crete Medical School	Resident, Clinic of Rheumatology-Clinical Immunology PhD Student, University of Crete Medical School
	<b>Aikaterini FYKA</b> Biology Department, Aristotle University of Thessaloniki	PhD Student, Medical School, National & Kapodistrian University of Athens

**NAME STATUS**

<b>Irini GONIANAKI</b> Biology Department, University of Crete	Scientific Associate, Intelligencia AI
<b>Maria LASKOU</b> Biology Department, University of Crete	PhD Student, University of Crete Medical School & NYU Langone Health Grossman School of Medicine
<b>Efsevia XENIKAKI</b> Biology Department, University of Crete	Intelligencia Company
<b>Ariadni PAPADAKI</b> Biology Department, University of Crete	----
<b>Nikoleta ARESTI</b> Biology Department, University of Crete	----
<b>Michail ORFANAKIS</b> Biology Department, University of Crete	PhD Student, University of Lausanne (UNIL)
<b>Frosyni MARKAKI</b> Biology Department, University of Crete	PhD Student, University of Crete Medical School

**ACADEMIC YEAR 2020 - 2021**

<b>Olga LYRAKI</b> Biology Department, University of Crete	Phd Student, Max Planck for the Science of Light
<b>Anastasia-Iris KARKEMPETZAKI</b> Biology Department, National & Kapodistrian University of Athens	PhD Student, University of Crete Medical School & Boston University
<b>Ioanna-Maria VINICHAKI</b> Biology Department, University of Crete	PhD Student, University of Crete Medical School & Northeastern University, Boston
<b>Panagiotis SIDIROPOULOS</b> Biology Department, Aristotle University of Thessaloniki	PhD Student, Dresden, Germany
<b>Dimitra-Maria ZEVLAKI</b> Agricultural University of Athens, University of Athens	----
<b>Agapi-Styliani DREDAKI</b> Biology Department, University of Crete	----
<b>Alexandros GEORGILIS</b> Biology Department, University of Crete	----

**ACADEMIC YEAR 2021 - 2022**

<b>Melpomeni TOITOU</b> Medical School, Aristotle University of Thessaloniki	Resident in Rheumatology, Zurich
<b>Theodoros CHANIS</b> Biology Department, Aristotle University of Thessaloniki	PhD Student, Mannheim Institute for Innate Immunoscience (MI3), Heidelberg University, Medical Faculty Mannheim
<b>Emmanouil THEODORAKIS</b> Biology Department, University of Crete	PhD Student, Biology Department, University of Crete
<b>Sofia PERDIKARI</b> Biology Department, University of Crete	PhD Student, Santiago de Compostela, Spain

**NAME STATUS**

**Evaggelia KANDYLAKI**  
Department of Molecular Biology and  
Genetics, Democritus University  
of Thrace

Biological Technical Assistant,  
Institute for Immunotherapy,  
Regensburg, Germany

**Despoina XANTHOPOULOU**  
Biology Department,  
Aristotle University of Thessaloniki

PhD Student,  
Technical University of Dresden, Germany

**Minas-Christovalantis DRAKOS**  
Biology Department, University of Crete

Master Awarded  
Pre-graduate Student in Medicine,  
University of Crete Medical School

**Konstantina PAMBOUKA**  
Biology Department, University of Crete

Research Engineer, University Paris-Saclay,  
Immuno-Rheumatology Department,  
Bicetre Hospital

**Asimina KAKALE**  
Biology Department,  
Aristotle University of Thessaloniki

PhD Student,  
Rheumatology Department, University Hospital  
Zurich

**Maria PETEINARELI**  
Biology Department, University of Crete

PhD Student,  
Medical University of Innsbruck, Austria

**ACADEMIC YEAR 2022 - 2023**

**Konstantinos FORTOUNAS**  
University of Crete Medical School

Master Awarded

**Aggelika ANTONIOU**  
Biology Department, University of Crete

Master Awarded

**Eleni LAZARIDOU**  
Department of Molecular Biology &  
Genetics, Democritus University of Thrace

Master Awarded

**Erjola RAPUSHI**  
Biology Department, University of Crete

Master Awarded

**ACADEMIC YEAR 2023 - 2024**

**Etini OTUMO**  
Medical School, Nigeria

Master Awarded

**Ioanna VOULGARI**  
Biology Department, University of Crete

Pre-graduate Student in Medicine,  
University of Crete Medical School

**Eleni KOUTSOPOULOU**  
Biochemistry & Biotechnology,  
University of Thessaly

Master Awarded

**Theoni-Maria MICHALOPOULOU**  
Biology Department, University of Crete

Master Awarded

**Kyriakos NIKOLAOU**  
University of Crete Medical School

Master Awarded

NAME	STATUS
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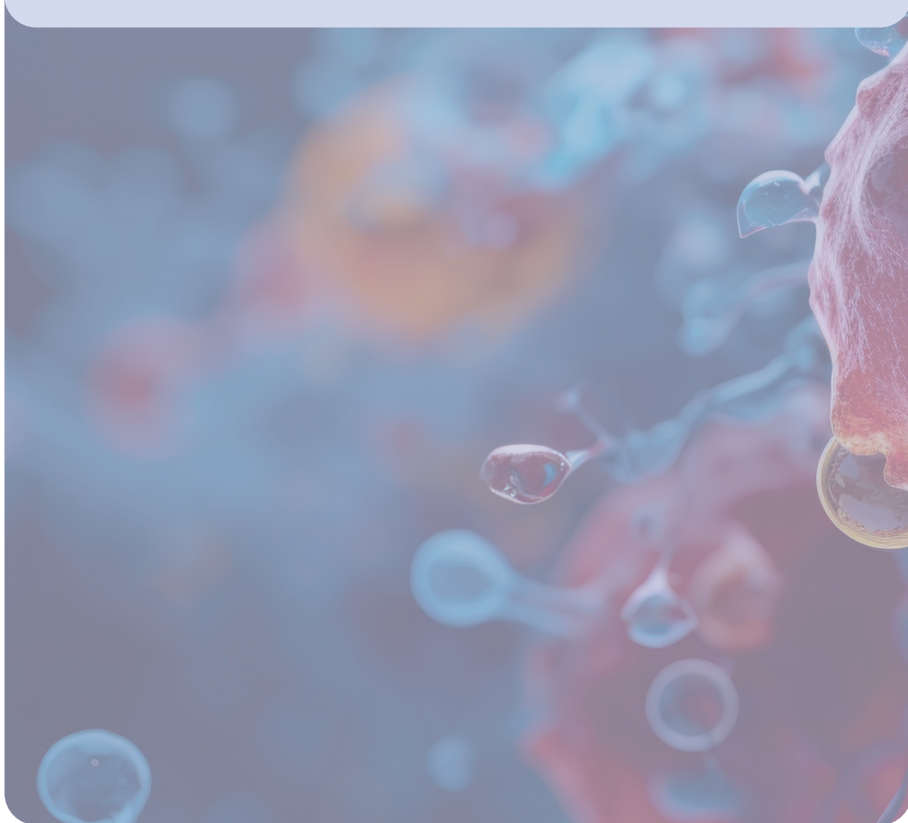
<b>Anna PIPERAKI</b> Biology Department, University of Crete	Master Awarded
<b>Evaggelia SKOURADAKI</b> Biology Department, University of Crete	Master Awarded
<b>Evdokia STATHI</b> Chemistry Department University of Crete	Master Awarded
<b>Ioanna STAVRAKAKI</b> Department of Molecular Biology & Genetics, Democritus University of Thrace	Master Awarded
<b>Arianna TSIMAROUSTI</b> Biology Department, University of Crete	Master Thesis in Progress
<b>Eleni PSAROUDAKI</b> Biology Department, University of Crete	Master Awarded

#### ACADEMIC YEAR 2024-2025

<b>Mickail HASAN</b> Kwame Nkrumah University of Science & Technology, Ghana, Medicine	2nd Year Student
<b>Yerb Kenneth MWINCHOGTAA</b> Jiujiang University, China, Medicine National & Kapodistrian University of Athens, Nanomedicine	2nd Year Student
<b>Vasilios VAGIATIS</b> Biology Department, University of Crete	2nd Year Student
<b>Grigorios ZAKKAS</b> Biology Department, University of Crete	2nd Year Student
<b>Dimitrios KOUPAS</b> University of Crete Medical School	2nd Year Student
<b>Depoina KRITIKAKI</b> Biology Department, University of Crete	2nd Year Student
<b>Athanasios BATSILAS</b> Biology Department, National & Kapodistrian University of Athens	2nd Year Student
<b>Efstathia-Lefkothea PAPADIAMANTI</b> Biology Department, University of Crete	2nd Year Student
<b>Maria PLAKOGIANNAKI</b> Department of Biochemistry & Biotechnology, University of Thessaly	2nd Year Student
<b>Styliani CHAOUASLI</b> Department of Biological Sciences, European University of Cyprus	2nd Year Student
<b>Georgios CHATZAKIS</b> Biology Department, University of Crete	2nd Year Student

ACADEMIC YEAR 2025 - 2026

<b>Alkiviadis SYMNIOTIS</b> Biology Department, University of Crete	1st Year Student
<b>Charalampos KARANTONIS</b> Biology Department, University of Crete	1st Year Student
<b>Georgia MALEZA</b> Department of Applied Biology & Biotechnology, Agricultural University of Athens	1st Year Student
<b>Stavria THOMA</b> Department of Molecular Biology & Biotechnology, University of Crete	1st Year Student
<b>Athina KOSTELIDOU</b> Biology Department, University of Crete	1st Year Student
<b>Giorgos BELITSOS</b> Biology Department, University of Crete	1st Year Student



# THE PROGRAM IN NUMBERS 2025

## FACULTY MEMBERS

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MEMBERS FROM THE UoC

40

MEMBERS FROM OTHER INSTITUTIONS

35

## STUDENTS

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TOTAL NUMBER  
of enrolled students

203

TOTAL NUMBER  
of MSc awarded

189

## BACKGROUND OF THE STUDENTS

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STUDENTS WITH MD DEGREES

26%

51

STUDENTS WITH BSc DEGREES

74%

154

# INDICATIVE CAREER ALUMNI

**Georgios Bertsias**

Prof. of Rheumatology-Clinical Immunology,  
University of Crete

**Ioanna Mosialou**

Ass. Prof., Columbia University Medical Center, NY, USA

**Magda Nakou**

Pfizer, Senior Medical Director,  
International Developed Markets, Dermatology

**Aggelos Oikonomopoulos**

Bristol-Meyers Squibb, CA, USA

**Panagiotis Fotakis**

Dren Bio Inc., San Francisco, USA

**Ioanna Tiniakou**

Postdoctoral Fellow, NYU Medical School, NY, USA

**Andreas Patsalos**

Postdoctoral Research Fellow, The Johns Hopkins University,  
School of Medicine, Baltimore, USA

**Andreas Kateifidis**

Sr. Business Operations Analyst, Process Management  
& Business Analytics at Vertex Pharmaceuticals

**George Voloudakis**

Ass. Prof. of Psychiatry, Mount Sinai Hospital, NY, USA

**Nikolaos Papadantonakis**

Ass. Prof. of Hematology-Medical Oncology,  
Emory Winship Cancer Institute, Atlanta, GA, USA

**Charilaos (Harry) Filippakis**

Ass. Prof., University of New England, Maine, USA

**Dimitris Kanellis**

Project Manager, Karolinska Institute, Stockholm, SWEDEN

**Marilena Mela**

Director of the Clinical Diagnostic Laboratory,  
New York Genome Center, NY, USA

**Eleni Vergadi**

Ass. Prof. of Paediatrics, University of Crete Medical School

**Eirini Vasarmidi**

Ass. Prof. of Pulmonology, University of Crete Medical School

**Ilias Kalafatakis**

AbbVie Pharmaceuticals S.A.

**Antonios Fanouriakis**

Ass. Prof. of Rheumatology, National & Kapodistrian  
University of Athens, Medical School

**Petros Ioannou**

Ass. Prof. of Internal Medicine,  
University of Crete Medical School

## EXTERNAL EVALUATION

Aiming at the continuous improvement of the Program, an External Evaluation is done every 5 years. The Committee discusses with the students, assesses in detail the Program structure, limitations, strengths and proposes actions to further improve its quality.

## MEMBERS OF THE LAST EXTERNAL EVALUATION COMMITTEE (OCTOBER 2024)

**PROF. MICHAEL CZECH**

UMass Chan Medical School, Boston, USA

**PROF. SILVIA CORVERA**

UMass Chan Medical School, Boston, USA

**PROF. LARS RÖNNBLOM**

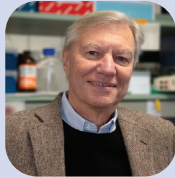
Department of Medical Sciences, Uppsala, Sweden

**PROF. CONSTANTINE STRATAKIS**

National and Kapodistrian University of Athens  
Medical School, Athens Greece

**PROF. IANNIS TALIANIDIS**

Research Director, former IMBB Director



**MICHAEL CZECH**  
PhD

**Isadore and Fannie Foxman Chair in Medical Science  
Professor of Molecular Medicine  
UMass Chan Medical School, Boston, USA**



**SILVIA CORVERA**  
M.D. PhD

**Professor of Molecular Medicine  
UMass Chan Medical School, Boston, USA**



**LARS RÖNNBLOM**  
M.D. PhD

**Professor of Rheumatology  
Department of Medical Sciences, Uppsala, Sweden**



**CONSTANTINE A. STRATAKIS**  
M.D. PhD

**Professor of Pediatrics  
National and Kapodistrian University of Athens  
Medical School, Athens Greece  
Senior Associate, NICHD, NIH, Bethesda, MD, USA**



**IANNIS TALIANIDIS**  
PhD

**Research Director, former IMBB Director**

## 18.

### PUBLICATIONS WITH PARTICIPATION OF STUDENTS OF OUR GRADUATE PROGRAM

(ACADEMIC  
YEARS  
2018-2019 →  
2023-2024)

- Theodorou V, Stefanaki A, **Drakos M**, Triantafyllou D, Delidakis C. ASC proneural factors are necessary for chromatin remodeling during neuroectodermal to neuroblast fate transition to ensure the timely initiation of the neural stem cell program. *BMC Biol.* 2022 May 13;20(1):107.
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- **Emmanouilidou E**, Kosmara D, Papadaki E, Mastorodemos V, Constantoulakis P, Repa A, Christopoulou G, Kalpadakis C, Avgoustidis N, Thomas K, Boumpas D, Sidiropoulos P, Bertsiaris G. Progressive Multifocal Leukoencephalopathy in Systemic Lupus Erythematosus: A Consequence of Patient- Intrinsic or -Extrinsic Factors? *J. Clin. Med.* 2023, 12(21), 6945
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- Georgoulis I, Feidantsis K, Giantsis IA, **Kakale A**, Bock C, Pörtner HO, Sokolova IM, Michaelidis B. (2021) Heat hardening enhances mitochondrial potential for respiration and oxidative defence capacity in the mantle of thermally stressed *Mytilus galloprovincialis*. *Sci Rep.* 11(1):17098.
- A Vittorio, **Al Karkempetzaki**, Leon Catherine, Krishnan Anandi, Huang Nasi, Di Buduo Christian A, Cattaneo Daniele, Ward Christina Marie Torres, Matsuura Shinobu, Guinard Ines, Weber Josiane, De Acutis Aurora, Vozzi Giovanni, Iurlo Alessandra, Ravid Katya, Balduini Alessandra Newly Identified Roles for PIEZO1 Mechanosensor in Controlling Normal Megakaryocyte Development and in Primary Myelofibrosis, *American Journal of Hematology*, 02 January 2024, DOI: 10.1002/ajh.27184 (co-first author)
- **Al Karkempetzaki**, Ravid Katya Piezo1 and its function in different blood cell lineages, *Cells MDPI*, review article, 2024 Mar 9;13(6):482, doi: 10.3390/cells13060482
- Aikaterini Karagianni, **Karkempetzaki Anastasia Iris**, Daniel J Brooks, Shinobu Matsuura, Vrinda Dambal, Philip C Trackman, Katya Ravid Depletion of mouse Lysyl Oxidase in megakaryocytes affects bone properties in a sex-dependent manner, *Blood*, 2024 Apr 18: blood.2024024620, doi: 10.1182/blood.2024024620

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- MG. Daskalaki, K. Axarlis, T. Aspevik, M. Orfanakis, O. Kolliniati, **I. Lapi**, M. Tzardi, E. Dermitzaki, M. Venihaki, K. Kousoulaki and C. Tsatsanis "Fish Sidestream-Derived Protein Hydrolysates Suppress DSS-Induced Colitis by Modulating Intestinal Inflammation in Mice." *Marine drugs* vol. 19,6 312. 28 May. 2021, doi:10.3390/md19060312, PMID: 34071180
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- **Papafragkos I**; Markaki, E.; Kalpadakis, C.; and Verginis, P. (2021) Decoding the Myeloid- Derived Suppressor Cells in Lymphoid Malignancies. *J. Clin. Med.* 10, 3462.
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*Int J Mol Sci.* 2023 Jul; 24(14): 11683.
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- New Perspectives on Myeloid-Derived Suppressor Cells and Their Emerging Role in Haematology. Nikoleta Bizymi, Andreas M. Matthaïou, Angelos Matheakakis, **Ioanna Voulgari**, Nikoleta Aresti, Konstantina Zavitsanou, Anastasios Karasachinidis, Irene Mavroudi, Charalampos Pontikoglou and Helen A. Papadaki  
*J. Clin. Med.* 2022, 11(18), 5326; <https://doi.org/10.3390/jcm11185326>
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