

# HEALTH SCIENCES RESEARCH

*A six-week research program*



## COURSE DESCRIPTION

Perrotis College offers two health sciences- related research tracks, one focusing on human physiology and the other on vector-borne diseases and their management. This program applies to a wide range of majors and academic interests including:

Pre-med, pre-vet, biology, entomology, biochemistry, microbiology, nutrition and nursing.

First track: A wealth of evidence from studies around the world have confirmed the importance of diet on human health and how proper nutrition can prevent the development of diseases ranging from metabolic syndrome and cardiovascular pathology to mental illness and depression.

Within this context, the Mediterranean diet, as it has been practiced since ancient times in Greece, presents a promising strategy for the prevention of disease and overall well-being. Research has shown that certain

components of this diet contain biologically active molecules. Therefore, ongoing research aims to further understand the beneficial character of the Mediterranean diet and to explore the actions of its constituents.

Second track: The American Farm School is home to one of only two full-time USDA research facilities in Europe. Research conducted here involves epidemiology of vector borne diseases, vector ecology, and vector management technologies.

Vectors are living organisms that can transmit infectious diseases between humans or from animals to humans. Many of these vectors are bloodsucking insects, which ingest disease-producing microorganisms during a blood meal from an infected host (human or animal) and later inject it into a new host during their subsequent blood meal. Vector-borne diseases account for more than 17% of all infectious diseases, causing more than 700 000 deaths annually.

## RESEARCH TOPICS

First track short research topics include:

- Biophenols in the Mediterranean Diet
- Gut Microbiome and Human Health: Current Trends
- Anti-oxidant and anti-inflammatory activity of proper diet and disease prevention

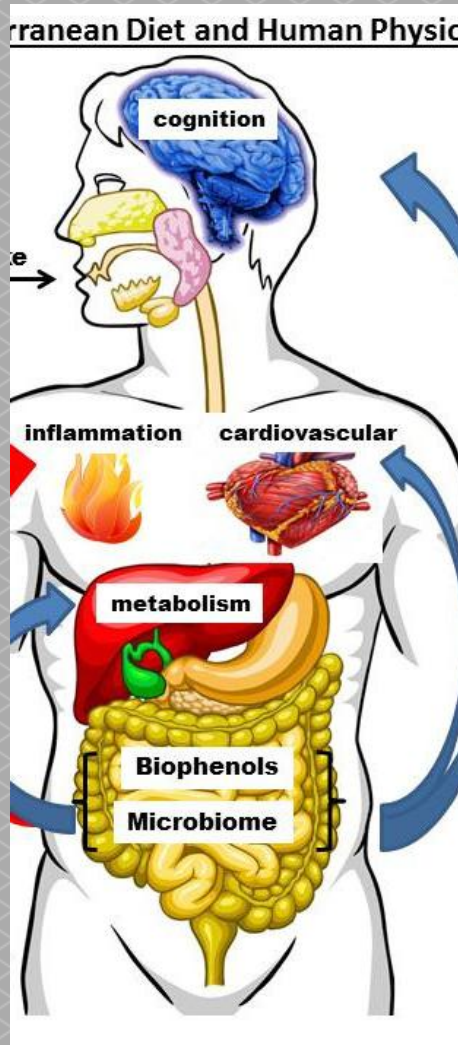
Second track short research topics include:

- Microscopy and morphological identification of insect vectors of pathogens
- Use of molecular techniques in identification of insect species
- Principles of molecular biology in the lab - DNA extraction methods, PCR and sequencing analysis
- Phylogenetic analyses of closely related species - evolutionary applications.

## WHERE WE ARE & WHERE WE GO

The City of Thessaloniki is over 2500 years old and is the second largest in Greece, with a vibrant student population. A mix of ancient, Byzantine, and modern worlds, it boasts a beautiful seaport, fantastic cuisine, break-taking vistas, and colorful nightlife.

Students in the Health Sciences Research Program may also participate in excursions and trips organized for study abroad. Trips include a one-day sailing trip around the turquoise waters of Halkidiki, a hiking trip to Mount Olympus, home of the Greek gods, an island cruise to beautiful Skiathos, Skopelos, and Alonissos, and city tours exploring the richness of Thessaloniki and its history.



PERROTIS COLLEGE, THESSALONIKI, GREECE

<http://www.perrotiscollege.edu.gr/study-abroad/>

Eleni Kantylzoglou [ekanty@afs.edu.gr](mailto:ekanty@afs.edu.gr)

Helen Yarenis [hyaren@afs.edu.gr](mailto:hyaren@afs.edu.gr)