BIOLOGY-BIOCHEMISTRY

POSTAL ADDRESS
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NAME OF THE HEAD OF THE LABORATORY Prof. Fotini Stylianopoulou

HEAD OF THE LABORATORY DETAILS

Fotini Stylianopoulou was born in Athens, Greece in 1948. She obtained her PhD in Neuro- and Biobehavioural Sciences from Stanford University, USA, in 1976, and has been a Professor of Biology in the University of Athens since 1985. Her research interests are in the area of cellular mechanisms underlying neuronal plasticity (using rodents as experimental animals), including sexual differentiation of the brain and the neurobiology of stress, particularly the effects of early experiences in programming adult behaviour.

HISTORY

The Biology-Biochemistry lab was founded in 1992 and Prof. Stylianopoulou has been its director since its foundation. 18 PhDs were conducted in it and more than 35 MSc students have been trained in molecular and cellular biology as well as behavioral techniques.

LABORATORY PERSONNEL

<table>
<thead>
<tr>
<th>Name</th>
<th>Degree</th>
<th>Tel.Nr/Fax</th>
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<tbody>
<tr>
<td>Teaching and Research Staff</td>
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<tr>
<td>FOTINI STYLIANOPOULOU</td>
<td>PROFESSOR</td>
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<td>ANTONIOS STAMATAKIS</td>
<td>ASSISTANT PROFESSOR</td>
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PhD Candidate Students

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<tr>
<th>Name</th>
<th>Degree</th>
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<tbody>
<tr>
<td>ANASTASSIA DIAMANTOPOULOU</td>
<td>PhD Student</td>
<td>00302107461452</td>
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<tr>
<td>ANDRONIKI RAFTOGIANNI</td>
<td>PhD Student</td>
<td>00302107461452</td>
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CURRICULUM

**Undergraduate Program (2010 - 2011)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Semester</th>
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<tbody>
<tr>
<td>Cell Biology</td>
<td>Winter</td>
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<td>Cell Biology laboratory exercises</td>
<td>Winter</td>
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<tr>
<td>Biology of Behaviour</td>
<td>Spring</td>
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<tr>
<td>Human Genetics</td>
<td>Spring</td>
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**Postgraduate Program 2009-2010**

<table>
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<th>Course</th>
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<tbody>
<tr>
<td>Psychoneuroendocrinology</td>
<td>Spring</td>
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<tr>
<td>Biology of Cancer</td>
<td>Spring</td>
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<tr>
<td>Methodology of Research</td>
<td>Spring</td>
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<tr>
<td>Neurobiology (interdisciplinary MSc MM)</td>
<td>Spring</td>
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<tr>
<td>Molecular Bases of Genetic Diseases (interdisciplinary MSc Clinical Biochemistry &amp; Molecular Diagnostics)</td>
<td>Spring Semester</td>
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<tr>
<td>Introduction to Neuroscience (interdisciplinary MSc Cognitive Neuroscience)</td>
<td>Winter Semester</td>
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<tr>
<td>Core course in Neuroscience (interdisciplinary MSc &quot;Brain and Mind&quot;)</td>
<td>Winter Semester</td>
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**RESEARCH ACTIVITY**

- Neurobiology of Behaviour
- Effects of early life experiences on brain development and function
- Neurobiology of stress responses
- Cellular and molecular mechanisms of learning and memory
- Sexual differentiation of the brain
- Use of growth factors and neural stem cells for the repair of nervous tissue damage following injury and neurodegeneration

**RESEARCH INFRASTRUCTURE**

- Animal behavior analysis system: Ethovision software on two PC workstations equipped with analogue and digital videocameras
- Image analysis system (Image ProPlus) connected to an optical microscope
- Fluorescent microscope
- Optical microscope
- Deep-freezers
- Centrifuges
- PCR-apparatus
- In-situ hybridization chamber
- Incubation chamber
- Western blot apparatus
- Nucleic acid Electrophoresis apparatus

**RESEARCH PROJECTS**

1. Effects of early experiences on the development of the brain and on its neurochemistry and function (including behavior) during adulthood.
2. Neurobiology of stress
3. Neurobiology of maternal behavior
4. Investigation of the neuroprotective potential of IGF-I and neural stem cell transplantation in animal models of neurodegenerative diseases

**PUBLICATIONS during the last 10 years**


Garoflos E., Stamatakis A., Mantelas A., Philippidis H. and Stylianopoulou F. “Cellular mechanisms underlying an effect of “early handling” on pCREB and BDNF in the neonatal rat hippocampus” Brain Res. 1052 (2), 187-95, 2005


Garoflos E, Stamatakis A, Rafrogianni A, Pondiki S, Stylianopoulou F. “Neonatal handling on the first postnatal day leads to increased maternal behavior and fos levels in the brain of the newborn rat.” Dev Psychobiol. 50(7):704-13, 2008.

Savvaki M., Panagiotaropoulos T., Stamatakis A., Sargiannidou I., Karatzioula P., Watanabe K., Stylianopoulou F., Karagogeos D., Kleopas K. “Impairment of learning and memory in

Panagiotaropoulos T., Diamantopoulou A., Stamatakis A., Dimitropoulou M., Stylianopoulou F. “Learning of a T-maze by rat pups when contact with the mother is either permitted or denied.” Neurobiology of Learning and Memory, 91(1):2-12, 2009.


Diamantopoulou A, Stamatakis A, Panagiotaropoulos T, Stylianopoulou F. “Reward or its denial during the neonatal period affects adult spatial memory and hippocampal phosphorylated cAMP response element-binding protein levels of both the neonatal and adult rat.” Neuroscience, 181:89-99, 2011.