



## Laboratory of Animal Histology and Confocal Microscopy

Research group: IDENTIFICATION AND CHARACTERIZATION of BIOLOGICAL ACTIVE MOLECULES

<http://www.bio.uaic.ro/cercetare/grupuri/bioactive/index.html>



**Manager: Assistant Professor Neagu Anca-Narcisa**

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Research and educational activities:  
**Histology, Histochemistry & Immunohistochemistry**

## Research activities

### Internal team work:

- **neurobiology** (Laboratory of Animal Physiology, coordinator Professor Lucian Hrițcu)
- **microbiology** (Laboratory of Microbiology, coordinator Professor Marius Ștefan)
- **electronic microscopy** (Laboratory of Electronic Microscopy of UAIC),
- **nanomaterials** (Faculty of Physics, Dr. Dana Pricop).

### External team work:

- **pain therapy** (CEMEX Research Institute of University of Medicine and Pharmacy of Iasi, Associated Professor Bogdan Ionel Tamba, Dr. Cătălina Bohotin)
- **microscopy BF, DIC, POL, FLUO, CS** (Regional Institute of Oncology Iași)
- **nanomaterials** (UMF Iași).

## Educational activities

- **Practical works for student in courses:** Animal Histology, Developmental Biology, Animal Ecomorphology, Bioindicators of environmental quality;
- **Research practical works** for students and highschool students
  - **licenses, master works and doctoral school thesis**
  - Preparation of permanent demonstrative microscopic slides

## Publications

1. Hrițcu, L., Stefan, M., Ursu, L., **Neagu, A.**, Mihășan, M., Tartau, L., Melnig, V., **2011**. Exposure to silver nanoparticles induces memory deficits in laboratory rats, *Central European Journal of Biology*, 6 (4): 497-509.
2. Stefan, M., Melnig, V., Pricop, D., **Neagu, A.**, Mihasan, M., Tartau, L., Hritcu, L., **2013**. Attenuated effects of chitosan-capped gold nanoparticles on LPS-induced toxicity in laboratory rats, *Materials Science and engineering*, 33 (1): 550-556. <http://dx.doi.org/10.1016/j.msec.2012.09.031>.
3. [Tamba, B. I.](#), [Dondas, A.](#), [Leon, M.](#), [Neagu, A. N.](#), [Dodi, G.](#), [Stefanescu, C.](#), [Tijani, A.](#), **2015**. Silica nanoparticles: Preparation, characterization and in vitro/in vivo biodistribution studies, *European Journal of Pharmaceutical Sciences*, 71: 46-55. [http://ac.els-cdn.com/S0928098715000524/1-s2.0-S0928098715000524-main.pdf?\\_tid=c14e4fac-82cb-11e5-92a0-00000aab0f01&acdnat=1446624913\\_503258aa9fc7f057b4c417008143bf09](http://ac.els-cdn.com/S0928098715000524/1-s2.0-S0928098715000524-main.pdf?_tid=c14e4fac-82cb-11e5-92a0-00000aab0f01&acdnat=1446624913_503258aa9fc7f057b4c417008143bf09).
4. Babii, C., Bahrin, L. G., **Neagu, A.-N.**, Gostin, I., Mihasan, M., Birsă, L. M., Stefan, M., 2016. Antibacterial activity and proposed action mechanism of a new class of synthetic tricyclic flavonoids, *Journal of Applied Microbiology*, doi: 10.1111/jam.13048.
5. Gostin, I. N., **Neagu, A.-N.**, Vulpe, V., 2010. [SEM investigations regarding skin micro-morphology and modifications induced by bacterial infections in \*Cyprinus carpio\* and \*Salmo trutta fario\*](#). *International Journal of Energy and Environment*, 5 (2): 274-281.

- Neagu, A.**, 2004. *Morphology and structure of the tracheal gills of two species of Stoneflies (Plecoptera)*, *Rev. Roum. Biol.-Biol. Anim.*, t. 49, N°. 1-2, Bucarest: 157-169.
- Neagu, A.**, 2008. *Comparative anatomy of the antennal sensilla of *Perla marginata*, *Dinocras cephalotes* and *Perlodes microcephalus* (Plecoptera) aquatic insect nymphs*, *An. Șt. Univ. „Al. I. Cuza” Iași*, t LIV: 129-134, CNCSIS B+. [http://www.bio.uaic.ro/publicatii/anale\\_zoologie/issue/2008/16-2008.pdf](http://www.bio.uaic.ro/publicatii/anale_zoologie/issue/2008/16-2008.pdf).
- Neagu, A.**, 2009. *Galeal tip sensilla of a carnivorous stonefly nymph, *Perla marginata* (Plecoptera: Perlidae)*, *An. Șt. Univ. Al. I. Cuza Iași*, t LV: 35-41, [http://www.bio.uaic.ro/publicatii/anale\\_zoologie/issue/2009/04-2009.pdf](http://www.bio.uaic.ro/publicatii/anale_zoologie/issue/2009/04-2009.pdf).
- Neagu, A.**, 2009. *Distal anatomy of glossa and paraglossa of stonefly nymph, *Perlodes microcephalus* (Plecoptera: Perlodidae)*, *An. Șt. Univ. Al. I. Cuza Iași*, t LV: 53-59, [http://www.bio.uaic.ro/publicatii/anale\\_zoologie/issue/2009/06-2009.pdf](http://www.bio.uaic.ro/publicatii/anale_zoologie/issue/2009/06-2009.pdf).
- Neagu, A.**, 2009. *Similarities in distal anatomy of maxillary and labial palps of zoophages stonefly nymphs*, *An. Șt. Univ. „Al. I. Cuza” Iași*, t LV: 43-51, [http://www.bio.uaic.ro/publicatii/anale\\_zoologie/issue/2009/05-2009.pdf](http://www.bio.uaic.ro/publicatii/anale_zoologie/issue/2009/05-2009.pdf).
- Neagu, A.-N.**, Petraru, O.-M., 2015. *Aquatic vs terrestrial eye design*, *Analele Științifice ale Universității „Alexandru Ioan Cuza” din Iași*, s. Biol. anim., t. LXI: 101-115. [http://www.bio.uaic.ro/publicatii/anale\\_zoologie/issue/2015/2015c11Neagu&Petraru.pdf](http://www.bio.uaic.ro/publicatii/anale_zoologie/issue/2015/2015c11Neagu&Petraru.pdf).

**Neagu, A.-N.**, Peptu, C., Harabagiu, V., Peptu, C. A., Leon, M.-M., Boca, A., Tamba, B. I., 2015. *Sisteme de administrare transdermica a medicamentelor bazate pe nanotehnologii*, în *Aplicatii ale nanotehnologiilor in dermatologie*, Tamba, B. I. (ed.), Ed. Performantica, Iasi: 96-131, ISBN: 978-606-685-368-2.

## Research projects

### 1. Evaluation of poluosensitivity of some bioindicators of water quality by the morpho-histological characteristics

Project director: **Neagu Anca-Narcisa**,  
**120. 000 RON**, 1453/2006-2008,  
CEEX, M II

### 2. EXTENSION OF THE INFRASTRUCTURE OF THE LABORATORY OF BIOINDICATORS OF WATER QUALITY – ACVAPUR , IN ORDER TO ASSESS THE POLLUOSENSITIVITY OF AQUATIC ORGANISMS, POLUOSENS

Project director: **Neagu Anca-Narcisa**,  
**1.729.510 RON**, 93/2007-2009,  
PN II, Capacities M I

[http://www.bio.uaic.ro/cercetare/contracte/poluosens/poluosens\\_en.pdf](http://www.bio.uaic.ro/cercetare/contracte/poluosens/poluosens_en.pdf)

## **Equipment for histological slides preparation (80.000 E):**

- Automatic Tissue Processor TP 1020
- Cryostat CM 1850
- Rotary Microtome RM 2265
- Leica Autostainer XL (ST 5010)
- Embedding Station Leica EG 1150: Heated Paraffin Embedding System and Cold Plate
- Drying Oven Digit Raypa

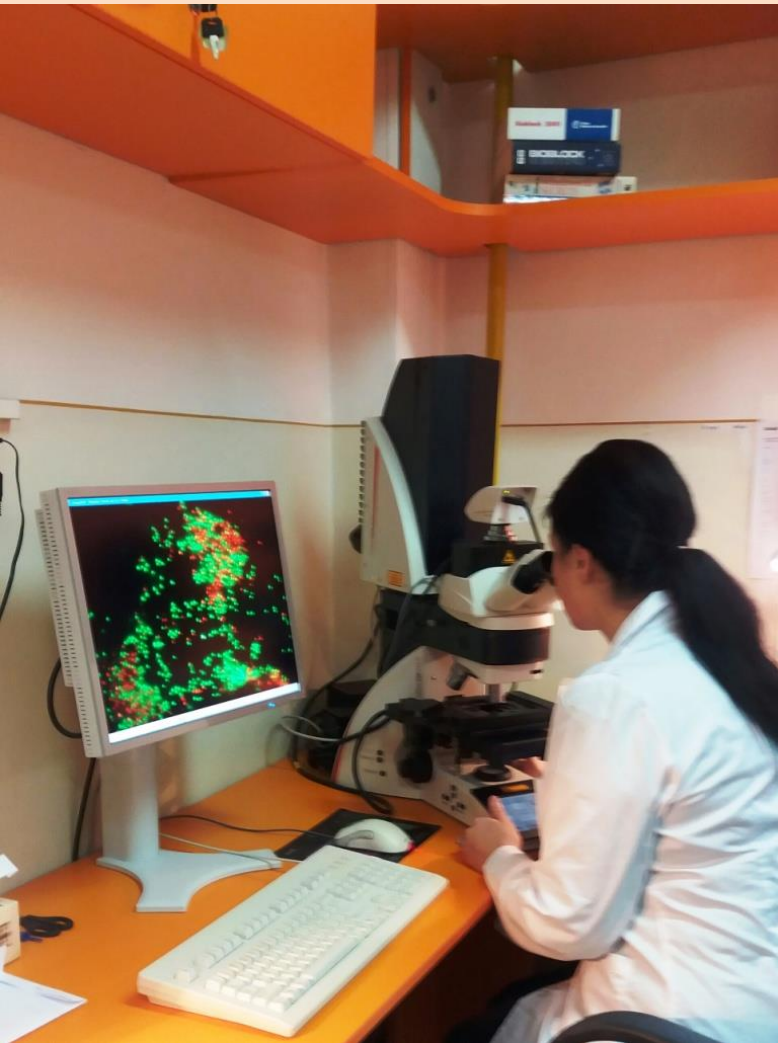
Master student  
Andreea Harnagea



Master student  
Ozana Petraru

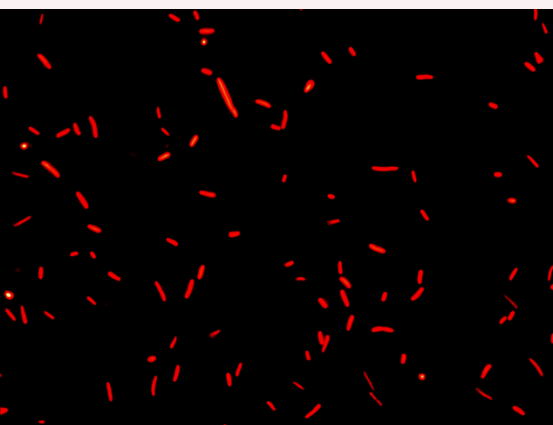
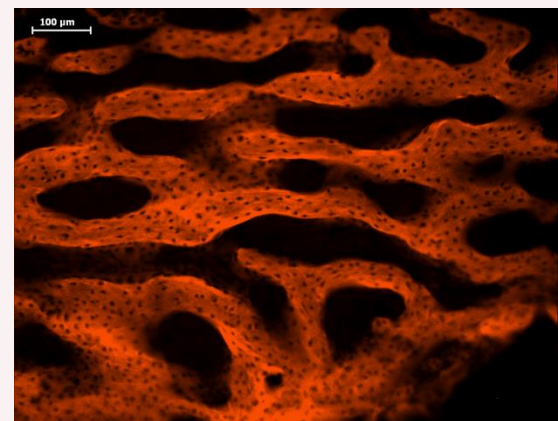
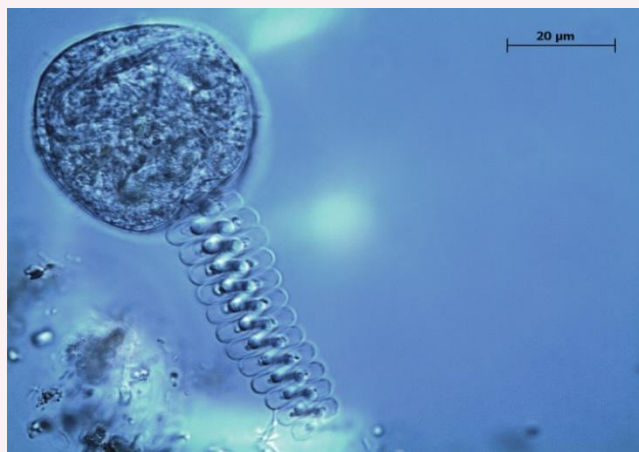
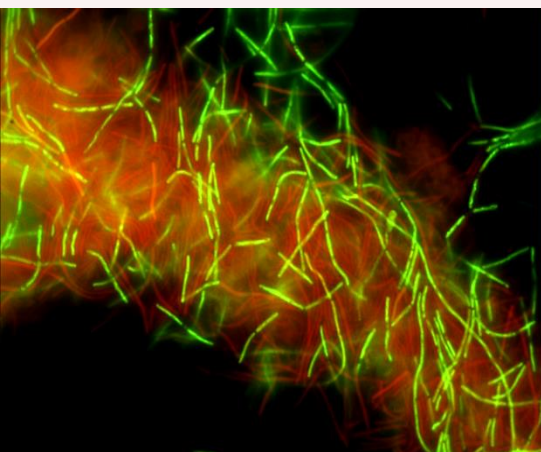
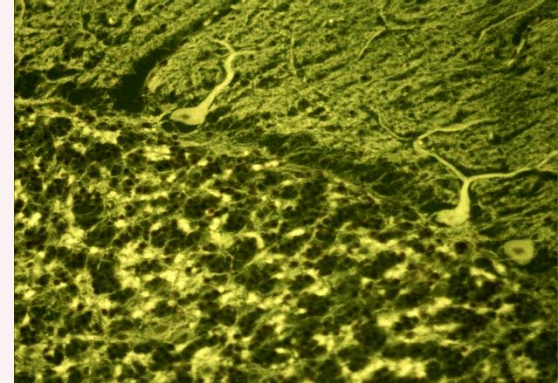
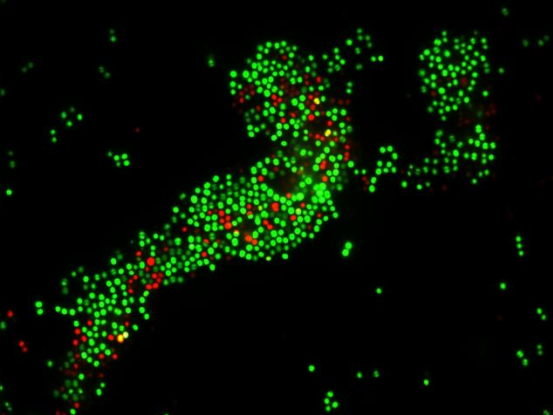


Master student  
Ioana Martin



**Laser Confocal Scanning Microscope (up-right)  
Leica DM 5500QTCS SPE- BF, DIC, POL, FLUO,  
FLUO-DIC, CS,  
with DFC 290 camera  
(155.000 E)**

- **Leica EM AMW Automatic Microwave Tissue Processor for electron microscopy (30.200 E)**
- **Leica Knike Maker EM KMR 2 (700 E)**
- **EMS 850 Critical Point Drier (10.000 E)**
- **EMS 550X Sputter Coater (20.000 E)**



Photos Anca-Narcisa Neagu  
DIC, FLUO, BF  
2016

