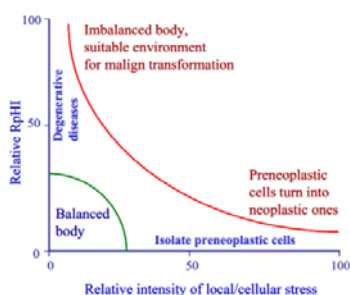


GABI DROCHIOIU

Research themes:

- **Proteomics & Metabolomics:** conformational changes of proteins and peptides upon metal ion binding. Protein and peptide chemistry.
- **Environmental Chemistry & Forensics:** contaminants, poisons, heavy metals and other major pollutants and decontaminating methods.
- **Toxicology:** cyanide reactions; cyanogens.
- **Bioenergetics:** Dinitrophenols & ATP synthesis.
- **Cancer biochemistry:** Respiratory and pH Imbalance hypothesis.
- **Biostructural theory:** Bioorganizational thinking in Biology; Biological systems, a structural-phenomenological approach.

Keywords: Organic synthesis and characterization, Peptide synthesis, Mass spectrometry, HPLC, Fluorimetry, Circular Dichroism, NMR, FT-IR investigation of metal complexes of peptides and proteins, Electrophoresis, Biostructure & biosystems.



Suggestive scheme for the role of the Respiratory and pH Imbalance (RpHI) in cancer development (Drochioiu, *Int. J. Biochem. Res. Rev.*, 4, 386-409, 2014).

Publications (selection)

Ciobanu, C.-I., Stefanescu, R., Niculaua, M., Teslaru, T., Gradinaru, R., **Drochioiu, G.** Mass spectrometric evidence for iron binding to the neuroprotective peptide NAP and its Cys5 mutant. *Eur. J. Mass Spectrom.*, 22, 97–104, **2016**.

Drochioiu, G. Mini-review: The influence of respiratory and pH imbalance in cancer development. *Int. J. Biochem. Res. Rev.*, 4, 386-409, **2014**.

Airinei, A., Nicolescu, A., **Drochioiu, G.**, Rusu, E., Jurcoane, S., Rusu, G. Dinitrophenols-from Chemistry to Life and Health. *PIM Publ. House*, Iasi, **2010**.

Murariu, M., **Drochioiu, G.** Biostructural theory of the living systems. *BioSystems*, 109, 126-132, **2012**.

Murariu, M., Dragan, E. S., **Drochioiu, G.** Model peptide-based system used for the investigation of metal ions binding to histidine-containing polypeptides. *Biopolymers*, 93, 497-508, **2010**.

Drochioiu, G. Laser-induced ATP formation: Mechanism and consequences. *Photomed. Laser Surg.*, **2010**, 28, 573-574.

Drochioiu, G., Manea, M., Dragusanu, M., Murariu, M., Dragan, E. S., Petre, B. A., Mezo, G., Przybylski, M. Interaction of β -amyloid(1-40) peptide with pairs of metal ions. *Biophys. Chem.*, 144, 9-20, **2009**.

Drochioiu, G. Chronic metabolic acidosis may be the cause of cachexia: Body fluid pH correction may be an effective therapy. *Med. Hypotheses*, 70, 1167-1173, **2008**.

Drochioiu, G. Highly selective and sensitive reaction of cyanide with 2,2-dihydroxy-1,3-indanedione. *Anal. Bioanal. Chem.*, 372, 744 – 747, **2002**.

Murariu, M., **Drochioiu, G.** Biostructural theory of the living systems. *BioSystems*, 109, 126-132, **2012**.



(n. 23.01.1954)

Prof. univ. dr.

E-mail:

gabidr@uaic.ro

<http://teclu.chem.uaic.ro/drochioiu>

Biochimie

(*Proteomică;*

Metabolomică;

Bioenergetică;

Biochimie analitică)

Toxicologie

(*Toxicologie analitică;*

Decontaminare)

Ph.D. supervisor -2007.

Doctor in Chemistry –

„Alexandru Ioan Cuza”

Univ. Iași, 1997.

Visiting Professor

- Univ. Konstanz,

Germany;

- Univ. Chemical

Technology & Metallurgy,

Sofia, Bulgaria; - Univ.

Istanbul Medeniyet,

Turcia

Visiting researcher

Konstanz Univ., Germany;

Chemical Technology &

Metallurgy Univ., Sofia,

Bulgaria;

Istanbul Medeniyet Univ.,

Turcia

Invited talks

2014

ICCMSE 2014, Athens,

Greece

2012

11th Food Chemistry,

Braganca, Portugal

2011

11th International Symposium

on Metal Ions in Biology and

Medicine, Cambridge, UK

2009

TEFC Food Chain,

Budapest, Hungary.