

## Curriculum vitae

### DATE PERSONALE

Nume, prenume: **ELENA - MARIA - ANTOANETA GANEA**

Institutul de Biochimie , Academia Romana, Splaiul Independentei 296,  
Bucuresti, Romania.

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### EXPERIENTA PROFESIONALA

**Senior Researcher I** (1994 – prezent) Institutul de Biochimie, Academia Romana (IBAR),  
Bucuresti.

**Conducator de Doctorat**, ordinul ministerului educatiei nationale, nr.3775/10.5.2000. Cercetare,  
indrumarea doctoranzilor si a membrilor departamentului, redenumit "Protein Folding"

**Senior Researcher II** (1990 – 1994) IBAR, Bucuresti. Cercetare, indrumat masterat, coordonat  
activitatea in departament.

**Senior Researcher III** (1981-1990), IBAR, Bucuresti, cercetare departamentul "Post translational  
modifications of proteins", indrumator studenti practica, colaboratori, masteranzi.

**Cercetator stiintific** (1973-1981), IBAR, Bucuresti, Cercetare stiintifica, SIgA, rol glicoproteine.

**Cercetator stiintific (CS)**, (1965 – 1973) Institutul de Endocrinologie C.I.Parhon, Department  
Biochimie, Bucuresti.

### EDUCATIE si FORMARE

1960 – 1965 Universitatea Bucuresti, Facultatea de Chimie, departament Biochimie, B.S. M.S.

1971-1977 **PhD** in Biochemistry (Biology): "*Hydroxyproline and the Metabolism of Collagen in  
Endocrine Diseases*".

### RESEARCH INTERESTS

- Lysosomal endoproteinase
  - The role of carbohydrate moiety of glycoproteins.
  - Non-enzymatic posttranslational modifications of proteins (aldehyde binding, cyanate binding);

- Non-enzymatic glycosylation of proteins (BSA, MBP, IgG, enzymes, crystallin proteins); ways of inhibition.
- Protein folding, the role of  $\alpha$ -crystallin as molecular chaperone.
- The effect of macromolecular crowding on protein structure and functions.

## **RESEARCH PROJECTS**

- 36 national research projects - Director.
- 2 international projects – Director : 1996, *Lens membrane proteins*, Medical Research Council, UK; 1998-1999, *Labile Enzymes of lens* Wellcome Trust, UK
- 1 international program - collaborator COST- B17 “*Insulin resistance, obesity and Diabetes Mellitus in elderly*” 1998-2005 - Resposabil proiect

### **List of research grants as coordinator:**

1. PNCII contract 42-103 2008-2011. *Sinteza si evaluarea farmacologica a noi compusi pentru implementarea de terapii moderne in tratamentul obezitatii si/sau diabetului de tip 2: cercetari preparative, structura, screening farmacologic.*
2. *Detection and estimation a possible inhibitory effect of newly synthesized compounds on nonenzymatic glycosylation of proteis in vitro.* PNCII contract 42-103 2008-2011
3. “*The protective effect of metabolic and synthetic compounds on insulin, against glycation induced modifications*”. Grant C.N.C.S.I.S., 2007-2008
4. “*The effect of macromolecular crowding on protein structure and function*”. Grant C.N.C.S.I.S, type A, 2003 - 2005
5. “*The excluded volume effect on protein folding and assemble*”. Grant Romanian Academy, nr.81/2004
6. “*Artificial chaperones, a way of protein refolding*”. Grant Romanian Academy 2005-2006.
7. “*Enzymes reactivation by heat shock proteins*”. Grant C.N.C.S.I.S. 2001-2002
8. “*Alpha crystallin as molecular chaperone, protects the enzymes against glycation induced inactivation*”. Grant Romanian Academy, 2000-2001

### **List of research grants as partener group lider:**

1. PNCII contract.42-103/2008-2011 *Efectul compusilor nou sintetizati asupra formarii produsilor de glicozilare avansata (AGEs) si a interactiei acestora cu receptori specifici*

- 2.. *Intracellular traffic and signaling properties of the AGEs receptors (RAGE), under pathological conditions.* Grant C.N.C.S.I.S. 2007-2009
3. *Molecular interactions - the effect on conformation and molecular stability.* Grant C.N.C.S.I.S. 2007-2008
4. *Synthesis and biological evaluation of new heterocyclic compounds, potential inhibitors of matrix metalloproteinases.* Grant CEEEX, 2006-2008
5. "Aminopeptidases renatured by artificial chaperones " Grant C.N.C.S.I.S., AT, Nr. 32492/22.06.2004

## **PUBLICATIONS**

Papers **more than 150**

### **Selected papers**

1. Popa I, **Ganea E**, Petrescu SM Expression and subcellular localization of RAGE in melanoma cells." *Biochem.Cell.Biol*, 92(2), 127-136 (2014)
2. Laslo AC, **Ganea E**, Obinger C. "Refolding of hexameric porcine leucine aminopeptidase using a cationic detergent and dextrin-10 as artificial chaperones." *J.Biotechnol.*, 140(3-4), 162-168 (2009)
3. Harding JJ, **Ganea E** "Protection against glycation and similar post-translational modifications of proteins." *Biochim.Biophys Acta*, 1764(9), 1436-1446 (2006)
4. **Ganea E**, Harding JJ "Glutathione-related enzymes and the eye." *Cur.Eye Res.*, 31(1), 1-11 (2006)
5. **Ganea E**, Harding JJ "Trehalose and 6-aminohexanoic acid stabilize and renature glucose-6-phosphate dehydrogenase inactivated by glycation and by guanidinium hydrochloride." *Biol.Chem.*, 386(3), 269-278 (2005)
7. **E.Ganea**, M.Trifan "The effect of macromolecular crowding on heat denatured lysozyme" *Rom. J. Biochem*, 40, (2003)
8. **E.Ganea**, A.C.Coman "Artificial chaperone-assisted renaturation of leucine aminopeptidases" *Rom. J. Biochem*, 39, 21-27, (2002)
9. **E.Ganea**, J.J.Harding "The Effect of Macromolecular Crowding on Chaperone Activity of  $\alpha$ -crystallin", *Proc. Rom. Acad. B*, 1, 13-17 (2002).
10. **Ganea E** "Chaperone-like Activity of  $\alpha$ -Crystallin and Other Small Heat Shock Proteins", *Current Prot. Pept. Sci.*, 2, 205-227 (2001)

11. **Ganea E**, J.J. Harding " $\alpha$ -Crystallin assists the renaturation of glyceraldehyde-3-phosphate dehydrogenase", *Biochem. J.*, 345, 467-472 (2000).

12. **Ganea E**, J.J. Harding " $\alpha$ -Crystallin protects G6PD against inactivation by MDA", *Biochim. Biophys. Acta*, 3, 1500, 49-58 (2000).

### **Books-chapter**

1. **Elena Ganea**, Chap.8, *Pancreatic Islet Amyloid Polypeptide (IAPP or Amylin), and type 2 diabetes*, in "Diabetes Complications. New Explanations and Solutions" Editor Dan Cheta, AGIR P. H., Bucharest 2014 (English)

2. **E.Ganea**, Chap.9 "*Insulin Glycation and Its Possible Role in the Pathogenesis of Diabetes*" in: "Vascular Involvement in Diabetes-Clinical and Experimental Data, Editor Dan Cheta, Romanian Academy P. H., Bucarest, and Karger, Basel, Freiburg, Paris, Londra, New York , 2005 (English)

3. **E. Ganea**, Chap.14 *Prevention of Insulin Glycation by Metabolic and Synthesis Inhibitors* in «Cellular Dysfunction in Arteriosclerosis and Diabetes •Reports from Bench to Bedside», Editors: Maya Simionescu, , Romanian Academy P. H., Bucharest, 2004 (English)