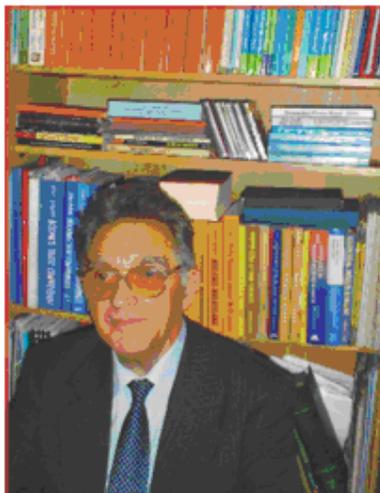


PROFESSOR ZENO GÂRBAN celebrates his 70th birthday this year.



Born in Timișoara on December 13th, 1939, Zeno Gârban finished „C.D. Loga” Highschool in Timișoara (1956), graduated the Faculty of Agronomy and Animal Sciences of the University of Agricultural Sciences Timișoara (1962) and the Faculty of Chemistry of University "Babeș-Bolyai" Cluj-Napoca (1973).

In 1962 he prepared his diploma work at the Faculty of Agronomy and Animal Sciences under the advice of Prof. Dr. Valeriu Pinteia with the theme electrophoresis of blood proteins in animals, carried out in the Laboratory of Animal Biology from the Romanian Academy – Branch Timișoara (head of laboratory Prof. Dr. Petru Spânu, researcher Eng. Ioan Vintilă). After graduation he became assistant professor at the Department of Physiology of Animals, University of Agricultural Sciences Timișoara. As student and assistant professor, he was initiated in researches in physiology and experimental biochemistry. In the same year, in accordance with a Government’s Decree (No. 427/1962) he was transferred - beside other 23 colleagues from the university - to District Bihor where he worked, initially, as engineer and later on as vice-president of the Agricultural Council Salonta-Bihor (1962-66). Afterwards, Zeno Gârban was nominated as head of the Laboratory of Animal Genetics Oradea for District Bihor (1966-1969). The passion for science and research, the view on the future role of chemistry in life sciences and their multidisciplinary have been continuous challenges in his career.

In 1968 he started the courses at Faculty of Chemistry - University "Babeș-Bolyai" Cluj-Napoca. In the same period he worked as external collaborator in research agreements at the Department of Biology of animal reproduction of the University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca (until 1974). His diploma work in Chemistry was prepared under the advice of Prof. Dr. Valer Fărcășan (from the Department of Organic Chemistry and Biochemistry) and had as theme the polarographic study of nucleobases from nucleic acids (1973).

Graduating the Faculty of Chemistry he occupied, by competition, the function of biochemist at the Central Laboratory of Clinical Chemistry at the University Clinics in Hospital No.1 Timișoara (1974-1979). In that period at the suggestion of Acad. Pius Brânzeu he oriented his research area towards metabolic pathways in pathobiochemistry.

In that period Zeno Gârban participated at *post-graduate stages* at the: Institute of Chemistry Cluj-Napoca (1973, 1975); Institute of Oncology Cluj-Napoca (1974); Academy of Medical Sciences Bucharest - domaine of medical researches on hydro-electrolytes metabolism (1978), completing experimental methods and benefiting of documentation. In the same period, beside Prof. Dr. Horst H. Mantsch and Dr.doc.Francisc Hodoșan, he was working for his doctoral thesis approaching the fields of metallomics and proteomics.

In 1979 Zeno Gârban occupied, by competition, the position of biochemist at the Department of Biochemistry, Laboratory of Embryology in Institute of Public Health Timișoara. That institute was subordinated to the Academy of Medical Sciences from Romania. In that Laboratory he passed successively the professional degrees up to that of Senior Researcher Fellow (1979-1991). The activity of the laboratory, in the mentioned period, was coordinated by Acad. Prof. Dr. Benedict Menkes - corresponding member of the Romanian Academy (founder of the Laboratory of Embryology) and had as leader Dr. doc. Ștefan Sandor – member of the Academy of Medical Sciences. Investigations were performed on experimental animals, following the teratogene effects of some substances with alimentary and therapeutic interest.

Together with Prof. Dr. Petru Drăgan (from the University of Medicine and Pharmacy Timisoara) in the year 1979, founded the „Working Group for Metal Research in Biological Systems” Timișoara, being located in the Institute of Public Health Timisoara.

In 1982, he obtained the Ph.D. degree in Chemical Sciences - speciality Biochemistry at the Institute of Chemistry Cluj-Napoca of University “Babeș-Bolyai” Cluj-Napoca, with the thesis entitled: *Investigations on native and denaturated nucleic acids: Interactions of deoxyribonucleic acid and purine metabolites with divalent metals.*

In 1984, when Zeno Gârban was invited for a specialization at the Emory University Atlanta, USA and was in the impossibility to attend it because of political reasons, he was accepted with benevolence of Acad. Nicolae Cajal – director of the Institute of Virology “St. S. Nicolau”, for a specialization in the domain of nucleic acids biochemistry, in the laboratories of that institute.

In 1990 (at the suggestion of an Initiative Committee from Bucharest) he contributed beside other colleagues from Timișoara, at the establishment of Branch Timișoara of the Romanian Society of Biochemistry.

Following the social changes in Romania he returned in 1991 to the University of Agricultural Sciences and Veterinary Medicine Timișoara and occupied, by competition, the function of associate professor (1991-1995) and later on that of full professor (1995-2006) at the Department of Biochemistry - Molecular Biology, Faculty of Food Products Technology.

In that period Prof. Zeno Gârban was attested as Doctoral thesis advisor at the University "Politehnica" Timisoara, Faculty of Industrial Chemistry and Environmental Engineering. A number of 6 doctoral thesis were finished under his advice. The studied themes were in the domains of researches regarding food components on experimental animals and on the metabolisms of proteins, lipids and hydro-electrolytes in human.

There have to be mentioned the short *post-doctoral stages* and *courses*, e.g. at the Institute of Virology "St. S. Nicolau" - Laboratory of nucleic acids, Bucharest-Romania (1984) ; FEBS Advanced Course: "Application of DNA Methods for the Diagnosis of Disease" University Patras-Greece – 1991 (Assoc. Prof. Dr. A. Athanassiadou, Prof. Dr. G. M. Maniatis); Institute of Biotechnology and University Szeged-Hungary – 1994 (Dr. doc. S.A.Kiss, Prof. Dr. J. Nemsok); Institut für Ernährung und Umwelt - Bereich Lebensmittel- und Umwelttoxikologie of "Friedrich-Schiller" University Jena-Germany -1995 (Prof. Dr. M. Anke); informational visit at the University of California Los Angeles (UCLA) – USA, Department of Biochemistry and Molecular Biology – 1997 (Prof. E. Reisler) that contributed to a wider understanding of the approached domains.

The scientific activity in the domain of metallomics was developed in the framework of the "Working Group for Metal Research in Biological Systems" Timișoara and influenced by the "School of Inorganic and Organometallic Chemistry" Cluj-Napoca created by Acad. Ionel Haiduc at the University Babeș-Bolyai in Cluj-Napoca. In this context, in 1993, with the assent of Acad. Nicolae Cajal, it was initiated the organization of the international Symposium "Metal Elements in Environment, Medicine and Biology" (MEEMB) with dienal periodicity, under the auspices of the Romanian Academy – Biochemical Commission. The symposium took place in the framework of the Romanian Academy – Branch Timișoara, initiated during the mandate of Acad. Toma Dordea. Since 2008 the MEEMB Symposium is organized in cooperation with the Cluj-Napoca Branch of the Romanian Academy .

It is noteworthy the collaboration with remarkable Schools in profile of metals research from the following universities: Jena (Prof. Dr. Manfred Anke); Budapest (Prof. Dr. Istvan Pais; Athens (Prof. Dr. Ermidou-Pollet; Vienna (Prof. Dr. Ronald Smetana) a.o. Those collaborations of Zeno Gârban allowed numerous young researchers and colleagues from Timișoara to participate at various symposia organized abroad (their papers can be find in symposia volumes).

In 2003 the volume *Molecular Biology - 4th edition* (2001) published by Prof. Zeno Gârban was awarded with "Traian Săvulescu" Prize of Roumanian Academy.

During 2000-2005 he was a partner, representing the University of Agricultural Sciences and Veterinary Medicine Timișoara, in the EU project „Biotechnology Thematic Network” (that included 24 European countries), coordonated by the Department of Biochemistry and Molecular Biotechnology of University of Perugia (Prof. Dr. Mariapia Viola Magni). That project had objectives of medical, agrobiological, pharmaceutical and nutritional interest. Within the project Prof. Gârban published a new, extended edition of the volume „Molecular biology: concepts, methods, applications”.

Starting with 2006 he is consulting professor. A different but perfectly harmonizing facet of the scientist Zeno Gârban is revealed by his gifted vocation for teaching, investing energy and determination in guiding generations of students .

The main areas of scientific research were metallomics and proteomics. Approached domains are : *biochemistry of nucleic acids* - interaction of deoxyribonucleic acid (DNA) with trace metal ions and with cytostatics (cyclophosphamide, cis-platinum), structure-activity relationship of deoxyribonucleic acid in the formation of adducts with small molecules; *food biochemistry* and *xenobiochemistry* - effects of macro- and trace elements, polycyclic hydrocarbons, mycotoxins, organochlorinated pesticides; *medical biochemistry* and *nutrition* : pathobiochemistry in embryology and teratology (effects of alcohol, metal ions on protein and hydro-electrolytic metabolism), pathobiochemistry of urolithiasis (heterogenic mechanism of uroconcrement nucleation, chemical composition); *bioinorganic chemistry*: interaction of biometal ions and metals with toxicogen potential with proteins (nucleoproteins); *animal physiology*: blood circulation-lactopoesis interrelationship, electrophoretic studies of blood proteins.

Prof. Gârban elaborated the first book of *Xenobiochemistry: Comprehensive Treatise* (2005) – that focuses rigorously the object of study, limits the domains of static and dynamic xenobiochemistry, defines distinctly pathways of the xenobiodegradation / xenobiosynthesis, makes an interactive approach concerning the metabolisation of nutrients and biotransformation of xenobiotics. His studies in the domain of xenobiochemistry were remarked since 2003 by Acad. David Davidescu, who had written the preface to *Biochemistry: Comprehensive treatise Vol.III*, in which Zeno Gârban approached problems related to metabolism and biotransformation.

The large variety of teaching fields for students comprised Biochemistry, Molecular biology and Human nutrition, Food recipes (*Recepta alimentaria*) and Documentary technics in Food Sciences. For master students he was teaching Biochemistry of food contaminants, Enzymatic technics, Protective foods – generally in the domain of biosciences – food science.

In his books written in the domain of biochemistry and molecular biology, he emphasized the contribution of these sciences to the progresses in life sciences and food science. On this regard it is made the remark that each progress in biochemistry meant the extension of knowledge frontiers. The reverse is characterised by an old but always new dilemma, that passing old barriers means, ino tempore, that new frontiers appear. The new frontiers that are shaped on each step of progress constitute fascinating challenges but also rigorous indebtedness for the generations of researchers that take over the destinies of scientific and technical progress.

As recognition of his merits in the educational and research activity Prof. Zeno Gârban was elected as member of some national and international academic societies. Thus, it is mentioned that he was/is member of the *national scientific societies*, such as: Union of the Societies for Medical Sciences from Romania - Branch Timisoara, Section of Clinical Laboratory; Section Prenatal Pathology and Embryology (1974-1991); National Society of Cell Biology (1985-present); Romanian Biochemical Society - founding member (1990) and member of the National Council (1990-1997); Romanian Biominerals Society (1991-1999); Academy of Scientists from Romania (from 1992-2007); Romanian Society of Analytical Chemistry (1993-present); Romanian Society of Magnesium Research – founding member (1999-present).

The scientific activity of Prof. Dr. Zeno Gârban was also recognized abroad being nominated as member of the following *international scientific societies*: International Society for Trace Elements Research in Humans - I.S.T.E.R.H (1985-1989); “Fondazione “Alessio Pezcoller” for Oncological Studies – Trento Italy (1987-present); European Placenta Group (1991-2004); European Cell Biology Organisation – ECBO (1993-present); New York Academy of Sciences - NYAS (1997-present) and American Chemical Society - ACS (2007-present).

He is / was also member in the editorial boards of the journals : Roumanian Biotechnological Letters Bucuresti (1995-2001), Acta Universitatis Cibiniensis Seria F Chemia Sibiu (1995-present), Journal of Agroalimentary Processes and Technologies – Timisoara (1995-present) of the Faculty of Food Processing Technology Timisoara.

Zeno Gârban was a member of the Council of the Faculty of Technology of Food Products (1995-2004) and of the Senate of University of Agricultural Sciences and Veterinary Medicine of Banat Timișoara (1996-2004), expert of the National Council for Scientific Research in Higher Education of the Ministry of Education (CNCSIS) – evaluation of research programmes (1995-2008).

The scientific activity of Prof. Gârban is concretized in more than 340 published papers in Romanian, English, French and German languages in journals from Romania and abroad (49 papers with ISI citation and more than 160 in other databases: CAB Abstracts, BIOSIS etc.). Over 190 scientific papers in the domain of metals in biological systems. Also, he contributed by publishing: 3 chapters in books in Romanian; 7 university handbooks; 23 books and treatises in the domain of biochemistry, molecular biology, nutrition (some of them at the 3rd edition or even more) in Romanian; 9 volumes (as co-editor) of Proceedings of the International Symposium *Metal Elements in Environment, Medicine and Biology* (Tome I-IX) – in English; 1 treatise of Biochemistry Vol. I (Part 2) – in English; 3 chapters in books in English published by foreign publishing houses.

Worldwide collaborations and many friendships, wide knowledge in history, universal literature, love for music and art are the main characteristics of this special person.

May the years to come keep him as an active presence of our Alma Mater, continuing to enjoy life and science, mentoring future researchers and inducing further on the well known stimulating working atmosphere.

Happy anniversary!

