



MAYA SIMIONESCU

DIRECTOR - SINCE 1995

Academic Degrees: Doctor in Biology

Major position and appointments

Vice-President of the Romanian Academy (1996 – 2005)

President of the Romanian Society for Cell Biology

President of the Section of Biological Sciences - Romanian Academy

Vice-President of the European Life Scientist Organization

Visiting Professor: Yale University, School of Medicine, New Haven, USA;

McGill University, School of Medicine, Montreal, Canada;

Columbia University, New York, USA; University of California-Los Angeles, Los Angeles, USA

MEMBER OF SCIENTIFIC SOCIETIES

American Society for Cell Biology;

European Cell Biology Organization;

European Life Scientist Organization (Vice-President);

Romanian Society for Cell Biology (President).

MAJOR RESEARCH INTEREST

Cellular and molecular biology and pathology of the cardiovascular system, with special emphasis on atherosclerosis and diabetes. Structural-functional correlation of microcirculation and large blood vessels, endothelial cells, lung cells plasma cells, stem cells, lipoproteins.

MAIN ACHIEVEMENTS

PUBLICATIONS: 450 scientific papers published in international peer review journals 55 chapters in international handbooks and monographs Co-editor at two monographs published by Plenum Press, one monograph by The Publishing House of the Romanian Academy and one monograph in Romanian.

ISI Citation of papers: 7000; Hirsh Index: 50

NOVEL CONTRIBUTIONS (in collaboration)

- Discovery of transendothelial channels and their role in the exchange of macromolecules across endothelial cell (EC).
- First identification of biochemically and structurally differentiated microdomains on the luminal and abluminal plasmalemma of endothelial cells.
- Plasmalemmal vesicle membrane: distinct chemical composition and receptors that carry out fluid phase, adsorptive or receptor-mediated transcytosis.
- First report on the existence of albumin and histamine receptors in EC.
- Discovery of intimal deposition of modified and reassembled lipoproteins as the first event occurring in the arterial wall and heart valves at the inception of atherosclerosis..
- Structural, biochemical and functional characterization of modified lipoproteins isolated from the arterial intima of hypercholesterolemic animal models.
- Transcytosed lipoproteins amass within the subendothelium as modified and reassembled lipoproteins

- Pathobiochemistry of combined diabetes and atherosclerosis studied on an original animal model, hyperlipemic/hyperglycemic hamster.
- Detection of the effect of high glucose on endothelium and of glycated proteins on lipoproteins that may account for accelerated atherosclerosis in diabetes.

TEACHING EXPERIENCE IN CELL BIOLOGY

19 years at Yale University, Medical School, USA: Cell Biology Course (Visiting Professor)
5 years at the University of Bucharest and "Ovidius University", Constanța, România

A SCIENTIFIC SIDE PROJECT

Co-founder of the Institute of Cellular Biology and Pathology together with Professor Nicolae Simionescu.

AWARDS AND HONORS

Louis and Arthur Lucian International Award for Research in Circulatory Diseases, McGill University, Montreal, Canada (shared with Prof. N. Simionescu), 1978

Medal of the Institute of Clinical Electron Microscopy, Bologna, Italy, 1987

Ludwig Schaefer Distinguished Professor, Columbia University, USA, 1990-1991

Borum Professor of Cardiology, University of California, Los Angeles, USA, 1990

Corresponding Member of the Romanian Academy, 1990

Member of the Romanian Academy, 1991

Vice-President of the Romanian Academy, 1998

Member of the Academy of Medical Sciences, Romania, 1998

Sanofi Thrombosis Prize for Atherosclerosis and Thrombosis Research, 1998

Award "Serviciul credincios" - Marea Cruce, of the Romanian Presidency, 2000

Honorary Member, Academy of Sciences of Moldova Republic, 2001

Award "Rio Branco – Comendador", of the Brazilian Presidency, 2001

UNESCO - L'Oreal Special Honor Award for Women in Science, 2001

"Ion Pavel" Prize of the Romanian Academy of Medical Sciences and of the Romanian Society for Diabetes, Nutrition and Metabolic Diseases, 2004

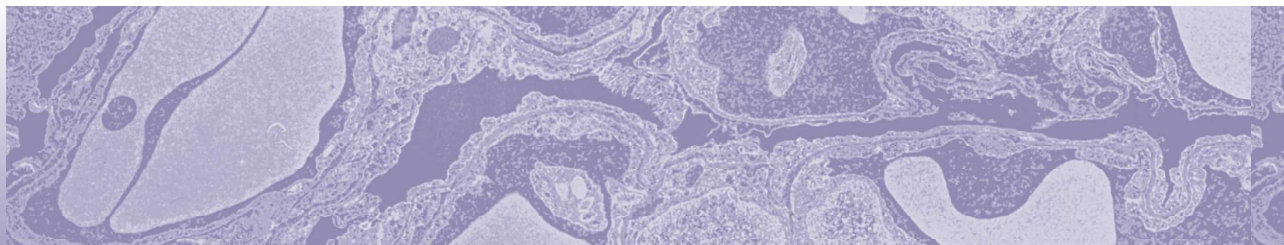
Académica Correspondiente de la Real Acadèmia de Doctors, Universitat de Barcelona, 2005

Doctor Honoris Causa: University "Ovidius", Constanța, România, 2000; **University of Medicine "Gr.T.Popa"**, Iași, România, 2000; **West University**, Timișoara, România, 2006; **„Vasile Goldiș" University**, Arad, România, 2011

"Romanian Star" Order of the Romanian Presidency, 2008

"Opera Omnia" Prize, of the Romanian Ministry of Education and Research, 2008

Gold medal – EUREKA, Bruxelles, 2013; Prize AGEPI (State Agency for Intellectual Property) for Innovation INNOVA and "Romanian Innovation Awards, 3M PREMIAZĂ



INOVAȚIA, 2014, for patent applications: *Nervous conductors made of collagen and process for preparing the same*. Inventors: Albu M. G., Lascăr I., Zamfirescu D., Simionescu M., Zegrea I., Titorencu I., D. Popescu M., Bumbeneci G., 2013.

“Légion d'Honneur” National Order of the French Republic, 2013.

Award for Excellence in Research - Romanian Society of Cardiology: L.S. Niculescu, N. Simionescu, G.M. Sanda, A.C. Popescu, M.R. Popescu, A. Vlad, D.R. Dimulescu, M. Simionescu, A.V. Sima; the 55th National Congress of Cardiology, Sinaia, 2016

“Omnia” Diploma of Excellence, Romanian Medical Association, 2017

Medal “Centenar Pierre Werner”, The Institute of Economic Research “Costin C. Kirițescu”, 2017

Honorary Member of the Romanian Society of Cardiology, 2017

EDITORIAL BOARDS

European Journal of Cell Biology; Differentiation; Cell and Tissue Research;
Journal of Cellular and Molecular Medicine; Microvascular Research;
Sciences et Techniques de l’Animal de Laboratoire;
Journal of Submicroscopical Cytology and Pathology; Biomedical Reviews.

Member Expert Panel, European Research Council Peer Review Evaluation

Peer Reviewer to International Grants application and Journals

Chairperson, invited speaker and co-organizer at over 60 scientific meetings in USA, Europe, Japan, Mexico.

Director of European Community FP5 Grant awarded by competition to ICBP - Centre of Excellence of the European Community *Blood Vessels: “Function and dysfunction of blood vessels: transcytosis in normal/pathological states, alterations in atherosclerosis and diabetes; their therapeutic control”*

Director of European Community FP6 Specific Support Action - grant awarded by competition: *“Strengthening the European Research Area by Reinforcement of Romanian Research Competency in Genomics and Proteomics of Major Global Risk Diseases: Atherosclerosis, Diabetes and its Complications”* (2005-2008)

Member in the Management Committee of the COST Action B 17 of the European Community *“Insulin Resistance, Obesity and Diabetes Mellitus in the Elderly”* Coordinator of the WG5 (2001-2003)

Member in the Management Committee of the COST Action BM0602 *“Adipose Tissue: A Key Target for Prevention of the Metabolic Syndrome”* (2008-2011)

Member in the Management Committee of the **COST Action CA17129**. *“Catalyzing Transcriptomics Research in Cardiovascular Disease”*: **The CardioRNA** (2019-2022)

Director of the “CARDIOPRO” investment project in RDI infrastructure and related administrative capacity, *“Extension and modernization of the research infrastructure for increasing competitiveness in the field of cardiovascular diseases, diabetes and obesity”*.

e-mail: maya.simionescu@icbp.ro

