

## SCIENTIFIC REPORT

1. Scientific content of the event (achieved objectives, presented subjects, obtained conclusions/results, contribution to the development of future directions in the scientific area); this report will be made public, both in Romanian and English

As part of the conference “Diaspora in the Romanian Scientific Research”, organized under the patronage of the Government of Romania and the National Authority for Scientific Research, the Institute of Cellular Biology and Pathology “N. Simionescu” Bucharest (ICBP) organized an Exploratory Workshop (EW) of Biomedicine entitled “**Translation of basic research discoveries into therapeutic applications**”.

The **objectives** of the EW were: (1) **to make known and integrate the scientific results** obtained thus far by the Romanian researchers from the country and from Diaspora; (2) **successful collaborations** in scientific projects of common interest among researchers from the country and from Diaspora; (3) **transfer of modern technology** for young Romanian researchers by training stages, and (4) specific proposals for **increasing the quality and the visibility of the Romanian research**.

**The scientific topics** discussed during the EW concentrated on major diseases affecting the population of XXI<sup>th</sup> century: cardiovascular diseases, diabetes, obesity, and cancer. These diseases are caused by a large number of factors such as life style, genetics, environment, etc., and can be challenged only through the common efforts and complementary skills of worldwide researchers. These topics were discussed during five scientific sessions:

Session 1. *Obesity – a new threat for contemporary society;*

Session 2. *Pathobiochemistry of diabetes – the danger of pandemics;*

Session 3. *Cellular and molecular biology of cancer;*

Session 4. *Cellular and molecular dynamics;*

Session 5. *Pathobiology of atherosclerosis – a continuous challenge for basic and clinical research.*

The program of the workshop included 15 invited lectures, 22 posters in the frame of which the latest results obtained by young researchers from the country were discussed, and 2 sessions for general discussions. Each day, around 4 hours were granted for scientific presentations, and about 4 hours were dedicated to free discussions among the participants.

**We consider that all the objectives were achieved. To make known and to integrate the scientific data** obtained so far by Romanian researchers from the country and from Diaspora (**objective 1**), their recent original contributions in the field of cardiovascular diseases, diabetes, obesity and cancer, the identification of the cellular and molecular mechanisms involved in the pathology of these major diseases and the methods for their prevention or reversal were presented.

These presentations led naturally to the identification of specific scientific topics of common interest, in which researchers from the country and from Diaspora could set up **successful collaborations (objective 2)** in order to find means for early detection, prevention and treatment of these diseases. Some collaborations that will materialise in the immediate future will facilitate the **transfer of technology** among the researchers from Diaspora and from the country (**objective 3**), and will contribute significantly to the integration of Romanian biomedical research to the world science. Two collaborations (USA - ICBP, Romania) have already been discussed and proposed during the workshop.

The general discussions were particularly animated and conducted to practical formulations and means **to boost the competence in Romanian research**, leading subsequently to increased visibility of the Romanian science (objective 4). The necessity to amplify the number of publications in peer review journals and to enlarge the Romanian participation to scientific meetings in the field was stressed.

The dialogue that took place among the researchers, throughout the scientific sessions and events associated with the conference, created the adequate frame for the exchange of ideas and experience, for identifying future directions for biomedical research and common projects, and for establishing real bridges for collaborations among researchers from the country and from Diaspora. As an example, one proposal was to submit a joint application for the December 2008 call of the European Commission - Framework Program 7.

**Among the subjects considered** during the general discussions were:

- Modernization of the Romanian scientific education and research;
- Training of young Romanian researchers;
- Increase in the visibility of Romanian research;
- Acceleration of the transfer of scientific results from bench to bedside;
- Collaboration opportunities: points of view of the researchers from the country and from Diaspora;
- Joint research teams;
- Joint applications for national and international projects.

**The proposals formulated** following these discussions were:

- Promotion of researchers on the basis of scientific performance and value irrespective on the number of years spent in research;
- The participants from the Diaspora offered their entire availability for participating as evaluators for the national grant proposals;
- Building accommodation spaces for Ph.D. students and post-doctoral fellows inside university campuses available to all young researchers throughout the country;
- Setting up a database of the Romanian researchers from Diaspora;
- Creating a system for notifying the Romanian researchers from Diaspora about the opportunities for collaborations and reintegration (e-news letters);
- Yearly conference with the Romanian scientists from Diaspora;
- Introducing grants to support short stages for “technological transfer”;
- Heighten up the standards for admission to Ph.D. programs;
- Disseminate science in schools, high schools and to the public at large.

**Special events** during the EW were:

- The visit of Mr. Jose Manuel Silva Rodriguez, General Director in the Division for General Research of the European Commission, and of Mr. Michel Andre, from the same body. The two high representatives of the European Commission visited the laboratories from ICBP. During a meeting in the library of ICBP, they were introduced to the history of the institute and they were informed about the scientific results obtained in the centre and the European projects in which the institute is involved. This was an opportunity for them to interact directly with the researchers from the institute and to discuss about the ongoing European programs and the possibilities to access the available European research funds, especially in the FP 7. At the end of his visit, Mr. Rodriguez wrote the following in the ICBP guest's book:

*„Remembering my first visit to this excellent centre of research, that tries to decipher and to advance in the science linked to diseases affecting the human kind. I hope that their enthusiasm, youth and acquired experience will help them pursuing their road of the excellence that they have already demonstrated”.*

· In the first day of the workshop, Mr. Martin Enserink, European correspondent, Science magazine, was present at the sessions, where he listened to the general presentation of the Institute, as well as to the invited lectures. Mr. Enserink discussed together with Dr. Maya Simionescu, young ICBP researchers (Dr. Elena Dragomir, Dr. Adian Manea, Dr. Marilena Lupu, Dr. Loredan Niculescu, Madalina Fenyo, Ph.D student), and the researchers from Diaspora about the ongoing projects in the institute and about the state of the Romanian science.

In general, this conference was an excellent opportunity to strengthen the ties within the Romanian scientific community, both at institutional and individual levels, offering a solid base for future collaborations. Mobilizing the Romanian energies, no matter of their location in the world, can put into motion the mechanisms of a system whose rapid improvement is much needed in our country. The example of ICBP and the creation of the Romanian school of cellular biology illustrate one such successful interaction that by connecting the national scientific research to the world leading values. Implementation of performance in Romanian science was the lifetime goal of Professors Nicolae and Maya Simionescu, personalities which during the totalitarian morass built an interface between the achievements of the United States of America, European and Romanian research systems, enforcing the standards of high-quality science that lead to the recognition of the research performed in the Institute of Cellular Biology and Pathology.

**Below are some fragments of the impression of our guest from Diaspora:**

**Magdalena Pasarica**, Ph.D., Louisiana State University System, Baton Rouge, Louisiana, USA:

*“I would like to congratulate the members of the Simionescu Institute for their excellence in research. It is a joy and a great honour to be here and to have you as an example”.*

*“It was an honour to participate and to be co-chair at the conference. A great idea, exceptionally organized. The scientific part was very interesting, and I am sure that the general discussions will lead to successful collaborations. For this, I thank you. The team of the Institute was extremely friendly, and as always before, had a constructive assessment of my projects. I will willingly participate in such events in the future.”*

**Jeanine Albu**, M.D., Ph.D., The New York Obesity Research Center, Columbia University College of Physicians and Surgeons, New York, USA:

*“I am very honoured to have been invited to participate in this conference. I am very proud of the achievements of this Institute and very happy and honoured to have meet Dr. Maya Simionescu. I hope to be able to help in future successful endeavours.”*

**Alexandru Almasan**, Ph.D., Taussig Cancer Center, Lerner Research Institute/ NB40, Cleveland, USA:

*“I was impressed by the quality of the researchers and by the impressive number of projects and papers already published and in progress. I was equally impressed by the high number of young, enthusiastic researchers, which assure the continuity in the present period, when with newly available resources much more can be achieved. The hospitality and good collegiality of*

*those receiving us will not be forgotten. I hope to stay in touch and to be able to contribute to the success of the enlarged family of the Romanian science.”*

*“ I think this is a crucial time for the Romanian science and I hope that we all will be able to contribute at defining new directions. I will do all my best to help especially the young researchers, to achieve their maximum scientific potential. I wish you success in the future, in continuing the extraordinary projects you develop in ICBP, and I look forward to find out about their results”.*

**Claudia Dumitru**, University of Duisburg-Essen, Medical School Essen, Germany:

*“On this occasion, I had the opportunity to meet, personally and professionally, many Romanian scientists from the country and from the Diaspora. The stimulating discussions that I had proved extremely useful for my ongoing projects, and offered me a new perspective on the good quality research performed in the present in Romania. Thank you, I hope such meetings will continue to be organized in the future.”*

**Vlad Cojocaru**, EML Research gGmbH, Heidelberg, Germany:

*“A great honour to be invited to participate at this workshop. I was as well impressed by the professional attitude I found in ICBP. It is encouraging that such a research centre exists in Romania. I would be greatly pleased to collaborate with researchers from the centre and to share the experience I achieved in Germany. I wish you success in the future and I hope to be back in ICBP as soon as possible. I hope from my heart that in a few years ICBP will become a research centre attractive for any scientist in the world. In this sense, I am more than willing to receive visitors from Romanian research institutes in our centre for collaborations, lectures and training in the field of computational structural biology.”*

**Conclusions:** the organization of this conference was a remarkable premiere that turned up into a successful meeting of the Romanian researchers from all over the world, enabling them to find out their advanced studies in the field, to establish future directions for biomedical research, and to establish personal interactions that will constitute the basis for future research collaborations.

## 2. Information regarding the organization of the event (max. 2 pages):

The Institute of Cellular Biology and Pathology “N. Simionescu” organized in the period 17 – 18 September 2008 the Exploratory Workshop (EW) of Biomedicine entitled “**Translation of basic research discoveries into therapeutic applications**”, as part of the conference “Diaspora in the Romanian Scientific Research”.

The sessions took place in the auditorium (150 places) of the institute. The Chair for the sessions was Dr. Maya Simionescu (Institute of Cellular Biology and Pathology “N. Simionescu”, Romania) and the Co-chair was Dr. Magdalena Pasarica (Endocrinology Laboratory, Pennington Biomedical Research Center, USA).

The **participants from Diaspora** invited to present lectures at workshop were:

**Magdalena Pasarica**, Ph.D., Endocrinology Laboratory, Pennington Biomedical Research Center, Louisiana State University System, Baton Rouge, Louisiana, USA

**Jeanine Albu**, M.D., Ph.D., The New York Obesity Research Center, Saint Luke’s - Roosevelt Hospital Center, University Hospital of Columbia University, Columbia University College of Physicians and Surgeons, New York, USA;

**Alexandru Almasan**, Ph.D., Department of Cancer Biology, Bridge appointment with Department of Radiation Oncology, Taussig Cancer Center, Lerner Research Institute/ NB40, Cleveland, USA;

**Claudia Dumitru**, University of Duisburg-Essen, Medical School Essen, Germany;

**Vlad Cojocaru**, EML Research gGmbH, Heidelberg, Germany.

The **participants from Romania** invited to present lectures at workshop were:

**Maya Simionescu**, Institute of Cellular Biology and Pathology “N. Simionescu”, Bucharest, Romania;

**Constantin Ionescu-Tirgoviste**, M.D., Ph.D., National Institute of Diabetes, Nutrition and Metabolic Diseases “N. C. Paulescu”, Bucharest, Romania;

**Laurentiu M. Popescu**, Professor, M.D., Ph.D., Department of Cellular and Molecular Medicine, University of Medicine and Pharmacy “Carol Davila”, Bucharest, Romania;

**Stefan Szedlacek**, Ph.D., Department of Enzymology, Institute of Biochemistry of the Romanian Academy, Bucharest, Romania;

**Octavian Popescu**, Professor, Ph.D., Department of Molecular Genetics, Faculty of Biology and Geology, University “Babes-Bolyai”, Cluj-Napoca, Romania;

**Doina Popov**, PhD, Laboratory of Vascular Dysfunction in Diabetes, Institute of Cellular Biology and Pathology “N. Simionescu”, Bucharest, Romania;

**Bogdan Grigoriu**, M.D., PhD, University of Medicine and Pharmacy “Gr. T. Popa”, Iassy, Romania and INSERM U774, Pasteur Institute, Lille 59019, France;

**Elena Dragomir**, Ph.D., Laboratory of Biopathology and Pharmacology of Inflammation, Institute of Cellular Biology and Pathology “N. Simionescu”, Bucharest, Romania;

**Adrian Manea**, Ph.D., Laboratory of Molecular Biology and Pharmacology, Institute of Cellular Biology and Pathology “N. Simionescu”, Bucharest, Romania;

**Loredan Niculescu**, Ph.D., Laboratory of Lipoproteins and Atherosclerosis, Institute of Cellular Biology and Pathology “N. Simionescu”, Bucharest, Romania..

In addition, three other representatives of the Diaspora participated in the general discussions:

**Livia Poenaru**, Professor, Ph.D., Faculty of Medicine *Cochin Port-Royal*, University *Rene Descartes*, Paris, France;

**Manuela Neuman**, Ph.D., Biophysics & International Health, Department of Pharmacology & Institute of Drug Research, University of Toronto, Toronto, Canada; In Vitro Drug Safety & BioTechnology, MaRS Discovery District, Toronto, Canada;

**Magda Botez**, Ph.D., USA, President of the Preventive Medicine Foundation, Bucharest, Romania.

The EW was announced and presented on the ICBP web site [<http://www.icbp.ro/>], together with the detailed program, the list of participants and their contact details, in order to facilitate interactions and future collaborations. Posters of the workshop were displayed at different research centres and universities in Bucharest, as well as at the Romanian Academy. The brochure of the containing the program of the workshop and the abstracts of the invited lectures and posters was distributed to the participants registered. During the 2 days workshop, approximately 62 researchers from centres from Bucharest and the country, as well as from Diaspora, were present at the sessions.

Half of the total time (~ 8 h/day) allocated for the sessions was designated for scientific discussions, and half was covered by general discussions were present day issues related to the Romanian research system and different ways by which the researchers from Diaspora can contribute to its improvement and increased efficiency were debated.

3. The final program of the workshop:

**Exploratory Workshop**  
**“Translation of basic research discoveries into therapeutic applications”**  
**Bucharest, 17 – 18 September 2008**

**PROGRAM**

**Chair:** Maya Simionescu, Romania, **Co-chair:** Magdalena Pasarica, USA

**Wednesday, 17 September 2008**

**9.00 - 9.30**            **Welcome opening** – presentation of the participants, workshop’s agenda, presentation of ICBP-NS  
*Maya Simionescu, Romania*

**9.30 - 11.00**        **SESSION 1**  
**Obesity** – a new threat of the modern society

**Ectopic fat and metabolic risk**  
*Jeanine Albu, USA*

**Reduced oxygenation of adipose tissue in human obesity - evidence for rarefaction, macrophage chemotaxis and inflammation**  
*Magdalena Pasarica, USA*

**Coffee break**

**11.30-13.00**        **SESSION 2**  
**Patobiochemistry of diabetes** – the risk of pandemics

**Lights and shadows in exploration of the arterial smooth muscle cells dysfunction in hyperglycemia**  
*Doina Popov, Romania*

**A diary for the Romanian diabetic research**  
*Constantin Ionescu Tirgoviste, Romania*

**Inflammatory up-regulation of fractalkine and MCP-1 in human SMC under high glucose conditions**  
*Elena Dragomir, Romania*

**13.00-14.30**        **Lunch break**  
**Poster session and discussion with researchers**

**14.30 – 16.00**     **SESSION 3**  
**Cellular and molecular biology of the cancer**

**New insights into the regulation of apoptosis in hematopoietic tumor cells**  
*Alexandru Almasan, USA*

**Role of sphingolipids in cancer therapy**  
*Claudia Dumitru, Germany*

## Coffee break

- 16.30 – 17.30**      **Round table:** Chair: *Jeanine Albu, USA*
- Upgrading the scientific education and research in Romania?
  - Training the young Romanian researchers
  - Increasing the perspective of science from Romania
  - Accelerating the transfer of results from basic research to clinics

**Thursday, 18 September 2008**

**9.00 – 12.00**      **SESSION 4**  
**Cellular and molecular dynamics**

**The Cajal-like interstitial cells – a new type of interstitial cells**

*Laurentiu M. Popescu, Romania*

**What can we learn from computer simulations of biomolecular systems?**

*Vlad Cojocaru, Germany*

## Coffee break

**Analysis of molecular determinants of PRL-3, a protein tyrosine phosphatase involved in cancer metastasis**

*Stefan Szedlacek, Romania*

**Glyconectins – a primordial class of cell adhesion molecules involved in the emergence of multicellular organisms**

*Octavian Popescu, Romania*

**12.00 – 13.00**      **Poster session and discussion with researchers**

**13.00 – 14.00**      **Lunch break**

**14.00 – 16.00**      **SESSION 5**  
**Pathobiology of atherosclerosis – a continuous challenge of basic and clinical research**

**Endotheliopathy in atherosclerosis**

*Maya Simionescu, Romania*

**Endocan, a new marker for endothelial activation**

*Bogdan Grigoriu, Romania*

**Transcriptional regulation of NADPH oxidase in human aortic smooth muscle cells: role of renin-angiotensin system**

*Adrian Manea, Romania*

**Associations of apolipoprotein A5 with metabolic syndrome**

*Loredan Niculescu, Romania*

## Coffee break

- 16.30 – 17.30**      **Round table:** Chair: *Magdalena Pasarica, USA*
- Collaboration opportunities in the vision of Romanian researcher from inside the country and Diaspora
  - Joined teams for research
  - Applications for common national and international projects

## Conclusion

4. Final list of invited speakers (keyspeakers) – scientific title, name, surname, signature, country of origin, institution of origin, address, phone, fax, email, short presentation of their professional experience;

### **From Diaspora**

**Jeanine Albu**, M.D., Ph.D., The New York Obesity Research Center, Saint Luke's - Roosevelt Hospital Center, University Hospital of Columbia University, Columbia University College of Physicians and Surgeons, 1111 Amsterdam Ave, New York, NY 10025, USA; *E-mail*: [jba1@columbia.edu](mailto:jba1@columbia.edu)

*Professional experience*: Dr. Albu is Board-certified in Internal Medicine and in Endocrinology and Metabolism and has special expertise in the evaluation and treatment of obesity and diabetes mellitus. She is an *Associate Attending* in Medicine, a full time member of the Division of Endocrinology, Diabetes and Nutrition and the Chief of the Metabolism and Diabetes Clinic at the St. Luke's site of the St. Luke's-Roosevelt Hospital Center. Dr. Albu is also closely associated with the *Joslin* - affiliated Diabetes Clinic and the *Van Itallie Center* for Weight Management at the St. Luke's Roosevelt Hospital Center. Dr. Albu has been listed in the *Woodward and White's* Best Doctors in America, Northwest region. She is a member of the American College of Physicians, American Diabetes Association, Endocrine Society and North American Association for the Study of Obesity.

*Publications*: 153 original scientific articles and communications.

**Alexandru Almasan**, Ph.D., Department of Cancer Biology, Bridge appointment with Department of Radiation Oncology, Taussig Cancer Center, Lerner Research Institute/ NB40, 9500 Euclid Avenue, Cleveland, OH 44195, USA; *E-mail*: [almasaa@ccf.org](mailto:almasaa@ccf.org)

*Professional experience*: Genotoxic stress-induced signals for cell cycle control, cell death, and survival. *Current program*: DNA damage responses: radiation-regulated genes (focus on haematological and epithelial tumours); integration of cellular radiation responses: apoptosis and/or cell cycle control; apo2L/TRAIL: apoptosis signalling, biology, and potential for cancer therapy.

*Publications*: 22 main original scientific articles.

**Vlad Cojocaru**, Ph.D, EML Research gGmbH, Schloss Wolfsbrunnenweg 33, 69118 Heidelberg, Germany; *E-mail*: [Vlad.Cojocaru@eml-r.villa-bosch.de](mailto:Vlad.Cojocaru@eml-r.villa-bosch.de)

*Professional experience*: Structural dynamics of biologically relevant systems.

*Publications*: 4 main original scientific articles.

**Claudia Alexandra Dumitru**, Dr. rer. nat., University of Duisburg-Essen, Medical School Essen, Dept. of Molecular Biology, Hufelandstrasse 55, D-45122 Essen, Germany; *E-mail*: [claudia.dumitru@uni-due.de](mailto:claudia.dumitru@uni-due.de)

*Professional experience*: cancer research, signal transduction, apoptosis, TRAIL, Rhinovirus, p38MAPK, ceramide, irradiation; During the PhD years, her main project focused on TRAIL (TNF-Related Apoptosis-Inducing Ligand)- triggered signalling and particularly the early events occurring at the plasma membrane. In one of her earlier projects, she also investigated Rhinovirus- induced p38MAPK pathway and identified new members of this signalling cascade. She is currently interested in elucidating the topology and role of ceramide in gamma-irradiation-induced apoptosis.

*Publications*: 6 main original scientific articles.

**Magdalena Pasarica**, Ph.D., Endocrinology Laboratory, Pennington Biomedical Research Center, Louisiana State University System, Baton Rouge, Louisiana 70808, USA; *E-mail*: [pasarim@pbrc.edu](mailto:pasarim@pbrc.edu)

*Professional experience*: adipose tissue biology, human adult stem cells differentiation, viral induced obesity; dr. Pasarica's projects link her clinical training as a physician and her graduate school experience in cell and molecular biology research to perform patient-oriented research;



she is currently working on two studies. The first study (TAKE TIME) aims to determine changes in mitochondrial content and function in skeletal muscle of type 2 diabetes subjects treated with pioglitazone. In addition this study will determine changes in metabolic flexibility and insulin suppression of free fatty acids. The second study (ACTIV) aims to validate a paradigm for the evaluation of compounds and drugs that activate mitochondrial biogenesis in skeletal muscle. Family history positive and family history negative healthy young adult volunteers will be studied. The project will determine how short term aerobic exercise influences skeletal muscle mitochondrial content and function, metabolic flexibility, and insulin sensitivity.

*Publications:* 6 main original scientific articles.

### **From Romania**

**Elena Dragomir**, Ph.D., Laboratory of Biopathology and Pharmacology of Inflammation, Institute of Cellular Biology and Pathology “N. Simionescu”, 8, B.P. Hasdeu Street, Bucharest 050568, Romania; *Phone:* (+4021) 319.27.37; *Fax:* (+4021) 319.45.19; *E-mail:* [elena.dragomir@icbp.ro](mailto:elena.dragomir@icbp.ro)

*Professional experience:* role of aspirin in calcium homeostasis, oxygen reactive species and NO production in human endothelial cells exposed to high glucose; the effect of high glucose levels on cell adhesion molecules expression (ICAM-1, VCAM-1, E-selectin); the effects of aspirin and PPAR $\alpha$  activators on monocyte chemoattractant protein-1 (MCP-1) induced by high glucose levels in human endothelial cells; the mechanisms involved in over-expression of fractalkine and MCP-1 in human smooth muscle cells exposed to diabetic conditions.

*Publications:* 48 original scientific articles and communications.

**Bogdan Dragos Grigoriu**, M.D., Ph.D., University of Medicine and Pharmacy “Gr. T. Popa”, Iassy, Romania and INSERM U774, Institute Pasteur of Lille, Lille, France; *E-mail:* [b\\_grigoriu@hotmail.com](mailto:b_grigoriu@hotmail.com), [b\\_grigoriu@yahoo.fr](mailto:b_grigoriu@yahoo.fr)

*Professional experience:* endothelial cells, micro-environment in cancer, sepsis, mesotheliom, tuberculosis, diagnosis markers; endothelial activation markers to patients with cancer and sepsis; tumoral micro-environment and cancer progression; diagnosis markers in malignant pleural mesotheliom; markers in tuberculosis diagnosis and evolution.

*Publications:* 29 main original scientific articles.

**Constantin Ionescu-Tirgoviste**, M.D., Ph.D., Associate Member of the Romanian Academy Director of the National Institute of Diabetes, Nutrition and Metabolic Diseases “N. C. Paulescu”, 5-7 Ion Movila Street, Bucharest; *Phone:* (+4021) 210.84.99; *Fax:* (+4021) 210.22.95; *E-mail:* [cit@paulescu.ro](mailto:cit@paulescu.ro)

*Professional experience:* diabetology; various phenotypes of diabetes and endoplasmic reticulum of beta-cell; pathophysiological approach of metabolic syndrome using factorial analysis in an adult population from Romania; vascular risk factors and diabetic neuropathy; genetic studies of diabetes; association of cell adhesion molecule-1 with type I diabetes.

*Publications:* 181 original scientific articles and communications.

**Adrian Manea**, Ph.D., Laboratory of Molecular Biology and Pharmacology, Institute of Cellular Biology and Pathology “N. Simionescu”, 8, B.P. Hasdeu Street, Bucharest 050568, Romania; *Phone:* (+4021) 319.27.37; *Fax:* (+4021) 319.45.19; *E-mail:* [adrian.manea@icbp.ro](mailto:adrian.manea@icbp.ro)

*Professional experience:* study of cellular and molecular changes induced by diabetic conditions in pericytes; characterization of NADPH oxidase in pericytes; evaluation of signalling pathways involved in NADPH oxidase regulation in pericytes; modulation of the oxidative stress by different drug classes in vascular cells; role of NF-kB and AP-1 pathways in transcriptional regulation of NADPH oxidase in vascular smooth muscle cells; polymorphism of human p22phox gene in cardiac failure, hypertension, diabetes and obesity.

*Publications:* 37 original scientific articles and communications.

**Loredan Stefan Niculescu**, Ph.D., Laboratory of Lipoproteins and Atherosclerosis, Institute of Cellular Biology and Pathology “N. Simionescu”, 8, B.P. Hasdeu Street, Bucharest 050568, Romania; *Phone*: (+4021) 319.27.37; *Fax*: (+4021) 319.45.19; *E-mail*: [loredan.niculescu@icbp.ro](mailto:loredan.niculescu@icbp.ro)

*Professional experience*: lipoproteins-apolipoproteins; mechanisms of action of apolipoprotein A5 in lipid metabolism; oxidative modification of Lp in atherosclerosis and diabetes; Lp interaction with cells from arterial wall; experimental models of hyperlipidemia: gene engineering modified animals (transgenic and knock-out); role of antioxidants in prevention of plasma lipoproteins in atherosclerosis; gene polymorphisms in atherosclerosis, diabetes and metabolic syndrome (*APOA5*, *APOC3*).

*Publications*: 48 original scientific articles and communications.

**Laurentiu Mircea Popescu**, M.D., Ph.D., President of Academy of Medical Sciences, Head of Cellular and Molecular Medicine Department, University of Medicine and Pharmacy “Carol Davila”, Bucharest, Romania; *E-mail*: [lpopescu@jcmm.org](mailto:lpopescu@jcmm.org)

*Professional experience*: Cellular and Molecular Medicine; 166 publications (books, books chapters, treaties and courses, scientific papers published in ISI journals).

**Octavian Popescu**, Ph.D., Associate Member of the Romanian Academy, Head of Molecular Genetics Department, Dean of Faculty of Biology and Geology, University “Babes-Bolyai” Cluj-Napoca, 44, Gh. Bilascu (Republicii) Street, Cluj-Napoca 40015, Romania; *Phone*: (+40 264) 431.858; *Fax*: (+40 264) 431.858; *E-mail*: [opopescu@biolog.ubbcluj.ro](mailto:opopescu@biolog.ubbcluj.ro)

*Professional experience*: recombinant DNA technology; genetics; glycobiology: molecular recognition between glyconectins as a self-assembly adhesion pathway to multi-cellularity; molecular mark of structural phenotypes of carbohydrates from three proteoglycan-type glyconectins from porifera.

*Publications*: 68 main original scientific articles and communications.

**Doina Lucia Popov**, PhD, Associate Member of the Romanian Academy, Head of Laboratory of Vascular Dysfunction in Diabetes, Institute of Cellular Biology and Pathology “N. Simionescu”, 8, B.P. Hasdeu Street, Bucharest 050568, Romania; *Phone*: (+4021) 319.27.37; *Fax*: (+4021) 319.45.19; *E-mail*: [doina.popov@icbp.ro](mailto:doina.popov@icbp.ro)

*Professional experience*: Diabetes: biochemistry of advanced glycation end products of proteins, oxidative stress; modification of structure and function of capillaries and resistance arteries; dysfunction of signal transduction pathways that lead to abnormal contractile/relaxant responses of the arterial wall; hypertension associated with diabetes mellitus; platelets metabolism.

*Publications*: 152 main original scientific articles and communications, 7 book chapters.

**Maya Simionescu**, Director, Institute of Cellular Biology and Pathology “N. Simionescu”, 8, B.P. Hasdeu Street, Bucharest 050568, Romania; *Phone*: (+4021)319.45.18; *Fax*: (+4021) 319.45.19; *E-mail*: [maya.simionescu@icbp.ro](mailto:maya.simionescu@icbp.ro)

*Professional experience*: cardiovascular system in health and disease; vascular endothelium: cellular biology and pathology; microcirculation; vascular wall: functional-structural correlations; lung biology; patho-biochemistry of diabetes and atherosclerosis complications.

*Publications*: 350 scientific papers published in international peer-review journals; 55 chapters in international monographies, 2 monographies published by Plenum Press (co-editor), 2 monographies - The Publishing House of the Romanian Academy (co-editor and co-author).

**Stefan Szedlacsek**, Ph.D., Head of Enzymology Department, Institute of Biochemistry of the Romanian Academy, 296, Splaiul Independentei Street, Bucharest 77700, Romania; *Phone*: (+4021) 223.90.69; *Fax*: (+4021) 223.90.68; *E-mail*: [szedlacs@yahoo.co.uk](mailto:szedlacs@yahoo.co.uk)

*Professional experience*: The specific interest of the group is to understand the structure-function relationships of PTPs and their possible relevance for the physiological functions of PTPs. Using an enzyme kinetic approach, the group has obtained important results concerning

the interrelationship between intracellular regions of PTPm. In addition, the group crystallized and solved (in a highly successful international collaboration) the corresponding crystal structure of PTP-SL/BR7; the first structure of a receptor-like PTP with a single cytoplasmic domain.

*Publications:* 50 scientific papers published in international peer-review journals and communications, 1 chapter in *Methods in Enzymology*.

5. Final list of the participants – scientific title, name, surname, signature, country of origin, institution of origin, address, phone, fax, email.

### **From Diaspora**

**Botez Magda**, Ph.D., President of The Preventive Medicine Foundation, Bucharest, Romania; *E-mail:* [ambassador.magda.botez@gmail.com](mailto:ambassador.magda.botez@gmail.com);

**Neuman Manuela**, Ph.D., Biophysics & International Health, Department of Pharmacology & Institute of Drug Research, University of Toronto, Toronto, Canada; In Vitro Drug Safety & BioTechnology, MaRS Discovery District, 101 College Street, Suite 300, lab 351, Toronto, Ontario, Canada, M5G 1L7, *E-mail:* [manuela.neuman@utoronto.ca](mailto:manuela.neuman@utoronto.ca);

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### **From Romania**

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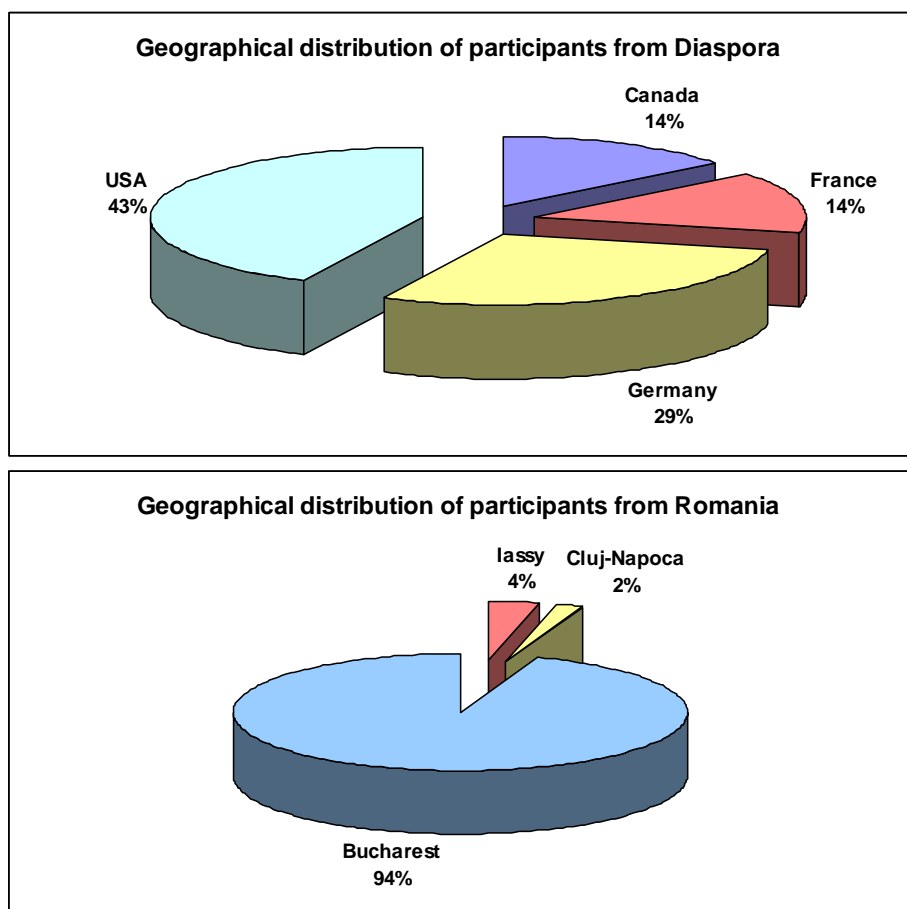
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6. Statistical information about participants (age structure, geographical distribution etc);

7 Diaspora - 3 SUA / 1 Canada / 2 Germany / 1 France

55 Romania – 1 Cluj-Napoca / 2 Iassy / 52 Bucharest



7. Portfolio of the workshop, web page (print), poster, pictures, any kind of materials offered for the event (CD copy)

The portfolio of the workshop is attached to the report:

- workshop poster;
- workshop brochure, containing the program and the abstracts of the invited lectures and posters;
- personalized badge and pen.

Project Director,

SIMIONESCU MAYA