

RESUME VITA



Dumitru Andrei Iacobas, PhD

Professor Emmeritus – Ovidiu University, Constanta, Romania
Research Professor and Director of the Personalized Genomics Laboratory
TAMUS Chacellor Research Initiative Center for Computational Systems Biology
Department of Electrical and Computer Engineering
Roy G Perry College of Engineering
Prairie View A7M University
daiacobas@pvamu.edu; tel. +1(936)261-9926

https://scholar.google.com/citations?hl=en&user=VFmHtewAAAAJ&view_op=list_works

Naturalized US Citizen (2011) Immigrated from Romania in 2001 on an O1 (extraordinary ability in the sciences) visa sponsored by the Albert Einstein College of Medicine, New York, NY.

PERSONAL STATEMENT

I am an expert in systems biology and PI/Co-PI/Investigator of university-, NIH-, NSF- and CURE-funded grants on functional and computational genomics. I published in biophysics, biomathematics, electrophysiology, genomics, pharmacology, mathematical ecology and even mathematical politics. Only my peer-reviewed genomics publications include so far: 84 articles, 2 edited books, 12 book chapters, 86 genomic datasets and description of microarray platforms, 7 bioprojects, 7 nucleotides and 24 proteins in the NCBI Gene Expression Omnibus. Since immigrated in the U.S.A. (2001), I was engaged in several collaborative genomic studies in which the collaborator provided the biological model and my laboratory contributed the genomics experiment, data processing and mathematical modeling. This strategy allowed me to cover projects on a wide diversity of cells and tissues from humans and animal (mouse, rat, rabbit, dog, chicken) models of: pulmonary hypertension, cancer, epilepsy, infantile spasms, multiple sclerosis, cardiac failure, cerebral malaria, glaucoma, Chagas and lyme diseases. My lab determined the transcriptomic alterations caused by exposure to chronic intermittent and constant hypoxia, microgravity, and various carcinogens and infectious germs (*Borrelia burdorferi*, *Trypanosome cruzi*, *Plasmodium berghei*, *Enterococcus faecium*). I have optimized the experimental protocol and normalization, introduced the “**genomic fabric paradigm**”, “**Principle of transcriptomic stoichiometry**” and the “**gene master regulator approach**”. I have also developed mathematically advanced analytical tools and associated software programs to quantify the transcriptome topology and its remodeling during maturation, progression of a disease and in response to external stimuli or a treatment.

In my studies, I was honored by the collaboration of outstanding scientists from: Albert Einstein College of Medicine (NY), Bar-Ilan University (Israel), Baylor College of Medicine (TX), Boehringer Ingelheim Pharma (Germany), Carol Davila University of Medicine (Romania), Chagas Institute (Brazil), Duke University (NC), Federal Universidad do Rio de Janeiro (Brazil), Fishawack Health Pharmaceuticals (UK), Food and Drug Administration (MD), Fundação Oswaldo Cruz (Brazil), Humboldt Universitet (Germany), Katholieke Universiteit (Belgium), Leibnitz Institute for Neurobiology (Germany), Mario Negri Institute (Italy), MD Anderson Cancer Institute (TX), New Vision University (Georgia), New York Institute of Technology (NY), New York Medical College (NY), NIH-National Institute for Child Health and Development (MD) Prairie View A&M University (TX), Queensland University (Australia), Ruhr University (Germany), Sydney University (Australia), Universita di Bari (Italy), Universidad de Caldas (Colombia), Universidad de Lujan (ARG), Universidad del Quindio (Colombia), University of Bucharest (Romania), University of Geneva (SWI), University of Louisville (KY), University of Nevada (NV), University of Patras (GRE), University of Szeged (HUN), University of Washington (WA), (University of Wroclaw (POL), Vanderbilt University and Virginia Commonwealth University Medical Center (VA). The large number of research partners and the wide spectrum of their academic institutions indicate my collaborative skills and the audience of the experimental and theoretical methods I have developed.

EDUCATION – PhD Physics, University of Bucharest (Romania) 1994

ACADEMIC APPOINTMENTS

2018 – present: **Research Professor** of Systems Biology, ECE, Roy G Perry College of Engineering, PVAMU
2013 - 2017 **Associate Professor** of Pathology, New York Medical College, Valhalla, NY
2006 - 2013 **Assistant Professor** of Neuroscience, Albert Einstein College of Medicine, New York, NY
2001 - 2006 **Visiting Associate Professor** of Neuroscience Albert Einstein College of Medicine, Bronx, NY
1990- 2001 **Assistant Professor** of Biophysics, Biostatistics and Medical Informatics, Ovidius University School of Medicine, Constanta, Romania
1981 - 1990 **Instructor** Biophysics and Physiology, Carol Davila University of Medicine and Pharmacy – School of Medicine, Bucharest, Romania (1981-1990)
1978 - 1981 **Lecturer** Physics & Biophysics, Natl Coll of Natural Sciences Mihai Eminescu, Constanta,
1976 - 1978 **Lecturer** Physics, Natl Coll of Mathematics and Physics, Mircea cel Batran, Constanta, Romania

ADMINISTRATIVE APPOINTMENTS

2018-present **Director** of the Personalized Genomics Laboratory, CCSB, PVAMU, Prairie View, TX 77446
2013-2017 **Director** of Systems Biology Core laboratory, New York Medical College, Valhalla, NY 10595
2002 - 2006 **Associate-Director** Molecular Biology & Neurogenomics Core Laboratory, DP Purpura Department of Neuroscience, Albert Einstein College of Medicine, New York, NY
2002 - 2005 **Co-Director** Biometry Core, Kennedy Center for Research in Mental Retardation and Human Development, New York, NY
1990-2001 **Head Division** Biophysics, Biostatistics and Medical Informatics, Ovidius University, Constanta
1990-1992 **Scientific Secretary** Ovidius University Medical School, Constanta, Romania
1990-1992 **Director** Nuclear Medicine Laboratory, Constanta District University Hospital, Constanta, Romania
1978-1981 **Associate Principal** for Student Affairs, National College “M. Eminescu”, Constanta, Romania
1977-1978 **Director** Electron Microscopy Laboratory, Central Institute for Sheep Research, Constanta, Romania

EXPERIENCE AND ACHIEVEMENTS IN ARTS AND SCIENCE

Mathematics – Physics – Chemistry – Biology

- **Teaching:** Biophysics, Biostatistics, Cellular Biophysics, General Physics, Genomics, Human Physiology and Clinic Laboratory, Mathematical Modeling of Biological Systems, Medical Informatics, Molecular Biophysics, Systems Biology at Romanian and NY medical schools.
- **\$\$\$ in Grant support** for researches in mathematics-physics-chemistry applications to biology and medicine awarded by agencies from USA, Romania, Colombia, Germany, Brazil and Italy
- **Peer-reviewed publications:** 3 patents, 8 books, 19 book chapters, 14 proceedings, 106 articles, 82 genomic databases etc (list attached), most as single, first or corresponding author.
- **Invited seminars and lectures** at numerous academic institutions worldwide (list attached).
- **Organizer, chair and presenter of international schools and conferences** (list attached).
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Social Work, Behavioral and Political Sciences

- **Principal Investigator** Project 4: “Survey of women’s health in the city of Constanta”, 01/01/98-02/28/01 within **AIHA/USAID Program:** Healthy Communities/Women's Wellness Partnership.
- **Honorary Citizen** of Louisville, **KY** (1999), commissioned by David L Armstrong, Mayor
- **Honorary Citizen** of Jefferson County, **KY** (1999), com by Hon R Jackson, County Judge/Executive
- **Latinoamericano honorario** awarded by the University of Lujan, **Argentina**

- **Book: Iacobas DA.** (1995) Social pathology and therapy, Bucharest: Bucura Mond Ltd. ISBN 973-96889-5-0 (1st European PHARE Prize for “Young scientists and politicians in the civil society”).

Language & Communication, Music & Theatre

- **Written:** 1 drama-script, 1 musical script, 3 novels, countless poems
- **Produced and Directed:** 1 student drama, 1 student musical
- **Presented:** “Universe, Matter, Life”, 1h weekly series (1988) on the (Romanian) National TV
- **Social and political debates** on (Romanian) national and local media (TV, radio, magazines, journals)

EDITORIAL ACTIVITY

- Editor:** - Tilia Press International Ltd., Constanta, **Romania** (1997-2001)
- Guest Editor:** - 2021-2022 Special MDPI CIMB Issue “Molecules at play in cancer”
https://www.mdpi.com/journal/cimb/special_issues/molecules_cancer
 - 2021 Special MDPI Genes Issue “Genomic fabric remodeling in neurological diseases”,
https://www.mdpi.com/journal/genes/special_issues/Genomic_Fabric
- Associate Editor:** - Frontiers in Integrative Neuroscience (2007-present),
<https://www.frontiersin.org/journals/integrative-neuroscience#editorial-board>
 - Current Issues in Molecular Biology (2020-present),
<https://www.mdpi.com/journal/cimb/editors>
 - Series “Advances in Ecological Sciences/Ecosystems and Sustainable Development”,
 WIT Press, Ltd., Southampton, **UK**; 2001-2005.
- Section Editor** - Bioinformatics and Systems Biology Section (2020 – present)
<https://www.mdpi.com/journal/cimb/sectioneditors/bsb>
- Book Reviewer:** - Advances in Medical Physics, Biophysics and Biomaterials, Male Centrum,
 Bratislava, **Slovak Republic**; 1997

- GRANT REVIEWER:** 2010 NIH SBIR Topic 110
 2010-2017 General Directorate for Health and Technologies Research, Ministry of
 Labor, Health and Social Policies, **Italy**
 2011-2017 National Council for Scientific Research, **Romania**
 2014-2017 National Science Centre, **Poland**

ELECTED POSITIONS

- 2019 **Professor Emeritus** – Ovidius University, Constanta, Romania by HS 112/02/28/2019
- 2012 **Chair** Colloquium “Intercellular Signaling and Myelination”, 43rd Ann Meeting of the American Society
 for Neurochemistry, Baltimore, MD, March 03-07/2012.
- 2002-2011 **Board of Microarray Core Directors**, Academy for Medical Development and Collaboration
- 2001-2007 Member Microarray Research Group of the Intl Assoc of the Biomolecular Research Facilities
- 2002 **Chair** Tutorial Session 13 International Symposium “Biomolecular Technologies”, Austin, TX
- 2001, 2003, 2005 **International Scientific Advisory Board and Session Chair** 3rd, 4th and 5th International
 Conferences “Ecosystems & Sustainable Development”, Alicante (**Spain**), Siena, (**Italy**), Cadiz, (**Spain**)
- 2001 **International Scientific Advisory Board and Session Chair** 1st International Conference on Sustainable
 Planning and Development, Skiathos Island, (**Greece**)
- 2001 **International Scientific Advisory Board and Session Chair** 13th International Conference of the
 International Society for Environmental Epidemiology, Garmisch-Partenkirchen, (**Germany**)
- 1999 **International Advisory Group for the introduction of a Biomathematics MS in Colombia**
- 1995, 1996 **Chair 1st and 2nd International Conferences** “Sustainable Development: System Analysis in
 Ecology”, Dnepopetrovsk (1995), Sevastopol (1996), (Ukraine)
- 1994-2000 **Founding President of Eastern and Central European Society of Mathematical Ecology.**

- 1993-1997 **Founding President** of the charitable organization “Heart and Soul”, Constanta, Romania
 1993-1997 **Founding President** of SIMPAC Foundation to help young investors understanding the market economy

TEACHING EXPERIENCE

A. EDUCATIONAL LEADERSHIP ROLES

- 1990-2001 **Founding Head** of Division of Biophysics, Biostatistics and Medical Informatics, Ovidius University School of Medicine, Constanta, Romania
 1978-1981 **Associate Principal** for Students Affairs, National College of Natural Sciences “M. Eminescu”, Constanta, Romania

B. DIDACTIC COURSEWORK

1) Undergraduate level:

- “Mircea cel Batran” National College of Mathematics and Physics, Constanta, Romania*
 - Physics, Physics Laboratory (20h/week) 1976-1978
“M. Eminescu” National College of Natural Sciences, Constanta, Romania
 - Physics, Biophysics, Physics Laboratory (18h/w) 1978-1981
“Ovidius” University Faculty of Natural Sciences, Constanta, Romania
 - Biophysics Lectures in Romanian, English and French for Biology and Ecology majors, credit 2 semester hours 1990-2001
 - General Physics for foreign MD students in English and French, credit 2 semester hours 1992-1994
 - Mathematical Modeling of Biosystems for Biology and Ecology majors, credit 2 semester hours 1994-2000
Prairie View A&M University, College of Engineering
 - Biophysics and Medical Physics for Bioengineers, Special topic, ELEG 4103 2018
 - Computational Systems Biology 2021

2) Postgraduate level:

- “Carol Davila” University of Medicine & Pharmacy, Bucharest, Romania*
 - Biophysics - practical classes, credit 2 semester hours 1981-1988
 - Seminars of Bioinformatics, credit 2 semester hours 1981-1988
 - Physiology & Clinical lab - practical classes, credit 2x2 semesters hours 1988-1990
 - Computational Methods in Physiology – Open course, credit 2 semester hours 1988-1990
 - Connexins, Calcium waves and myelination, 2h/y Invited lecture within the optional Neuroscience course of Prof. L. Zagrean, Chair Department of Physiology 2008-2009
“Ovidius” University School of Medicine, Constanta, Romania
 - Biophysics (in Romanian, English and French) for MD and DDR, credit 2 semester hours 1990-2001
 - Biostatistics (in Romanian and English) for MD and DDR students, credit 2 semester hours 1992-2001
 - Medical Informatics (in Romanian and English) for MD and DDR students, credit 2 semester hours 1992-2001
Universidad de Caldas, Manizales, Colombia
 - Bioestadística médica (in Spanish), 14 hrs, Intensive Introductory Course within an exploratory MS program in biomathematics in Colombia. 1999
Albert Einstein College of Medicine of Yeshiva University, Bronx, NY
 - "Transcriptomics" lecture within collective course "Modern techniques applied to neuroscience",

- Credit 6h/year 2003-2012
- "Mathematical modeling of intercellular communication", 2hrs, Kennedy Center Computational Neuroscience Club 2005
- "Microarray technology between fishing expedition and hypothesis driven research", 2h, Kennedy Center Computational Neuroscience Club 2005
- New York Medical College – School of Medicine, Valhalla, NY***
- "Microarrays to explore functional genomic fabrics" within collective course "Bioinformatics and Functional Genomics", credit 2h/y 2013-2016
- New York Medical College – Graduate School of Basic Medical Sciences, Valhalla, NY***
- "Ecosystems stability and evolution" within collective course "Evolutionary Medicine", Credit 2h/y, 2016-2017
- Prairie View A&M University – "Radiogenomics"*** 2022

C. CURRICULUM DEVELOPMENT WORK

Introduced the following new courses:

"Ovidius" University, Constanta, Romania

- Biophysics Lectures in Romanian, English and French for MD, DDR, Biology and Ecology students,
- Biostatistics Lectures in Romanian and English for MD and DDR students,
- General Physics for foreign MD students in English and French,
- Mathematical Modeling of Biosystems for Biology and Ecology students

University of Caldas, Manizales, Colombia

- Bioestadística médica (in Spanish), 14 hrs, Intensive Introductory Course within an exploratory MS Program in biomathematics in Colombia

Prairie View A&M University, Prairie View, TX

- "Biophysics and Medical Physics for Bioengineers", Special topic, ELEG 4103

D. MENTORING AND NON-DIDACTIC TEACHING

1. Former academic institutions

- mentored numerous postdocs, postgraduate (PhD, MD, PharmD, MS) and undergraduate students at Carol Davila University of Medicine and Pharmacy (Bucharest), Ovidius University (Constanta), Albert Einstein College of Medicine (New York, NY) and New York Medical College (Valhalla, NY).
- mentored also numerous visiting students from Australia, Brazil, Italy, Slovak Republic

2. PVAMU

- mentor of Dr. Victoria Mgbemena, Assist Prof Dept Biology
- mentor Dr. Kareen Menezes, scientist RAISE
- mentored the Computer Engineering student Nneka Ede, recipient of the **PVAMU – Undergraduate scholarly research award** with the project "Development of Cancer GMR Software Package for Personalized Cancer Gene Therapy.
- mentor of the Electrical and Computer Engineering graduate student Mohamed Ahmed with the project "Development of a mobile APP to optimize medical diagnostic"
- organizer of the public CCSB seminars on Systems Biology

E. CONTINUING MEDICAL EDUCATION (CME accredited seminars)

"Gene Master Regulators approach may provide the most legitimate targets for cancer gene therapy",

Baylor College of Medicine **Division of Pediatric Hematology-Oncology**, Houston 10/25/2018, host: Dr. T Horton.

“The personalized GMR approach of thyroid cancer gene therapy”, **MD Anderson Cancer Center**, University of Texas, Houston, TX, 1/26/2018. Host: Dr. G. Calin, Co-Director, The RNA Interference and non-coding RNA Center.

“Hierarchal gene master regulators of papillary and anaplastic thyroid cancer phenotypes”, **New York Medical College Dept. of Otolaryngology**, Valhalla, 9/9/2017, host Dr. A Moscatello, Chair

“Remodeling of host and pathogen genomic fabrics’ topology and interplay in infections”. New York Medical College, **Dept. of Microbiology and Immunology**, Valhalla, NY. 3/12/2015, Host. Dr. Cabello F.

“Genomic fabric remodeling in microflora-induced colon cancer”, **Gastroenterology Grand rounds**, New York Medical College, Valhalla, NY. 12/11/2014, Host. Dr. E. Lebovics, Chief Division of Gastroenterology and Hepatobiliary Diseases, Department of Medicine.

“Mathematics of the cardiovascular disorders – correlation between pathophysiological and genomic data”, Cardiology fellow’s research conference, New York Medical College, **Heart Failure & Pulmonary Hypertension**, Department of Medicine, Valhalla, NY. 12/3/2014, Host. Dr. G. Lanier, Director.

“Remodeling of Cardiac Genomic Fabrics in Disease and Treatment”, **Pharmacology Dept.**, New York Medical College, Valhalla, NY. 12/11/2013. Host. Dr. ML Schwartzman, Chair.

“Developmental sex dichotomy of the heart rhythm determinant gene fabric”, 6/28/2010. Albert Einstein College of Medicine, **Department of Obstetrics & Gynecology and Women's Health**. Host: Dr. A Etgen.

“Topology and dynamics of the myelination genomic fabric”. 12/4/2009. Albert Einstein College of Medicine, **Department of Neuroscience**. Host: Dr. D.C. Spray.

“3D mathematical model of intercellular Ca²⁺ signaling in healthy and diabetic rat bladder and corpora”. 2/8/2009. Albert Einstein College of Medicine, **Department of Urology**. Host: Dr. A. Melman Chair.

“Alteration of transcriptomic networks in adoptive-transfer experimental autoimmune encephalomyelitis”. 6/30/2007. Albert Einstein College of Medicine, **Department of Neuroscience**. Host: Dr. E. Scemes.

“Large scale transcriptomic analysis using oligonucleotide and cDNA microarrays”, 6/11/2006. Albert Einstein College of Medicine, **Department of Genetics**. Host: A. Massimi, Director Microarray Core.

“Cancer patterns in the pre-Hilbert space of standard gene expressions”, **Division of Oncology**, Montefiore Hospital, Bronx, NY. 28/07/2000. (Hosted: Dr. L. Augenlicht).

“¿Porque estudiar las biomatemáticas en las ciencias de la salud?” **Facultad de Enfermería** Universidad Libre de Pereira. Pereira, **Colombia**. 12/05/1999 (Host: Prof. Liliana E Achury, Dean)

Visiting Faculty

- Visiting Associate Professor, Dept. of Neuroscience, Albert Einstein College of Medicine, **NY** (2001 – 2006)
- Visiting Associate Professor, Dept. Experimental Biophysics, Humboldt University, Berlin, **Germany**, 1996 (2 months sponsored by the German Academy)
- Visiting Assistant Professor, Institute of Biophysics, University of Ljubljana, Ljubljana, **Slovenia**, 1993 (3 weeks sponsored by the University of Ljubljana)
- Visiting Assistant Professor, Dept. Biophysics & Nuclear Medicine, Université Bretagne Occidentale School of Medicine, Brest, **France**, 1992 (2 months sponsored by the European Tempus Program).

PUBLICATIONS

I. STEM PUBLICATIONS

A. PATENTS

- 3 **Iacobas DA**, Amuzescu B. (1991). Device to clean and stabilise the patch-clamp pipettes (Romanian: Instalație pentru curățirea și stabilizarea micropipetelor de patch-clamp). Patent No.108844 (Romania).
- 2 **Iacobas DA**, Amuzescu B, Ciontu C. (1988). Procedure to fabricate the micro-pipettes for single-channel current recording (Romanian: Procedeu de realizare a micropipetelor pentru culegerea curenților ionici unicanal din biomembrane). Patent no. 102203 (Romania).
- 1 **Iacobas DA**, Ailoaie, C. (1986). Micro-pipette puller (Romanian: Aparat pentru confecționarea micropipetelor din sticlă). Patent no. 96704 (Romania).

+ numerous technical innovations in biophysics, nuclear medicine and genomics

B. BOOKS

- 9 **Iacobas DA** (Editor, 2021 – 2022) "Molecules at Play in Cancer", Special Issue of the MDPI journal CIMB, https://www.mdpi.com/journal/cimb/special_issues/molecules_cancer
- 8 **Iacobas DA**, Spray DC (Editors, 2021) Genomic Fabric Remodeling in Neurological Diseases. Genes Special Issue. https://www.mdpi.com/journal/genes/special_issues/Genomic_Fabric
- 7 **Iacobas DA**. (2000, 4th English edition). Ideas and Methods in the Physics of the Living. (total 7 editions: 4 English + 3 Romanian), Constanta: Tilia Press Intl. Ltd. ISBN 973-98470-6-4
- 6 **Iacobas S**, **Iacobas DA** (2000). Pharmacology of the nervous system (in Romanian). Constanta: Tilia Press Intl. ISBN 973-98470-8-0.
- 5 **Iacobas DA**, **Iacobas S** (1998) Electrophysiology of the cell membrane (in Romanian) Constanta: Tilia Press Intl., Ltd. ISBN 973-98470-1-3.
- 4 **Iacobas DA**. (1997, 3rd English edition). Medical Biostatistics. (Total 7 editions: 3 English + 2 Romanian + 1 Spanish + 1 Greek), Bucharest: Bucura Mond. ISBN 973-97977-3-3.
- 3 **Iacobas DA**. (1996, 2nd English edition) Molecular Biophysics. (Total 4 editions: 2 English + 2 Romanian) Bucharest: Bucura Mond. ISBN 973-97977-0-9
- 2 **Iacobas DA**. (1996, 2nd English edition) Cell Biophysics. (Total 4 editions: 2 English + 2 Romanian), Bucharest: Bucura Mond. ISBN 973-97977-2-5
- 1 **Iacobas DA**. (1995) Social pathology and therapy - A systems approach on social and political transition in post-communist Romania (in Romanian), Bucharest: Bucura Mond Ltd. ISBN 973-96889-5-0 (*1st European PHARE Prize for "Young scientists and politicians in the civil society"*).

+ **Iacobas DA** (1993-2000, Editor) *Practical Works of Biophysics*. Ovidius University Press, (7 Romanian + 5 English editions).

C. BOOK CHAPTERS

- 20 **Iacobas DA**, Mgbemena VE, **Iacobas S**, Menezes KM, Wang H, Saganti PB. (2021) Genomic Fabric Remodeling in Metastatic Clear Cell Renal Cell Carcinoma (ccRCC): A New Paradigm and Proposal for a Personalized Gene Therapy Approach. In: Jiangnan Peng (Editor) "Prime Archives in Cancer Research", 2nd Edition.
- 19 **Iacobas S**, Amuzescu B, **Iacobas DA** (2021). Drug discovery, tools and theory Transcriptomic uniqueness and commonality of the ion channels and transporters in the four heart chambers, In: Ciria C Hernandez (Ed) "Channelopathies: molecular and genetic mechanisms", <https://www.nature.com/collections/gjifhfcha>
- 18 **Iacobas DA** (2021) Biomarkers, master regulators and genomic fabric remodeling in a case of papillary thyroid carcinoma. In: Susana Nunez Silva (Ed). "Genetic Perspectives in Thyroid Cancer",

- <https://www.mdpi.com/books/pdfview/book/3607>. ISBN 978-3-0365-0544-2 (Hbk); ISBN 978-3-0365-0545-9 (PDF) <https://doi.org/10.3390/books978-3-0365-0545-9>
- 17 Nisimura LM, Coelho LL, de Melo TG, de C. Vieira P, Victorino PH, Garzoni LR, Spray DC, **Iacobas DA**, Iacobas S, Tanowitz HB, Adesse D. (2020). Trypanosoma cruzi promotes transcriptomic remodeling of the JAK/STAT signaling and Cell Cycle pathways in myoblasts. In: N Yoshida, MC Taylor & N Lander (Eds) *Unravelling T. Cruzi Biology*, Lausanne: Frontiers Media, SA, <https://www.frontiersin.org/research-topics/10322/unravelling-t-cruzi-biology>
 - 16 **Iacobas DA**, Iacobas S, Nebieridze N, Velisek L, Veliskova J (2020): Estrogen protects neurotransmission transcriptome during status epilepticus. In: T Ubuka, I Parhar and V Trudeau (Eds) *Steroids and the Brain*, Lausanne: Frontiers Media, SA, <https://www.frontiersin.org/research-topics/5979/steroids-and-the-brain>.
 - 15 Veliskova J, **Iacobas DA**, Iacobas S, Velisek L. (2017). Hormonal modulation of neuronal excitability. In *Reference Module in Neuroscience and Biobehavioral Psychology*, Elsevier, 1-6. <http://dx.doi.org/10.1016/B978-0-12-809324-5.00082-1>
 - 14 **Iacobas DA**, Iacobas S, Chachua T, Goletiani C, Sidyelyeva G, Velišková J, Velišek L. (2013). Prenatal corticosteroids modify glutamatergic and GABAergic synapse genomic fabric: Insights from a novel animal model of infantile spasms. In RC Melcangi, GC Panzica (Editors): *Steroids and the Nervous System*, Wiley Online Library. <https://onlinelibrary.wiley.com/doi/epdf/10.1111/jne.12061>
 - 13 Iacobas S, Neal-Perry G, **Iacobas DA** (2013). Analyzing the cytoskeletal transcriptome: sex differences in rat hypothalamus. In Rolf Dermietzel (editor): *The Cytoskeleton: Imaging, Isolation, and Interaction, Neuromethods*, 79: 119:133, Springer New York Heidelberg Dordrecht London, ISBN 978-1-62703-266-7.
 - 12 Iacobas S, **Iacobas DA** (2012). Effects of Chronic Intermittent Hypoxia on Cardiac Rhythm Transcriptomic Networks. In: L XI & TV Serebrovskaya (Editors): *Intermittent Hypoxia and Human Diseases*, New York: Springer. Pp. 15-28. ISBN 978-1-4471-2906-6 (eBook)
 - 11 Adesse D, Goldenberg RC, Fortes FS, **Iacobas DA**, Iacobas S, Campos de Carvalho AC, de Nazareth M, Huang H, Tanowitz HB, Garzoni LR, Spray DC. (2011). Gap junctions and Chagas' disease. In Louis M Weiss & Herbert B Tanowitz (Editors): *Chagas Disease, Part B*, London Academic Press (by Elsevier), ISBN: 978-0-12-385895-5
 - 10 Thi MM, **Iacobas DA**, Iacobas S, Spray DC. (2008). Fluid shear stress regulates vascular endothelial growth factor gene in osteoblasts. In Mone Zaidi (editor): *Skeletal Biology and Medicine, Part B*, Wiley-Blackwell. ISBN: 978-1-573-31728-3.
 - 9 **Iacobas DA**, Iacobas S, Spray DC (2005). Use of cDNA arrays to explore gene expression in genetically manipulated mice and cell lines. In S Dhein, FW Mohr & M Delmar (Editors): *Practical Methods in Cardiovascular Research*, Berlin-Heidelberg-New York: Springer-Verlag. ISBN: 3-540-40763-4. pp. 907-915. https://doi.org/10.1007/3-540-26574-0_45
 - 8 **Iacobas DA**, Urban M, Iacobas S, Spray DC (2001). The “patholog” of the gene expression profile in evaluating the ecotoxin effects. In C Brebia, Y Vilacampa & J Uso (Editors): *Ecosystems and Sustainable Development*, WIT Press, Southampton, U.K. 733-742.
 - 7 **Iacobas DA**, Iacobas S. (1997). Evaluation and validation of the health care system by the Theory of Pathologic. In E Kukurova (Editor): *Advances in Medical Physics, Biophysics and Biomaterials*, Bratislava (Slovak R) Male Centrum, pp. 175-179, ISBN-80-967064-7-0.
 - 6 **Iacobas DA** (1997). Instead of introduction... In E Kukurova (Editor): *Advances in Medical Physics, Biophysics and Biomaterials*, Bratislava (Slovak R) Male Centrum, p. 1, ISBN-80-967064-7-0.
 - 5 **Iacobas DA**. (1986). La thermodynamique des reseaux a l'analyse des phenomenes de transport dans les ecosytemes. In M Godeanu (editor): *Aspects energetiques et informationels dans les systhems vivants*, pp. 138-143.
 - 4 Iacobas S, **Iacobas DA**. (1986). Le pathologique - synthese des informations sur l'organisme humain. In: M Godeanu (Editor): *Aspects energetiques et informationels dans les systhems vivants*, 127-134.
 - 3 Spataru C, **Iacobas DA**. (1988). L'ordinateur personnel du medecin à la surveillance de l'évolution du malade. *Archives de l'Union Medicale Balkanique*. Tome XXVI. No.1-4. 118-119.
 - 2 **Iacobas DA**, Sanda Iacobaş. (1985). Algoritm pentru optimizarea pe computer a unor tratamente medicamentoase. In A Florescu & E Niculescu Mizil (Editors): *Cibernetica aplicata*, Editura Academiei, Bucuresti, p.117-122
 - 1 **Iacobas DA**, Iacobas S. (1980). Model of a theory of ecological efficiency (Romanian) In A Ionescu, R Stancu (Editors): *Ecologie si protectia ecosistemelor*. CMSN Pitesti, Romania, 62-66.

D. ARTICLES

- 108 Iacobas, S.; **Iacobas, D.A.** How to select personalized 3-gene target panels for cancer-free prostate. *Curr Issues in Molecular Biology*.
- 107 Iacobas, S.; **Iacobas, D.A.** Personalized 1-2-3-Gene(s) Tickets to Cancer-Free Prostate. *Preprints* **2021**, 2021100003 (doi: 10.20944/preprints202110.0003.v1).
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E. CONFERENCE PROCEEDINGS

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F. ONLINE COMMUNICATING SCIENTIFIC RESULTS

11 **DA Iacobas** (2020): Custom-made cancer gene therapy, 4th Intl. Symp. Stop Cancer, Bucharest. Videoconference. <https://www.stop-cancer-romania.ro/simpozion2020/prezentari-2020/prezentari-2020video/>

10 Mgbemena V, **Iacobas DA**, Wang H, Menezes K, Bush L, Saganti PB. Exploring New Combination Therapy Methods using the Genomic Fabric Paradigm in a Metastatic Prostate Cancer Model. 27th Scientific Retreat of the Prostate Cancer Foundation. 10/20-23/2020. <https://www.morressier.com/article/role-tumor-suppressors-cytokine-profiles-prostate-cancer-cells/5f69edb69b74b699bf38c680?>

9 Menezes M K, Mgbemena V, Bush L, Wang H, **Iacobas DA**, Saganti PB. Designing novel radiation protocols and drugs for prostate cancer using the Genomic Fabric Paradigm. 27th Scientific Retreat of the Prostate Cancer Foundation. 10/20-23/2020. <https://www.morressier.com/article/designing-novel-radiation-protocols-drugs-prostate-cancer-using-genomic-fabric-paradigm/5f69edb69b74b699bf38c67f?>

8 **Iacobas DA.** (2019 **video conference**) "The Gene Master Regulators of tissues and cells collected from patients with blood, lung, kidney, prostate or thyroid cancer", <http://www.stop-cancer-romania.ro/prezentari/prezentari-2019/>

7 **Iacobas DA.** (2018 **video conference**) "Gene Master Regulators in Cancer Gene Therapy", <http://www.stop-cancer-romania.ro/prezentari/prezentari-2018/>

6 Iacobas S, **Iacobas DA** (2011) Remodeling and crosstalk of functional genomic fabrics in multiple sclerosis. Conference: Great Lakes Bioinformatics (GLBIO) Conference 2011, Volume: 2, https://www.researchgate.net/publication/266156076_Remodeling_and_crosstalk_of_functional_genomic_fabrics_in_multiple_sclerosis

5 **Iacobas DA**, Iacobas S (2011) Prominent Gene Analysis in refining, quantifying and deconvoluting functional pathways. Conference: Great Lakes Bioinformatics (GLBIO) Conference 2011, Volume: 2, https://www.researchgate.net/publication/266154228_Prominent_gene_analysis_in_refining_quantifying_and_deconvoluting_the_functional_pathways

4 Iacobas S, Thomas NM, Spray DC, **Iacobas DA.** (2010). Connexin-dependent regulatory networks in controlling the myelination gene fabric in mouse brain. 1st Intl Online and Onsite Ann Conf of Models of Human Diseases. http://www.vetbiotech.com/resources.php?id=29&p=1&site_cat=26

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2 Knudson K, Brooks AI, Griffin C, Iacobas DA, Johnson K, Khitrov G, Levy S, Massimi A, Nowak N, Viale A, Grills G. (2003). A current profile of microarray laboratories: 2002-2003 Microarray Research Group Survey of laboratories using microarray technologies.

http://www.abrf.org/ResearchGroups/Microarray/EPosters/MARG_Survey_Poster2003.pdf

1 Knudson KL, Griffin C, Brooks A, **Iacobas DA**, Johnson K, Khitrov G, Lilley K, Massimi A, Viale A, Zhang W, Bao Y, Grills G. (2002). Factors contributing to variability in DNA microarray results: the ABRF Microarray Research Group 2002 Study. *J Biomol Tech*. Posters on line http://www.abrf.org/ResearchGroups/Microarray/EPosters/MARG_2002_Poster.pdf

+ Numerous national and local TV radio talk shows, including 1 h weekly National TV broadcasting of *Universe, Matter, Life*” in 1987

G. INVITED STEM LECTURES AND SEMINARS

A. International

T Kobets, J-D Duan, KD Brunnemann, **DA Iacobas**, S Iacobas, E Vock, U Deschl, GM Williams (2020) Alterations of Expression of RNA Modification Regulators by Carcinogens in the Alternative Chicken Egg Model, Conference, INTERNATIONAL JOURNAL OF TOXICOLOGY, 39(1), 56-57, SAGE PUBLICATIONS INC

DA Iacobas (2020): Custom-made cancer gene therapy, 4th Intl. Symp. Stop Cancer, Bucharest. Videoconference. <https://www.stop-cancer-romania.ro/simpozion2020/prezentari-2020/prezentari-2020video/>

DA Iacobas (2019): "The Gene Master Regulators of tissues and cells collected from patients with blood, lung, kidney, prostate and thyroid cancer", 3rd Symposium of Translational Oncology "STOP Cancer Romania", Bucharest, **Romania**, 05/10-12/2019. Videoconference: <https://www.stop-cancer-romania.ro/prezentari/prezentari-2019/>

DA Iacobas (2019): "The Gene Master Regulators Approach Provides the Best Targets for the Personalized Cancer Gene Therapy", International Conference on Disease Biomarkers and Precision Medicine (DBPM-2018), 10/22-24/2018 in Houston, TX, **U.S.A.**

DA Iacobas (2018): "Gene Master Regulators not Biomarkers should be tested for personalized cancer medicine", 4th World Congress on Cancer Research & Therapy, Rome (**Italy**), 08/13-15/2018.

DA Iacobas (2018): "Gene Master Regulators and the Personalized Timely Cancer Gene Therapy", 3rd International Conference on "Cancer Research and Targeted Therapy", London, **UK**, 08/06-08/2018.

"Gene Master Regulators in Cancer Gene Therapy", 2nd Symposium of Translational Oncology STOP Cancer, Bucharest, **Romania**, 04/13-15/2018. Videoconference: <https://www.stop-cancer-romania.ro/prezentari/prezentari-2018/>

"Prenatal exposure to corticosteroids: hypothalamic changes relevant for postnatal impairments, 7th International Meeting Steroids and Nervous System, 02/16-20/2013, Torino, **Italy**.

"Connexins as nodes in heart rhythm networks", 7/13/2011. Gap Junction Conference, Ghent, **Belgium**.

"New analytical tools to characterize remodeling of the transcriptomic networks in rodent models for human immunological diseases", 10/9/2009, MUGEN, Athens, **Greece**.

"Coordinated transcriptomics – a new tool to identify functional pathways in the cell", 1st International Conference on Medical informatics and Engineering, Craiova, **Romania**, 10/10/2003.

"Improved procedures for cDNA array mining", Tutorial International Symposium "Biomolecular technologies: Tools for discovery in proteomics and genomics", Austin, TX, **U.S.A.** 03/9-12/2002.

"Theory of potential life. A new hypothesis on life origin and evolution". 4^o Encuentro LatinoAmericano de Ecologia Matematica. University Nacional de Cuyo, Mendoza, **Argentina**. 08/27/1998

"Evaluation and validation of the health care system by the Theory of pathologic". 20th International Congress on Medical Physics, Biophysics and Biomaterials, Stara Lesna, **Slovak R**, 1997.

"Dracula's postulates and biocoenosis stability". 4^o Encuentro Latino Americano de Ecologia Matematica. Valparaiso, **Chile**, 08/23/1998.

"Ecosystem stability in the Theory of Many Population Correlations", 8^o Congreso Internacional de Biomatemática, Panama, **Panama City**, 08/28/1997

"Thermodynamics of biomass storage, exchange and conversion in agrosystems". 2nd International Conference on Sustainable Development: System Analysis in Ecology. Sevastopol, **Ukraine**, 1996.

“The stability of ecosystems in the Theory of many-population correlation functions. Spruce III International Conference, Statistics in Public Resources, Utilities and care of the Environment. Merida, **Mexico**, 1996.

“Thermodynamics of biomass storage, exchange and conversion in agrosystems. International Workshop on Biomass Production and Utilization. Trieste, **Italy**, 1996

“The Theory of many-population correlation functions. 1st Practical International Conference on Sustainable development: environmental pollution and ecological safety. Dnepropetrovsk **Ukraine**, 1995.

“New ideas in thermodynamical ecology. 1st Practical International Conference on Sustainable development: environmental pollution and ecological safety. Dnepropetrovsk **Ukraine**, 1995.

“Problems in the dimensional analysis of ecosystems. 3^o Encuentro Latinoamericano de Ecologia Matematica, Lujan - Buenos Aires, **Argentina**, 1994.

“Standard versus normal mathematical approach of ecosystems”. 3^o Encuentro Latinoamericano de Ecologia Matematica, Lujan - Buenos Aires, **Argentina**, 1994.

“Computer simulation of membrane single-channel currents”. International Workshop "What is computer simulation of biological systems good for?", Liblice, **Czechoslovakia**, 1991

“A pre-Hilbert space for physiological states and some functions which could be used to simulate the human body behavior during the medical treatment”, International Workshop "What is computer simulation of biological systems good for?", Liblice, **Czechoslovakia**, 1991.

B. National

“Transcellular transcriptomic networks in remodeling the myelination genomic fabric”, C10 Colloquium “Intercellular signaling and myelination”, 3/7/2012 43rd Annual Meeting of the American Society for Neurochemistry (ASN), Baltimore, **MD**.

“Ankyrins and the genomic sex dichotomy of the heart rhythm”, 5/25/2011. American Heart Association Ann Meeting, Orlando, FL.

"Astrocyte and oligodendrocyte - love at first sight with myelination consequences", 09/22/2010 Institute of Biochemistry of the Romanian Academy, Bucharest, **Romania**, Host: Dr Stefania Petrescu, Director.

"Connexin-dependent networks and the heart rhythm determinants", 10/05/2008, Canada Research Chair in Gap Junctions and Disease, University of Western Ontario, London (ON) **Canada**. Host D. Laird, Chair.

“Coordinated transcriptomics-principles and applications”, AMDEC meeting of Microarray Core Directors, Cold Spring Harbour Laboratory, Woodbury, **NY**. 02/24/2006. Host: Dr S. Welle, Director AMDEC Steering Committee.

“The Theory of Pathologic to evaluate and optimize the medical activity. Segunda Jornada Nacional en Biomatemática. Universidad del Quindío. Armenia (**Colombia**).

“Stability and evolution in the Theory of Many-Population Correlation Functions”. Segunda Jornada Nacional en Biomatemática. Universidad del Quindío. Armenia (**Colombia**).

C. Local (Abroad)

“Genomics from a biophysicist’s perspective”, University of Bucharest, Dept. Anatomy, Animal Physiology and Biophysics, Bucharest, **Romania**, 10/18/2019, Host: Dr. D Mihailescu, Chair

“ACTH and PMX53 recover synaptic transcriptome alterations in a male rat model of infantile spasms”, Champalimaud Centre for the Unknown, Lisbon, **Portugal**, 10/13/2017, Host: Dr. Z Mainen, Director Neuroscience Program

“Sex, brain and synapses”, Federal Universidade do Rio de Janeiro, **Brazil**. 10/01/2015. Host: Dr. R. Linden.

“Genomic fabric remodeling in Chagas disease and treatment”, Chagas Filho Instituto de Biofísica, Rio de Janeiro, **Brazil**. 9/28/2015. Host: Dr. AC de Carvalho.

“The Theory of Genomic Patholog”, Dept. Mathematics, Universitat Jaume I, Castellon, **Spain**. 06/08/2001. (Host: Prof. J.L. Uso, Chairman)

“Theory of Potential Life: a new hypothesis on life origin and evolution”. Universidad Central de Venezuela. Caracas, **Venezuela**. 20/05/1999. (Host: Prof. J.A. Leon, Chairman)

“Aplicaciones Clinicas de la Teoria del Patologico”. Facultad de Medicina, Universidad Tecnologica de Pereira. Pereira, **Colombia**. 13/05/1999. (Hosted: Prof. H. Moreno-Rojas, Dean).

“Bioelectrogenesis of the lumbricus terrestris ganglia chain”, Dipartimento di Physiologia e Biophysica, Universita di Trieste, **Italy**. 10/10/1998. Host: Dr F Ruzzier, Chair.

“Drug efficiency Estimate with the Theory of Pathologic”. Instituto de Farmacologia y Bioquimica, Universidad de Buenos Aires, **Argentina**. 08/14/1998 (Host: Prof. M. Rubio, viceDean)

“Problemas teoreticos y experimentales en los estudios electrofisiologicos”. Facultad de Medicina. Universidad Nacional de Cuyo, Mendoza, **Argentina**. 08/25/1998. (Hosted: Prof. F. Saravi, Chairman)

“The Theory of potential life”, University of Panama, Panama City, **Panama**. 08/25/1997. Host: Prof. R Howe, Chair Mathematics

“The Theory of Patholog”, University of Patras, **Greece**. 08/15/1996. Host: G Lefterakis, Dean

“Modulation of the ionic channel activity by gamma lactones”, Department of Experimental Biophysics, Humboldt University, **Germany**, 06/21/1996. Host: Dr. R Glaser, Chairman.

“The stochasticity of the membrane ionic channel”, Department of Biophysics, Eötvös Loránd University, Budapest, **Hungary**, 07/22/1994, Host Dr. S Gyiorgy, Chair.

“A quantum model of the Cl⁻ ionic channel in axolemma”, Universite Bretagne Occidentale, Brest, **France**. 06/25/1992. Host: Dr. JP Pennec, Chair of the Department Animal Physiologie et Biophysique.

D. Local (USA)

“Towards a personalized cancer medicine”, Philips Health Care Research, **BioInc Valhalla**, NY 2/3/2017, Host: Dr. N. Dimitrova

“Alteration of the 3D calcium waves in the diabetic smooth muscle”, Dept. Pathology, **New York Medical College**, Valhalla, NY. 03/05/2014, Host. Dr. TJ Fallon, Chair.

“Tumorigenesis: a genomic fabric interplay going bad?”, **State University of New York at Stony Brook**, NY Dept. Pathology. 08/09/2012. Host: Dr. Y Hannun, Director of Stony Brook Cancer center, Vice Dean for Cancer Medicine.

“Sex, stress and the brain: genomic fabric paradigm above functional pathway”, **Rockefeller University**, Harold and Margaret Milliken Hatch Laboratory of Neuroendocrinology, host Bruce McEwen, Head Laboratory, 06/12/2012.

“Sex dichotomy and remodeling of neurogenomic fabrics”, **State University of New York at Stony Brook**, NY Dept. Biophysics. 02/15/2012. Host: Dr. P. Brink, Chairman Dept Biophysics.

“Differential topological analysis of functional genomic fabrics”, **New York University, Dept Biomedical Engineering**, CCNY, CUNY, 09/07/2011. Host: Dr. J Tarbell, Chair

“Remodeling of Ca²⁺-signaling genomic fabric in stimulated DRG neurons”; 07/06/2011, **NIH-NICHD**, Bethesda, Host: DR Douglas Fields, Chief Nervous System Development & Plasticity Section

“Intercellular signaling and myelination”, **New York University Langone Medical Center**, 5/11/2011. Host: Dr James L Salzer, Co-Director Center of Excellence for Multiple Sclerosis.

“Topology and dynamics of the myelination genomic fabric”, 01/08/2010, **NIH-NICHD**, Bethesda, Host: DR Douglas Fields, Chief Nervous System Development & Plasticity Section

“Physics of the transcriptome”, 2005, Dept Physics, **New Mexico State University at Las Cruces**, NM. Host Dr. G Kyle, Chair Dept. Physics.

“A 2D stochastic model of calcium signaling in hypoxic brain”, 11/17/2005, **Yale University School of Medicine**, host: Dr. N. Siegel, Chair Division of Pediatric Nephrology, Department of Pediatrics.

“Mining the cDNA array through the Theory of genomic patholog”, **Rockefeller University** Microarray Facility, Manhattan, NY, 10/12/2001. (Host Dr. G Khitrov, Director).

“Mathematical mining of the microarray data through the Theory of Pathologic”. **Rosswell Park Cancer Institute**, **Buffalo**, NY. 21/08/2000. (Host: Dr. SP Hui, Chairman)

E. PVAMU

“Up-down and left-right by the heart transcriptome”, Center for Computational Systems Biology Seminar series, 9/1/2021

“Experimental and computational problems in transcriptomic studies. The Genomic Fabric paradigm”, PVAMU CRI-RaISE Seminar series, 02/19/2020. Host: Dr. P Saganti -Director

“Brain, Sex, Synapses and Neurological Diseases – A Transcriptomic Story”, Center for Computational Systems Biology Seminar series, 10/09/2019

“Validation of the Gene Master Regulators Theory for Cancer Gene Therapy”, Center for Computational Systems Biology Seminar series, 02/13/2019

“A 3D pseudostochastic model of intercellular calcium signaling alteration in the diabetic smooth muscle”, Dept of Mathematics, College of Arts and Sciences, Prairie View A&M University, Prairie View 09/07/2018. Host Dr. N Hritonenko

“Alteration of Ca²⁺-wave in the diabetic smooth muscle”, Dept. Electrical and Computer Engineering, PVAMU RGP College of Engineering, Host Dr. P Obiomon, 02/23/2018

“The Gene Master Regulators Approach of the Personalized Cancer Gene Therapy”, PVAMU College of Engineering, Host Dr. L Qian, 08/24/2017.

H. USA NATIONAL LIBRARY OF MEDICINE <https://www.ncbi.nlm.nih.gov/search/all/?term=IACOBAS>

a. Genomic Datasets

86 Transcriptomic heterogeneity of the prostate cancer. [*Homo sapiens*]
<https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE183889>

85 Remodeling of Mouse Hippocampus Genomic Fabrics in Neuropsychiatric Systemic Lupus Erythematosus [*Mus musculus*] <https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE169486>

84 Genomic fabric remodeling in prostate cancer, [*Homo sapiens*]
<https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE168718>

83 Remodeling of Neurotransmission and Chemokine Signaling Genomic Fabrics in Neuropsychiatric Systemic Lupus Erythematosus , <https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE164140>, [*Mus musculus*]

82 Gene Commanding Height (GCH) hierarchy in the cancer nucleus and cancer-free resection margins from a surgically removed prostatic adenocarcinoma of a 65y old black man. [*Homo sapiens*],
<https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE133906>

81 Gene Commanding Height (GCH) hierarchy in the cancer nucleus and cancer-free resection margins from a surgically removed prostatic adenocarcinoma of a 47y old white man. [*Homo sapiens*],
<https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE133891>

80 Transcriptional profiling of the rat retina after optic nerve crush uncovers sustained activation of the complement cascade and Delta-Notch signaling pathways, [*Rattus norvegicus*],
<https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE133563>

79 Recovery of the synaptic transmission genomic fabrics in the hypothalamic paraventricular nucleus of a rat model of autism treated with PMX53, <https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE128090>, [*Rattus norvegicus*],

78 Remodeling of synaptic transmission genomic fabrics in the hypothalamic paraventricular nucleus of a rat model of autism. [*Rattus norvegicus*], <https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE128091>

77 Recovery of the synaptic transmission genomic fabrics in the hypothalamic paraventricular nucleus of a rat model of autism treated with ACTH, [*Rattus norvegicus*],
<https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE124615>

76 Prenatal betamethasone remodels the genomic fabrics of the synaptic transmission in the rat hypothalamic paraventricular nuclei, [*Rattus norvegicus*], <https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE124613>

75 Sex differences in the synaptic genomic fabrics of the rat hypothalamic paraventricular node [*Rattus norvegicus*], <https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE123721>

74 Overexpression of miR-155 alters the hierarchy of gene master regulators in the adenocarcinomic human alveolar basal epithelial cell line A549 [*Homo sapiens*]
<https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE116575>

73 Hierarchical gene master regulators of adenocarcinomic human alveolar basal epithelial cells A549 [*Homo sapiens*], <https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE116361>

- 72 Genotoxicity of nitrosamines [Gallus gallus]
<https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE110906>
- 71 Gene expression in chicken embryo liver [Gallus gallus]
<https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE110904>
- 70 Proximity of oligodendrocytes remodels astrocytes' transcriptome [Mus musculus]
<https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE109035>
- 69 Estrogen protects neurotransmission transcriptome during status epilepticus [Rattus norvegicus],
<https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE107725>
- 68 Validation of the Personalized Gene Therapy by stably transfection of UBALD1 in the papillary (BCPAP) and anaplastic (8505C) thyroid cancer cell lines [Homo sapiens]
<https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE97427>
- 67 Validation of the Personalized Gene Therapy by stably transfection of NEMP1 (TMEM194A) in the papillary (BCPAP) and anaplastic (8505C) thyroid cancer cell lines [Homo sapiens]
<https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE97031>
- 66 Validation of the Personalized Gene Therapy by stably transfection of PANK2 in the papillary (BCPAP) and anaplastic (8505C) thyroid cancer cell lines [Homo sapiens]
<https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE97030>
- 65 Validation of the Personalized Gene Therapy by stably transfection of DDX19B in the papillary (BCPAP) and anaplastic (8505C) thyroid cancer cell lines [Homo sapiens],
<https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE97028>
- 64 Hierarchal gene master regulators of papillary (BCPAP) and anaplastic (8505C) thyroid cancer cell lines [Homo sapiens] <https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE97002>
- 63 Hierarchal gene master regulators of one case of papillary thyroid cancer [Homo sapiens]
<https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE97001>
- 62 Gene-regulatory networks activated by pattern-specific generation of action potentials in dorsal root ganglia neurons [Mus musculus], <https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE84872>
- 61 Remodeling of synaptic transmission genomic fabrics in the hypothalamic arcuate nucleus of a rat female model of infantile spasms [Rattus norvegicus], <https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE84585>
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- 55 Transcriptomic effects of low salt diet on the mouse left ventricle [Mus musculus],
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- 54 Transcriptomic effects of Capridine on the acute promyelocytic leukemia HL-60 cell line [Homo sapiens], <https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE72415>
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36 Post-ischemic heart failure model. <https://www.ncbi.nlm.nih.gov/sites/GDSbrowser?acc=GDS3655>

35 Therapy with bone marrow cells recovers gene expression alterations in hearts of mice with chronic chagasic cardiomyopathy [*Mus musculus*], <https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE24088>

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27 Oli-neu cells cocultured with cortical astrocytes in insert system_rep2, [*Mus musculus*],
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26 Oli-neu cells cocultured with cortical astrocytes in insert system_rep1, [*Mus musculus*],
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25 Oli-neu cells, differentiated_rep4, [*Mus musculus*],
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24 Oli-neu cells, differentiated_rep3. [*Mus musculus*],
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23 Oli-neu cells, differentiated_rep2. [*Mus musculus*],
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- 22 Oli-neu cells, differentiated_rep1. [*Mus musculus*], <https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSM465175>
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- 16 Effect of microgravity on brain gene expression in mice [*Mus musculus*], <https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE12312>
- 15 “Compensatory” transcriptional mechanisms: Comparison of transcriptomes of Cx43 null and knockdown astrocytes [*Mus musculus*], <https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE8168>
- 14 Fluid Shear Stress Up-regulates Vascular Endothelial Growth Factor Gene. [*Mus musculus*], <https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE8117>
- 13 AECOM 32K mouse oligonucleotide array, MO2 printing series. [*Mus musculus*], <https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GPL5371>
- 12 Gap junction and purinergic P2 receptor proteins as a functional unit: insights from transcriptomics. [*Mus musculus*], <https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE8105>
- 11 Connexin-dependent transcellular transcriptomic networks in mouse brain [*Mus musculus*], <https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE6355>
- 10 Chronic hypoxia alters the level, maturation and control of gene expression in mouse kidney [*Mus musculus*], <https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE3289>
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- 5 CX43 KO vs WT cortical astrocytes [*Mus musculus*], <https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE580>

b. Microarray Platforms

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- 3 <https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GPL1862>
- 2 <https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GPL1698>
- 1 <https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GPL369>

c. Bioprojects:

- 7 **PRJNA479438:** Overexpression of miR-155 alters the hierarchy of gene master regulators in the adenocarcinomic human alveolar basal epithelial cell line A549. <https://www.ncbi.nlm.nih.gov/bioproject/479438>
- 6 **PRJNA130217:** Alterations in the Brain Transcriptome in Plasmodium Berghei ANKA Infected Mice. Organism: Mus musculus. <https://www.ncbi.nlm.nih.gov/bioproject/130217>
- 5 **PRJNA119085:** Gene expression changes associated with myocarditis and fibrosis in hearts of mice with chronic chagasic cardiomyopathy. <https://www.ncbi.nlm.nih.gov/bioproject/119085>

- 4 **PRJNA119013:** Transcriptomic alterations in Trypanosoma cruzi-infected cardiac myocytes. Organism: Mus musculus. <https://www.ncbi.nlm.nih.gov/bioproject/119013>
- 3 **PRJNA113619:** Effect of microgravity on brain gene expression in mice. Organism: Mus musculus. <https://www.ncbi.nlm.nih.gov/bioproject/113619>
- 2 **PRJNA100989:** Fluid Shear Stress Up-regulates Vascular Endothelial Growth Factor Gene. Organism: Mus musculus. <https://www.ncbi.nlm.nih.gov/bioproject/100989>
- 1 **PRJNA100967:** Gap junction and purinergic P2 receptor proteins as a functional unit: insights from transcriptomics. Organism: Mus musculus. <https://www.ncbi.nlm.nih.gov/bioproject/100967>

d. Nucleotides:

- 7 https://www.ncbi.nlm.nih.gov/nuccore/NM_001375594.1
- 6 https://www.ncbi.nlm.nih.gov/nuccore/NM_001174102.3
- 5 https://www.ncbi.nlm.nih.gov/nuccore/NM_001174101.2
- 4 https://www.ncbi.nlm.nih.gov/nuccore/NM_030567.5
- 3 <https://www.ncbi.nlm.nih.gov/nuccore/KM576780.1>
- 2 https://www.ncbi.nlm.nih.gov/nuccore/NM_001375593.1
- 1 https://www.ncbi.nlm.nih.gov/nuccore/NM_001109116.1

e. Proteins:

- 24 https://www.ncbi.nlm.nih.gov/protein/NP_001167573.1
- 23 https://www.ncbi.nlm.nih.gov/protein/NP_001362522.1
- 22 https://www.ncbi.nlm.nih.gov/protein/NP_001362523.1
- 21 https://www.ncbi.nlm.nih.gov/protein/NP_001167572.1
- 20 https://www.ncbi.nlm.nih.gov/protein/NP_085044.2
- 19 https://www.ncbi.nlm.nih.gov/protein/NP_001102586.1
- 18 <https://www.ncbi.nlm.nih.gov/protein/D3Z902.2>
- 17 <https://www.ncbi.nlm.nih.gov/protein/P0C6T3.1>
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- 15 <https://www.ncbi.nlm.nih.gov/protein/P35439.1>
- 14 <https://www.ncbi.nlm.nih.gov/protein/Q00960.1>
- 13 <https://www.ncbi.nlm.nih.gov/protein/Q05586.1>
- 12 <https://www.ncbi.nlm.nih.gov/protein/Q13224.3>
- 11 <https://www.ncbi.nlm.nih.gov/protein/Q3V0I2.1>
- 10 <https://www.ncbi.nlm.nih.gov/protein/Q8TB68.1>
- 9 <https://www.ncbi.nlm.nih.gov/protein/Q969H0.1>
- 8 <https://www.ncbi.nlm.nih.gov/protein/P05412.2>
- 7 <https://www.ncbi.nlm.nih.gov/protein/P05627.3>
- 6 <https://www.ncbi.nlm.nih.gov/protein/P17325.1>
- 5 <https://www.ncbi.nlm.nih.gov/protein/AIZ73048.1>
- 4 <https://www.ncbi.nlm.nih.gov/protein/AIZ73049.1>
- 3 <https://www.ncbi.nlm.nih.gov/protein/AIZ73050.1>
- 2 <https://www.ncbi.nlm.nih.gov/protein/AIZ73051.1>
- 1 <https://www.ncbi.nlm.nih.gov/protein/AIZ73052.1>

II. OTHER PUBLICATIONS

A. SOCIOLOGY AND POLITICS

1 **Iacobas DA.** (1995) Social pathology and therapy - A systems approach on social and political transition in post-communist Romania (in Romanian), Bucharest: Bucura Mond Ltd. ISBN 973-96889-5-0 (*1st European PHARE Prize for "Young scientists and politicians in the civil society"*).

B. PHILOSOPHICAL NOVELS

2 **Iacobas DA.** (2000). "Tucapai". (Romanian: Tucapai) A philosophical novel on a possible quantum theory of cognition) Constanta: Tilia Press Intl. Ltd. ISBN 973-98470-9-9.

1 **Iacobas DA.** (1998) "Noul Tetractys". (Romanian: The New Tetractys) A philosophical novel on a possible quantum refinement of Darwin's Theory of Evolution). Constanta: Tilia Press Intl. Ltd. ISBN 973-98470-3-X.

C. THRILLERS

1 **Iacobas DA.** (1998) "Deseara, nu veni la gara! - Jurnalul lui Argon" (Romanian: Don't come at station tonight! Argon's diary, Thriller) Constanta: Tilia Press Intl. Ltd. ISBN 973-98470-7-2.

D. DRAMAS/SCRIPTS/MUSICALS:

4 Iacobas DA (2004) "Urzici, ciuperci și caltabosi". (Romanian: Stinging nettles, mushrooms and blood puddings) Lumea libera - A Worldwide Romanian Weekly, New York, NY

3 Iacobas D.A. (2000) "Deseara, nu veni la gară!" (Romanian: Don't come at station tonight. Constanta: Tilia Press Intl. Ltd. ISBN 973-98470-2-1 - Student theater.

2 Iacobas DA (1982) "Yellow submarine in water with ions", student musical.

1 Iacobas D.A. (1980) "Un Faust atomic". (Romanian: An Atomic Faust) Constanta: Dobrogea Noua. Musical.

E. MEDIA

- **Iacobas DA.** (1993) Dumnezeu e bun si iarta (Romanian: God is good and forgives – Essay about social problems in Romania during the transition from communist dictatorship to democracy), Telegraf.

- numerous talk shows on various political, social and cultural issues at (Romanian) national and local TV and radio stations (1990-2000)

- numerous articles and poems in (Romanian) national and local newspapers and magazines

PUBLIC CONFERENCES ON SOCIAL AND POLITICAL PROBLEMS

"Healthy communities for empowering women's health". 12th Conference "Environmental epidemiology in Pan America and the World: Building connections." Buffalo, NY, USA, 08/21/2000.

"Organizing a public awareness campaign on domestic violence". *American Romanian workshop on domestic violence.* Mamaia, **Romania**, 04/28/2000.

"Survey on domestic violence in Constanța". *American Romanian workshop on domestic violence.* Mamaia, **Romania**, 04/28/2000.

"Experiencia de un científico rumano en Colombia". Velada cultural, organizada de Embajada de Colombia, Ministerio Rumano de las Relaciones Exteriores, y Casa de la America Latina. Bucharest, **Romania**, 08/22/1999.

"Survey on women health in Constanta District", University of Louisville, Louisville, KY, USA, 05/12/1999. Host: Prof. Prasaad Steiner.

"Ecology and politics. A mathematical approach", 8^o Congreso Internacional de Biomatemática, Panama, Panama City, **Panama**, 08/29/1997

"For a U.N. Ministry of Peace. The Summer Festival of Peace University, Berlin, **Germany**, 1995

“The problem of ecological reconstruction”. The Summer Festival of Peace University, Berlin, **Germany**, 1995.

“Ecological reconstruction between science and politics”. Spruce III International Conference, Statistics in Public Resources, Utilities and care of the Environment. Merida, **Mexico**, 1996

+ numerous talk shows and debates on social and political problems at (Romanian) national and local media (TV, radio, magazines)

COLLABORATORS AT EXPERIMENTS, GRANTS, PUBLICATIONS AND IN ORGANIZING SCHOOLS AND MEETINGS

Owing to expertise in systems biology, biophysics and biomathematics, I succeeded to ensemble a worldwide network of outstanding scientists and clinicians with whom I have collaborated at research grants (experiments and publications) and in organizing international schools and conferences.

I. U.S.A.

CA: D Bota, R Bota, Q Chen, C Fan, O Gavrialov, C Griffin, GG Haddad, L Marcu, D Zhou

CT: T Chachua

FL: RS Dronca

GA: D Brann

IA: K Knudson

KY: RWP Steiner, D Wilson

MA: GD Duda

MD: JE Cohen, RD Fields, PR Lee

ME: K Jhonson

MN: G Gheorghe

NJ: S Bota, E Brand-Schieber, AI Brooks,

NM: G Kyle, T Vulcan

NY: D Axlinte, P Ballabh, AM Beal, M Beelitz, TJ Belbin, BB Bhimavapu, P Brink, KD Brunnemann, AU

Carbonell, MJ Caimano, A Corona, M Desruisseaux, A Ding, P Dohare, D Duan, LK Friedman, J

Geliebter, Y Hannun, J Huang, S Iacobas, R Iyer, MJ Iatropoulos, K Khitrov, RN Kitsis, T Kobets, DO

Kravchick, V Kudur, L Jelijs, B Jordan, EF LaGamma, J Leheste, WE Li, SL Lowery, A Luthra, J

Mankuso, A Massimi, R Mathew, B McEwen, A Moscatello, S Mukherjee, NK Pandey, A Patel, D

Paul, C Putterman, JD Radolf, JK Rasamny, E Scemes, I Schwartz, P Scherer, DC Spray, SO Suadicani,

H Tanowitz, M Thi, R Tiwari, N Tuli, M Urban, A Viale, L Velisek, J Veliskova, G Vinukonda, LR

Vose, LM Weiss, P Werner, M Williams, M Wittner, MT Zia

OH: D Matei

PA: JF Jasmin, MM Lisanti, L Xi

TN: C Crisman, G Hallam

TX: GA Calin, X Dong, N Ede, M Hada, N Hritonenko, A Ho, T Horton, I Iacobas, C Ivan, A Joy, A Keaton, S

Kim, A Kumar, V Mgbena, M Pulikkathara, P Saganti, M Sadiku, H Wang, R Wilkins

UT: MA Cohen

VA: Y Bao, Lei Xi

WA: G Neal-Perry

II. CANADA: S Dang, V Kardami, M Jeyaraman, J Makazan, BE Nickel, W Srisakuldee, S Tanguy, J Tarbell, G Zoidl

III. EUROPE

ARMENIA: C Goletiani

BELGIUM: K Van Roosbroeck

CZECH R: P Krcmar, M Machala, V Mornstein, J Neca, K Pencikova, J Prochazkova, P Simeckova, J Slavik,

L Umannova, J Vondracek

FRANCE: JF Desaphy, S Morin, JP Penneec

GEORGIA: N Nebieridze

GERMANY: R Dermietzel, U Deschl, S Dhein, R Glaser, M Hrdinka, Karpova, Kreutz MR, J Lopez-Rojas,

FV Mohr, A Sturdza, J Trotter, E Vock, G Zoidl

GREECE: S Alahiotis, G Lefterakis

HUNGARY: S Gyorgyi, P Igaz, L Kerstelyi

ITALY: DC Camerino, A Frigeri, GP Nicchia, F Ruzzier, M Svelto

POLAND: W Presztalski

PORTUGAL: Z Mainen

ROMANIA: C Ailoaie, B Amuzescu, C Ciontu, A Croitoru, A Florescu, G Georgescu, M Godeanu, S Iacobas, A Ionescu, G Mihalas, E Niculescu-Mizil, D Paul, C Spataru, T Spircu, S Tigan, V Vasilescu, D Verman

RUSSIA: TV Serebrovskaya, G Sidyelyeva

SLOVAK R: E Kukurova

SLOVENIA: M Schuka, S Svetina

SPAIN: J Uso, Y Vilacampa,

UK: C Brebia, K Lilley, MP Lisanti, NM Thomas

UKRAINE: S Chernyshenko

IV. CENTRAL AND SOUTH AMERICA

ARGENTINA: C Leguizamon, N Rubio, F Saravi

BRAZIL: D Adesse, LC Belem, AC Campos de Carvalho, P Costa, HFR Dohman, RR dosSantos, BL Esporcatte, FS Fortes, G Garzoni, RC Goldenberg, H Huang, R Linden, RS Lima, F Montalvo, M deNarateh, S Lachtermacher, RS Lima, N Meirelles Mde, F Nagajyothi, F Neto, A Rabischoffisky, D Rodrigues, SR Rogatto, MB Soares, BSF Souza, L Vairo, R Vasconcellos

CHILE: E Gonzales-Olivares, R Jimenez

COLOMBIA: H Morales, H Moreno-Rojas, A Munoz-Loiza

MEXICO: AF Collar, LL Rocha

PANAMA: R Howe

VENEZUELA: JA Leon

V. AUSTRALIA: MJ Benson, K Borges