

EUROPEAN
CURRICULUM
VITAE
FORMAT



PERSONAL INFORMATION

Name
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WORK EXPERIENCE

- Dates (from – to)
- Name and address of employer
- Type of business or sector
- Occupation or position held
 - Main activities and responsibilities

01.2013 –
Institute of Biology and Immunology of Reproduction, Bulgarian Academy of Sciences, Sofia
73 Tzarigradsko shose, 1113 Sofia, Bulgaria
Scientific Research and Development in Reproductive and Tumor Biology
Associate Professor in Immunology, Department of Embryobiotecnologies
Research in male reproductive system innate immunity, cancerogenesis and embryo implantation implicated molecules signaling
Research methodology: molecular and cell biology, proteomics, transcriptomics, bioinformatics (structural modeling and “peptide docking”).
Current Research Projects:
1. Innate immune receptors of the NOD/NALP family in Sertoli cell biology and immunology, implications on male fertility.
2. *PreimplantationFactor*TM signaling in collaboration with BioIncept Inc: Cloning of *in silico* designed synthetic DNA for mammalian expression of preimplantation related peptides. Bioinformatics analysis of ligand-receptor interaction, *de novo* structural modeling and peptide docking.
3. Biolmaging - new methods for visual analysis of innate immunity intracellular receptors using high-resolution 3D confocal microscopy data processing and statistical methods for 3D object interaction assessment - collaboration with University of Essex
4. Biolmaging - implementation of new methods for chromatin compactization and DNA methylation segments assessment
5. Tumor biology - epigenetics and modeling of fusion phenomena, whole RNASeq transcriptomics

- Dates (from – to) 09.2010 – 09.2012
- Name and address of employer Institute of Biology and Immunology of Reproduction, Bulgarian Academy of Sciences, Sofia
- Type of business or sector Scientific Research and Development
- Occupation or position held Chief Assistant Professor
(http://en.wikipedia.org/wiki/List_of_academic_ranks#Bulgaria), Department of Immunobiology of Reproduction
- Main activities and responsibilities Planning, design and conducting of scientific experiments; data acquisition, processing and analysis; preparation and submitting of scientific papers; training of Master degree students in biology (cell and molecular biology)
Scientific Topic: Sertoli cells innate immunity signaling and adaptive immunity relations. Role of innate and autophagy pathways in germ cells blood-testis barrier function.

- Dates (from – to) 2009 -2010
- Name and address of employer International Consortium “BHIS – public tender won contract for Integrated Hospital Information System Deployment at UHSEC “St. Ekaterina”
- Type of business or sector IT sector
- Occupation or position held Project Coordinator for Bulgaria at Integrated Hospital Information System Delivery
- Main activities and responsibilities Project Coordinator. Implementation, Customization and Deployment of Integrated Hospital Information System

- Dates (from – to) 2007 -2008
- Name and address of employer Harvard Cutaneous Biology Research Center at Massachusetts General Hospital, Boston, USA
- Type of business or sector Scientific Research
- Occupation or position held Postdoctoral Fellow (http://en.wikipedia.org/wiki/List_of_academic_ranks)
- Main activities and responsibilities Planning, design and conducting of scientific experiments; data acquisition, processing and analysis; **Scientific Topic: Cell starvation studies in cancer. Rho member protein binging partners. Chemical genetics.**

- Dates (from – to) 2006 -2007
- Name and address of employer Institute of Biology and Immunology of Reproduction, Bulgarian Academy of Sciences, Sofia
- Type of business or sector Scientific Research and Development
- Occupation or position held Chief Assistant Professor
(http://en.wikipedia.org/wiki/List_of_academic_ranks#Bulgaria), Department of Molecular Immunology
- Main activities and responsibilities Planning, design and conducting of scientific experiments; data acquisition, processing and analysis; preparation and submitting of scientific papers
Scientific Topic: Research on prostate cancer tumor markers.

- Dates (from – to) 2004 - 2006
- Name and address of employer Institute of Biology and Immunology of Reproduction, Bulgarian Academy of Sciences, Sofia
- Type of business or sector Scientific Research and Development
- Occupation or position held Assistant Professor
(http://en.wikipedia.org/wiki/List_of_academic_ranks#Bulgaria), Department of Molecular Immunology
- Main activities and responsibilities Planning, design and conducting of scientific experiments; data acquisition, processing and analysis; preparation and submitting of scientific papers
Scientific Topic: Research on angiogenic and tumor markers in endometriosis.

- Dates (from – to) 2000-2001
- Name and address of employer Medical University of Pleven (www.mu-pleven.bg)
Medical College
- Type of business or sector University Education

- Occupation or position held
 - Main activities and responsibilities
 - Dates (from – to)
 - Name and address of employer
 - Type of business or sector
- Occupation or position held
 - Main activities and responsibilities
 - Dates (from – to)
 - Name and address of employer
 - Type of business or sector
- Occupation or position held
 - Main activities and responsibilities
 - Dates (from – to)
 - Name and address of employer
 - Type of business or sector

Visiting Instructor in Informatics
Teaching Assistant in physiology, Department of Human Physiology
Instruction to foreign students of physiology hands-on classes in English language.

1999-2000
Medical University of Pleven (www.mu-pleven.bg)
International Relations Office

University Education
EU 5th FP Project Development: Programs Leonardo, Erasmus.
International Relations Officer
Teaching Assistant in physiology, Department of Human Physiology
Instruction to foreign students of physiology hands-on classes in English language.

1998-1999
Medical University of Pleven (www.mu-pleven.bg)
Department of Human and Animal Physiology

University Education
Assistant Professor
Instruction to foreign students of physiology hands-on classes in English language.

EDUCATION AND TRAINING

- Dates (from – to)
 - Name and type of organization providing education and training
 - Principal subjects/occupational skills covered
- Title of qualification awarded
 - Level in national classification (if appropriate)
- Dates (from – to)
 - Name and type of organization providing education and training
 - Principal subjects/occupational skills covered
- Title of qualification awarded
 - Level in national classification (if appropriate)
- Dates (from – to)
 - Name and type of organization providing education and training
 - Principal subjects/occupational skills covered
- Title of qualification awarded

2001 – 2006
Institute of Biology and Immunology of Reproduction, Bulgarian Academy of Sciences, Sofia
73 Tzarigradsko shose, 1113 Sofia, Bulgaria
Immunology, Cell and tumor biology. PhD thesis: „Angiogenic factors and tumor markers in endometriosis”

PhD in Immunology

1995 – 2000
“St.st. Cyril and Methodius” University of Veliko Turnovo, Bulgaria
(<http://www.uni-vt.bg>)

Informatics. Information Systems. Databases architecture and design. Mater Thesis “Using 3D color space for pixel colors selection in immunohistochemistry” (developed in MS Visual Studio, C#)

Master Degree in Informatics. Information Systems.

1990 – 1996
Medical University of Pleven, Bulgaria (www.mu-pleven.bg)
Faculty of Medicine

6 years Masters degree program in Medicine

Doctor of Medicine (MD)

- Level in national classification (if appropriate)

PERSONAL SKILLS

AND COMPETENCES

Acquired in the course of life and career but not necessarily covered by formal certificates and diplomas.

LANGUAGES SPOKEN

BULGARIAN, ENGLISH, RUSSIAN

SOCIAL SKILLS AND COMPETENCES

Living and working with other people, in multicultural environments, in positions where communication is important and situations where teamwork is essential (for example culture and sports), etc.

Good interpersonal communication skills developed during the participation in several collaborative projects between IBIR and different Bulgarian Universities, and within the international research community of Massachusetts General Hospital as postdoctoral fellow in Boston, MA.

ORGANIZATIONAL SKILLS AND COMPETENCES

Coordination and administration of people, projects and budgets; at work, in voluntary work (for example culture and sports) and at home, etc.

Teaching experience gained during work as Instructor in Physiology and supervision of younger master and PhD students.

Project coordination and administration skills obtained during international IT project in the role of local project Coordinator. Communication and Presentation skills.

TECHNICAL SKILLS AND COMPETENCES

With computers, specific kinds of equipment, machinery, etc.

Bench Research skills:

biochemical methods, recombinant protein and molecular biology techniques, primary cell cultures, stable cell lines establishment, cell cultures (U2OS, EJ, MCF7, HCT119, SKMEL), RNAi technologies, viral transduction; luciferase reporter assay, SEAP reporter assays; RT-qPCR; enzymology; immunological (ELISA, IB, IP, Ab characterization). IF, IHC, quantitative imaging; software development; project coordination; bioinformatics analysis;

Bioinformatics:

RNASeq whole transcriptome pipeline analysis, differential expression, new fusions inference
microarray datasets expression analysis, cluster analysis, PCI, GSEA (frameworks: R & bioconductor, genome workbench, GenePattern, etc.); LIMS, NTI Vector, other molecular cloning;

Biolmaging:

Quantitative immunohistochemistry software development (Object Pascal, C#); Image processing and analysis using ImageJ, BioImage and other tools for morphometry, colorimetry and densitometry;
3D image analysis (high resolution confocal z-stack image datasets) for segmenting and compartmentalizing of three dimensional molecular objects, data processing statistics (PCA) and high order statistics (ICA, other) for receptor interaction analysis;

Computer and IT skills:

Software development (Flash, Object Pascal, C#);

SCIENTIFIC ORGANIZATIONS MEMBERSHIP	International Society of Reproductive Immunology, 2013- European Society of Reproductive Immunology, 2011- Bulgarian Union of Reproductive Immunology, 2006- Union of Bulgarian Scientist, 2006- Bulgarian Union of Reproductive Immunology, 2004 Bulgarian Medical Union, 1996-
AWARDS & SCHOLARSHIPS	2008, Diploma conferred at the Annual Awards for academic achievements of PhD students that have received their degrees in 2006, a Joint Competition by the Higher Attestation Committee, the Union of Bulgarian Scientists and the Federation of Scientific-Technical Unions
ADDITIONAL INFORMATION	<p>Selected Publications:</p> <p>Hayrabyan, Soren, Krassimira Todorova, Shina Pashova, Margarita Mollova, and Nelson Fernández. "Sertoli Cell Quiescence–New Insights." <i>American Journal of Reproductive Immunology</i> 68, no. 6 (2012): 451-455 - IF 3.317</p> <p>Jabeen, Asma, José Maria Miranda-Sayago, Boguslaw Obara, Patrick Simon Spencer, Gill Barbara Dealtry, Soren Hayrabyan, Valerie Shaikly, Pierre Philippe Laissue, and Nelson Fernández. "Quantified Colocalization Reveals Heterotypic Histocompatibility Class I Antigen Associations on Trophoblast Cell Membranes: Relevance for Human Pregnancy 1." <i>Biology of reproduction</i> 89, no. 4 (2013) - IF 4.027</p> <p>Kuzmanov A., Hayrabyan S., Karaivanov M., Todorova K.. Basal cell subpopulation as putative human prostate carcinoma stem cells. <i>Folia Histochem Cytobiol.</i>, 45(2): 75-80 (2007). ISSN 0239-8508 - IF - 1.081</p> <p>Karaivanov M*, Todorova K*, Kuzmanov A, Hayrabyan S. Quantitative immunohistochemical detection of the molecular expression patterns in proliferative inflammatory atrophy. <i>J Mol Histol.</i> (2006). ISSN: 1567-2379 - IF - 1.752</p> <p>Hayrabyan, S., S. Kyurkchiev, and I. Kehayov. "Evaluation of IL-1α expression in endometriotic lesions using quantitative immunohistochemistry approach." <i>Comptes rendus de l'Académie bulgare des Sciences</i> 59, no. 2 (2006): 229-234</p> <p>Hayrabyan S., Kyurkchiev S., Kehayov I., FGF-1 and S100A13 possibly contribute to angiogenesis in endometriosis. (Review) <i>J Reprod Immunol</i>, 67(1-2):87-101 (2005). ISSN: 0165-0378 - IF - 2.536</p> <p>Hayrabyan S., Kyurkchiev S., Kehayov I. Endoglin (CD105) and S100A13 as markers of active angiogenesis in endometriosis. <i>Reprod Biol.</i>, 5(1):51-67 (2005) - IF - 0.882</p> <p>Book Chapters:</p> <ol style="list-style-type: none"> 1. Krassimira Todorova and Soren Hayrabyan. <i>Handbook of Prostate Cancer Cell Research – Growth, Signalling and Survival.</i> NOVA BIOMEDICAL. <i>The Stem Cell Paradigm and Its Application to prostate Cancer – An Old and Young Idea.</i> Chapter 3, 127-177., 2009. ISBN: 978-1-60741-954-9. (Published by Nova Science Publishers, Inc. NewYork) 2. Vangelov, Ivailo, Julieta Dineva, Krassimira Todorova, Soren Hayrabyan, and Maria D. Ivanova. "Ovarian Biomarkers in Infertility."