Ioan-Ovidiu Sîrbu, MD, PhD

Professor of Biochemistry | Research Group Leader

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PROFESSIONAL PROFILE

Physician-scientist and full professor with over 25 years of international experience in biochemistry, molecular embryology, and translational biomedical research. Track record of leading independent research groups in Germany (Ulm University) and the United States (The Burnham Institute, La Jolla), with foundational contributions to understanding retinoic acid and Wnt signalling pathways in vertebrate embryonic development. Currently directing graduate and doctoral training at UMF "Victor Babeș" Timișoara, Romania while pursuing collaborative projects in genomics, microbiome research, and cancer biomarkers. Experienced principal investigator on competitive national (UEFISCDI) and international (DFG) grants. Committed to fostering cross-border research partnerships and advancing open, reproducible science.

PROFESSIONAL EXPERIENCE

2020 – present

Full Professor (Profesor Universitar)
Universitatea de Medicină și Farmacie "Victor Babeș" Timișoara, Romania — Department of Biochemistry
- Holder of the Clinical Biochemistry course for English and French-language sections
- Lecturer on the AMMLPA Master's programme and IOSUD doctoral programme
- Supervision of PhD candidates in translational molecular biology and biochemistry

2013 – 2020

Associate Professor (Conferențiar Universitar)
Universitatea de Medicină și Farmacie "Victor Babeș" Timișoara, Romania — Department of Biochemistry
- Clinical Biochemistry lectures for English and French sections
- Courses within AMMLPA Master's and doctoral programmes

2007 – 2012

Research Group Leader
Institute for Biochemistry and Molecular Biology, Ulm University, Ulm, Germany
- Led an independent research group on retinoic acid signalling and molecular embryology
- Supervised doctoral students and delivered biochemistry courses for the medical faculty
- Secured DFG funding (SI 1381/1-1 and SI 1381/1-2) for mechanistic studies of RA–Wnt crosstalk

2003 – 2006

Postdoctoral Fellow
The Burnham Institute, La Jolla, California, USA
- Fundamental research on retinoic acid signalling and molecular embryology

- Investigated transcriptional mechanisms downstream of RAR/RXR receptor complexes

2001 – 2002 **Postdoctoral Fellow**
Laboratoire de Chimie Structurale des Macromolécules, Institut Pasteur, Paris, France
- Structural and functional characterisation of bacterial UMP kinases

1999 – 2001 **Assistant Professor**
Universitatea de Medicină și Farmacie "Victor Babeș" Timișoara, Romania — Discipline of Biochemistry
- Practical biochemistry sessions for Year I–II medical students (Romanian, English, French sections)
- Fundamental research on STR markers and applied human identification testing

1996 – 1999 **Research Assistant**
Laboratory of Embryology and Teratology, Timișoara, Romania
- Fundamental research in post-implantational mouse and avian embryology (neural tube closure, limb development)

EDUCATION

2001 **Doctor of Philosophy (PhD) in Medicine**
Universitatea de Medicină și Farmacie "Victor Babeș" Timișoara, Romania
Thesis: *Retinoic acid signalling in the development of the embryonic axis*

1995 **Doctor of Medicine (MD)**
Universitatea de Medicină și Farmacie "Victor Babeș" Timișoara, Romania

RESEARCH GRANTS (AS PRINCIPAL INVESTIGATOR)

2016 – 2018 **Plasma microRNA markers associated with Parkinson's disease**
UEFISCDI Romania, PN-III-P2-2.1-PED-2016-0735

2013 – 2016 **Retinoic acid–Wnt signalling interactions during early axial development of the mouse embryo**
UEFISCDI Romania, PN-II-ID-PCE-2012-4-0575

2010 – 2013 **New mechanisms of action of retinoic acid during post-implantational mouse embryogenesis**
Deutsche Forschungsgemeinschaft (DFG), Germany — SI 1381/1-2

2007 – 2010 **Characterising the interactions of retinoic acid and Wnt signalling pathways during mouse embryogenesis**
Deutsche Forschungsgemeinschaft (DFG), Germany — SI 1381/1-1

SELECTED COURSES & TRAINING

2023	ATLAS EU Functions Course, National and Kapodistrian University of Athens, Greece
2018	3rd @RoBioinfo Seminar: Next-Generation Sequencing Data Analysis, Timișoara, Romania
2013	Human Pluripotent Stem Cell Training Course, EMBO, Glasgow, UK
2013	Transgenic Animals: Techniques for Generation of Transgenic Mice, EMBL, Heidelberg, Germany
2009	Targeted Genome Editing using Zinc Finger Nucleases, EMBL, Heidelberg, Germany
2002	Cellular and Molecular Genetics Course, Institut Pasteur, Paris, France
2000	EMBO Course in Developmental Histology of Higher Vertebrates, Freiburg, Germany
1998	Elective Fellowship in Biology of Limb Development, University of Cantabria, Santander, Spain
1996	Elective Fellowship in Neurodevelopmental Biology, Maastricht University, Maastricht, Netherlands

SKILLS & COMPETENCIES

Languages

Language	Listening	Reading	Spoken	Writing	Level
Romanian (native)					
English	C1	C1	C1	C2	Advanced
French	C1	C1	C2	B2	Proficient
German	B2	B2	B1	B1	Independent

Digital & Technical Skills

Information processing	Proficient — statistical analysis, bioinformatics pipelines, NGS data analysis
Communication & writing	Proficient — scientific manuscript preparation, grant writing, academic presentation
Content creation	Proficient — research figures, teaching materials, scientific communication
Specialist software	Proficient — ImageJ/FIJI, GraphPad Prism, R (basic), standard office & reference management tools
Data security	Independent — GDPR compliance, data protection in clinical research contexts
Problem-solving	Independent — experimental design, troubleshooting complex molecular biology protocols

ADDITIONAL INFORMATION

Identifiers
ORCID: 0000-0003-1618-9656
Web of Science ResearcherID: AAP-1290-2021

Leadership
President, Timișoara Institute for Complex Sciences (TICS)

Nationality
Romanian

Signature


• CV prepared in October 2026
• Language levels follow the Common European Framework of Reference (CEFR)