





PERSONAL INFORMATION	Elena Matei
	 National Institute for Research and Development of Isotopic and Molecular Technologies (INCDTIM), Cluj-Napoca, Romania
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PROFESIONAL EXPERIENCE	
10/2021- present	Research Scientist CS II National Institute for Research and Development of Isotopic and Molecular Technologies (INCDTIM), Cluj-Napoca, str. Donat 67 –103, www.itim-cj.ro
06/2016 -12/2019	Einstein Visiting Fellow- Associate Scientist Technical University, Berlin, Germany
08/2008- 05/2016	Research Scientist Associate Structural Biology, University of Pittsburgh, USA
08/2005- 07/2008	Postdoc Structural Biology, University of Pittsburgh, USA
10/2004 - 07/2005	Postdoctoral Fellow National Institutes of Health (NIH), USA
10/1999 - 01/2003	Assistant Professor- Physics Technical University, Cluj-Napoca
09/1993 - 08/1997	Professor - Physics Liceul Transporturi CFR, Școala Generală nr 5, and nr 20, Cluj-Napoca, Liceul Industria Sticlei, Turda

EDUCATION	
09/1997 - 08/2003	PhD in Physics (<i>summa cum laude</i>) Faculty of Physics, Babeș-Bolyai University, Cluj-Napoca
09/1988 - 07/1993	BS Sc. Fizică Faculty of Physics, Babeș-Bolyai University, Cluj-Napoca

COURSES	
09/2017	3rd G-NMR School Leibniz-Institut für Molekulare Pharmakologie (FMP- Berlin)
11/2010	Theoretical and Computational Biophysics course University of Illinois Urbana-Champaign, USA
07/2009	Nanotechnology in Medicine Workshop National Institutes of Health (NIH), USA
10/2005	X-ray Methods in Structural Biology Cold Spring Harbor course, USA
08/2003	Biomolecular NMR Spectroscopy course Columbia, MD, USA

Awards	
12/1999 – 06/2000	Graduate Fellowship form Romanian Government –Institut Curie-Orsay France
06/2002 –06/2003	Dr. Daniel B. Newell & Aurel B. Newell Fellowship, USA

PROFESSIONAL COMPETENCES	
<p>Professional skills</p>	<p>Expertise in high resolution Nuclear Magnetic Resonance</p> <ul style="list-style-type: none"> • processing and analysis of NMR spectra: Topspin, NMRpipe, CCPNmr • 3D structure determination of proteins by NMR (CYANA, XPLOR) • NMR paramagnetic relaxation enhancement (¹H-PRE, ¹⁹F-PRE) • protein-ligand interaction by RMN, and ITC calorimetry <p>Expression and purification of isotopically labeled proteins</p> <ul style="list-style-type: none"> • cloning in expression vectors, mutagenesis, PCR amplification • cellular cultures for expression of labeled proteins (¹⁵N/¹³C/¹⁹F/²H) • protein purification chromatography (FPLC, IEX, His-tag) • protein characterization by spectroscopic method UV/Vis, SDS-PAGE • mass spectrometry (MALDI-tof, ESI-MS, cross-linking/MS) <p>Expertise in protein crystallography</p> <ul style="list-style-type: none"> • initial screening, and optimization of crystallization condition • X-ray diffraction measurements, data processing, analysis (HKL, CCP4) • protein 3D structure determination by X-ray crystallography (PHENIX) <p>Experience in the synthesis and characterization of gold nanoparticle</p> <ul style="list-style-type: none"> • microarray chemistry used in screening of carbohydrate-binding proteins as support for antiviral sensors, for a rapid diagnostic method • gold nanoparticle characterization by UV/VIS • lectin - gold nanoparticle interaction study by ITC calorimetry
<p>Digital skills</p>	<ul style="list-style-type: none"> • molecular docking (HADDOCK), visualization (PyMol, Coot) • work experience in Linux (csh, tcsh, bash, tcl/tk) • data analysis in Origin, and KaleidaGraph • protein/gene data bank (RCSB PDB, BMRB, NCBI), ExpASy, Blast • editing/presentation: MSOffice, PowerPoint, Adobe Illustrator
<p>Communicational and organizational skills</p>	<ul style="list-style-type: none"> • efficiency in teamwork as well as independently • perceptiveness, sincerity, and respect in teamwork • ability to use a variety of interdisciplinary techniques • identification of needs, elaboration of plans, action, and evaluation • setting priorities, monitoring progress, achieving goals • coordination and supervision of the team

<p>Mother tongue</p>	Romanian				
<p>Foreign languages</p>	UNDERSTANDING		SPEAKING		WRITING
	Lisening	Reading	Conversation	Speaking	
English	C2	C2	C2	C2	C2
French	B1	B1	B1	B1	B1
German	A2	A2	A2	A2	A2
<p>Driver licence</p>	B				

SUPLIMENTAR INFORMATION	
Publication	ISI citations 599 (578 without self-citations) Hirsch index: 12
Conferences	14 conferences international, 1 national
Oral presentations	5 conferences, 7 seminars, 25 group meetings
Protein Data Bank	PDB structures in protein databank: 2L2F, 3CZZ, 5K79, 2RP3, 3LHC, 1M39
Projects	Director/coordinator /member
	<p>PN-III-P4-PCE-2021-0316 - director of project (2022 - 2024) <i>Molecular aggregation pathway and in silico inhibitors screening of cataract-associated gamma D-crystallin congenital defect</i></p> <p>R01 grant financed by National Institute of Health (NIH), USA (2012-2016) <i>Structures, carbohydrate binding, anti-viral activity of CVNH family</i></p> <p>R01 grant financed by National Institute of Health (NIH), USA (2007-2012) <i>Carbohydrate binding and anti-viral activity of Cyanovirin-like lectins</i></p> <p>R01 grant financed by National Institute of Health (NIH), USA (2011-2013) <i>Photogenerated Carbohydrate Microarrays</i></p>