PETER TOMPA, CURICULUM VITAE

NATIONALITY

Hungarian, Belgian

DATE OF BIRTH

March 14, 1959

OFFICE ADDRESS

HUN-REN Office for Supported Research Groups (TKI), Cell Cycle Laboratory, National Institute of Oncology, 1122 Budapest, Hungary

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EDUCATION, DEGREES

1983	M.Sc. in chemistry, University of Eötvös Loránd (ELTE) Budapest, Faculty of Science, Institute of Chemistry
1991	Ph.D., "Quantitative characterization of the interactions of glycolytic and citric acid cycle enzymes", Hungarian Academy of Sciences (HAS)
2006	D.Sc., “Mechanism of calpain activation”, HAS

CURRENT POSITIONS:

2025 - present	Scientific advisor, HUN-REN Office for Supported Research Groups (TKI), Cell Cycle Laboratory, National Institute of Oncology, 1122 Budapest, Hungary
2006 - present	Scientific advisor, Institute of Enzymology (IoE), Research Centre for Natural Sciences (RCNS) of HAS, Budapest, Hungary
2011 - present	Group leader emeritus, Vlaams Instituut Biotechnologie (VIB), Structural Biology Research Center (SBRC), Brussels, Belgium
2011 - present	Full professor (Gewoon Hoogleraar) emeritus, Faculty of Sciences and Bioengineering Sciences, Vrije Universiteit Brussel (VUB), Brussels, Belgium

PREVIOUS POSITIONS:

2019-2023	Chair of advisory board, New Equilibrium Biosciences
2011-2016	Director, VIB-VUB center for Structural Biology, Brussels (10 research groups, 130 people)
2007-2009	Deputy director, Institute of Enzymology, Budapest (15 research groups, 150 people)
1992	Principal research fellow, Institute of Enzymology, Budapest
1986	Research fellow, Institute of Enzymology, Budapest

ESTEEM FACTORS, INSTITUTIONAL RESPONSIBILITIES, COMMISSIONS OF TRUST

2024-	Scientific advisory board, HORIZON-CSA program IDP2Biomed (Bringing intrinsically disordered proteins to biomedical applications)
2022-	Scientific advisory board, COST action ML4NGP (Non-globular proteins in the era of machine learning)
2018, 2022	Member, German Research Foundation (DFG), SPP Priority program panel
2021-	Member, ERC StG LSF1 panel
2020-	Member, Hungarian Scientific Research Fund (OTKA), Molecular Biology (MOLBI) Evaluation Board
2018-	Board of Belgian Society for Biochemistry & Molecular Biology
2015-	Advisor, Protein Modules Consortium (PMC)
2015-	Scientific Advisory Board, Biological Magnetic Resonance Bank (BMRB)
2015-	International Advisory Committee, Human Dark Proteome Initiative (HDPI)
2012-16	Editorial board member, Journal of Intrinsically Disordered Proteins (IDPs)
2009-11	Chair, Biochemistry and Molecular Biology Committee, HAS
2007	Chair, Hungarian Scientific Research Fund, Molecular Biology Evaluation Board (MOLBI)
2001-2004	Member, Hungarian Scientific Research Fund, Infra-individual 1 Evaluation Board
1997-2008	Secretary, Biochemical and Molecular Biological Committee of the Hungarian Academy of Sciences
1990-2002	Scientific secretary, Institute of Enzymology

MEMBERSHIP IN SOCIETIES

Academia Europaea, Hungarian Biochemical Society, American Biophysical Society

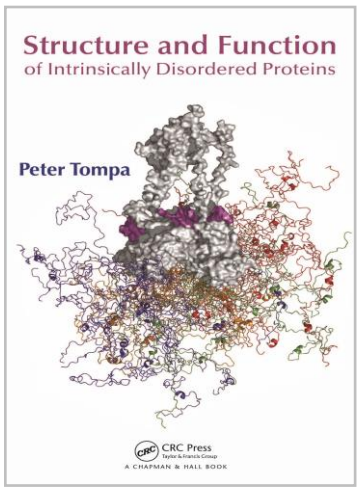
GRANTS, FUNDING (SELECTED FROM ABOUT 25 IN 1992-2016, TOTAL OF 5.8M €)

2018-2021	H2020-MSCA-RISE-2018 grant *(IDPfun: Driving functional characterization of intrinsically disordered proteins)*
2011-2016	FWO Odysseus Type I grant (*Structural biology of the intrinsically disordered plant dehydrin ERD14)*
2013-2017	OTKA – FWF Joint Research Grant *(Comparative Analysis of Intrinsically Disordered Proteins)*
2010-2014	EC FP7-Infrastructures-2010-1 grant, Bio-NMR *(NMR for Structural Biology)*
2010-2014	EC FP7-PEOPLE-2010-ITN, Marie Curie Initial Training Networks, IDPbyNMR *(NMR in the structural characterization of intrinsically disordered proteins)*
2003-2007	Wellcome Trust International Senior Research Fellowship (ISRF) (*Intrinsically unstructured proteins*)

FELLOWSHIPS AND AWARDS

2011	Arnold Ipolyi Prize (Hungarian Scientific Research Fund, Hungary)
2010	Straub Plaquette (Biological Research Center, Hungary)
2010	Academy Prize (Hungarian Academy of Sciences, HAS)
1999-2002	Bolyai János postdoctoral research fellowship (HAS)
2002-2007	Wellcome Trust, International Senior Research Fellowship (ISRF)

1998 and 1996. Qualitas Biologica Award II (Qualitas Biologica Foundation)
1993 Young Investigator Prize (HAS)



PUBLICATIONS

Publications	247 papers, 11 book chapters, 1 book (Structure and function of intrinsically disordered proteins, CRC Press, 2010)
First/last (corresponding) author	125 papers
High-impact papers (i.f. >10)	46 papers
Citations	24.000 (Web of Science), 37.500 (Google Scholar)
H-index	71 (Web of Science), 81 (Google Scholar)

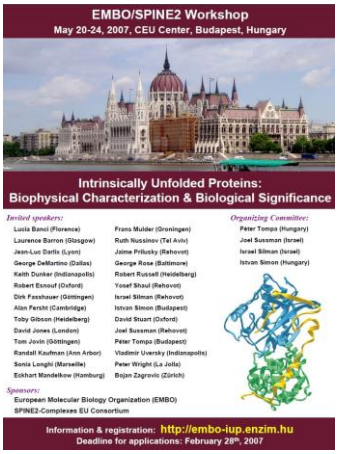
INVITED LECTURES, PRESENTATIONS

145 international meetings (20 plenary/keynote lectures), >120 department seminars
selected keynote/plenary lectures:

2014 *Towards describing IDP function by dynamic structural ensembles* (Gordon Research Conference, Intrinsically Disordered Proteins, July 6-11, Stonehill College, Easton, MA, USA)
2014 *IDP function and dynamic structural ensembles* (6th meeting of the Austrian Association of Molecular Life Sciences and Biotechnology (ÖGMBT), Sept. 15-18, Wien, Austria)
2016 *Structural disorder and allostery: new challenges in drug development* (Frontiers in Medicinal Chemistry GDCh – DPhG - SCT Joint Meeting, March 13-16, Bonn, Germany)
2017 *Phase separation of C9orf72 dipeptide repeats in ALS* (plenary lecture, XXVIth congress of the Hungarian Biophysical Society, Aug. 22-25. Szeged, Hungary)
2019 *Functional features of structural ensembles of IDPs* (10th Argentinean Congress of Bioinformatics and Computational Biology (A2B2C), Nov. 10-13, Mar del Plata, Argentina)
2023 *Targeting LLPS in disease: a new modality in drug development* (Belgrade BioInformatics Conference – BELBI, June 19-23, Belgrade, Serbia)

CONFERENCE ORGANIZATION (SELECTED FROM TOTAL OF 11)

2007 First international meeting on IDPs *(Intrinsically Unfolded Proteins (IUP): Biophysical Characterization and Biological Significance, EMBO/SPINE2 meeting (Budapest, Hungary)*
2010 First Gordon Research Conference on IDPs *(Intrinsically Disordered Proteins, Gordon Research Conference, Davidson, NC, USA)*
2015 First VIB Conference *(Structural dynamics in cellular communication, Brussels)*
2017 VIB Symposium *(Phase Transitions in Biology and Disease, Leuven, Belgium)*
2022 VIB-PhasAGE symposium *(Biomolecular condensates in biology and disease, Brussels, Belgium)*



GRANTS REVIEWED

> 100 for about 20 funding agencies, such as: FWO (Belgium, Flaneders); NWO (Nederalnds); ANR (France); NIH (USA); NSF (USA); U.S.-Israel Binational Science Foundation (USA), FWF (Austria); DFG (Germany); H2020 FET (European Commission); INRA (Italy); KAUST (Saudi Arabia); UKRI (Ukraine); AcRF (Singapore); NCSTE (Kazakhstan); ESF (Europe); Marsden Fund (Australia); Novo

Nordisk (Denmark); National Science Centre (Poland); FCT (Portugal); Science Fund (Republic of Serbia); Academic Research Fund (AcRF, Singapore); Swiss National Science Foundation (Switzerland); Biotechnology and Biological Sciences Research Council (BBSRC, UK)

> 200, as panel member: OTKA MOLBI, DFG, ERC StG LS1

COLLABORATIVE NETWORK

protein dynamics: Peter Wright (Scripps), Claus Seidel (Univ. Dusseldorf), Toshio Ando (Kanazawa University), Richard Kriwacki (St. Jude Children's Hospital, Memphis, TN), Isabella Felli (CERM, Florence)

intrinsically disordered chaperones:
Martin Blackledge (IBS, Grenoble), Dimitri Svergun (EMBL, Hamburg), Silvio Tosatto (U Padova)

protein ubiquitination and degradation:
Aaron Ciechanover (Technion, Haifa), Gustavo Gutierrez (VUB Brussels), Giulio Superti-Furga (CEMM, Wien)

structural ensembles:
Michele Vendruscolo (Cambridge Univ., Cambridge), Julie Forman Kay (Toronto Univ.), Keith Dunker (Indiana Univ., Indianapolis), Joel Sussman (Weizmann Institute of Science, Rehovot), David Wishart (Univ. Alberta, Edmonton)

phase transitions in biology:
Ludo Van Den Bosch (VIB, Leuven), Rohit Pappu (Washington University, St. Louis), Clifford Brangwynne (Princeton University, Princeton, New Yersey), Steven Boeynaems (Baylor College of Medicine), Zoher Gueroui (Ecole Normale Superieure, Paris)

tech transfer, entrepreneurship:
Jo Bury (VIB, Belgium), Virginia Burger (Blackbird BioVentures), Titia Sixma (Netherlands Cancer Institute)

TECH-TRANSFER, VALORIZATION

2023	Means and methods to treat neurodegenerative diseases (Patent application PCT/EP2023/055419)
2019	Co-founder of New Equilibrium Biosciences, a Boston-based startup
2002	Calpain activators (Patent PCT WO2003050141B1)

TEACHING AND MENTORING

Teaching	regular MSc course on bioinformatics (VUB)
	special courses on IDPs (ELTE University (Budapest), Weizmann Institute of Science (Rehovot), ECUST University (Shanghai), KU Leuven (Kortrijk)
Supervision	PhD work: 24 (completed), 2 (ongoing)
	postdocs: 9; MSc students: 15

INTEREST

My long-standing interest is in the structure-function relationship of proteins, with particular focus on protein-protein interactions and structural features involved in their recognition functions. Studying an enzyme-inhibitor pair (calpain-calpastatin) brought my interest to proteins that exist and function without a stable 3D fold (intrinsically disordered proteins, IDPs), which represents a conceptual challenge to our view of protein structure and function. My research in the last 25 years has focused on various aspects of

IDP research, from bioinformatics through database building to detailed structure-function studies of selected IDPs, both *in vitro* and *in vivo*. I also paid attention to targeting disease-linked IDPs in drug-development efforts. Recently, I am active in studying liquid-liquid phase separation (LLPS) involving RNA-binding IDPs, leading to the formation of membraneless organelles (MLOs) in biology and disease, amyotrophic lateral sclerosis (ALS) and cancer.