



Professor Mladen Krajacic, PhD

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Mladen Krajacic is a Professor Emeritus at the University of Zagreb, Faculty of Science (Department of Biology). He earned his PhD in Virology from the same institution. As Head of Laboratory and principal investigator on several research projects, he led molecular biology investigations of viruses, subviral agents (viroids and satellite RNAs), and non-cultivable bacteria.

His research has been published in high-impact scientific journals, including several in the top 10% of the field. He was a regular peer reviewer for these journals. Over his career, he has presented numerous research contributions at international conferences, including several invited lectures. He has also mentored many young researchers who have received positions at the University of Zagreb and prestigious institutions worldwide.

Over the past two decades, he held various administrative roles at the department and faculty level, including Vice-Head and Head of the Department, and Vice-Dean of the Faculty of Science. In 2010, he founded the Division of Microbiology within the Department of Biology. He was also a member of the University Council for Natural Sciences and the Biology Board of the National Scientific Council.

Prof. Krajacic has extensive experience evaluating academic institutions, study programs, and research grants at both national and international levels. He has served as an evaluator for several national accreditation agencies across Europe.

Teaching a number of courses across all academic levels, he was awarded in 2012 (*Srečko Jelenic Award*) and 2023 (*Brdo Award*) as a prominent lecturer in biology.

Beyond his academic career he has been deeply involved in science popularization, delivering numerous public talks in molecular biology and microbiology. He has also co-authored several biology textbooks for secondary school students.

Upon retiring from the University of Zagreb in 2024, he continued his academic career as a Professor at Tbilisi Medical Academy (TMA). The collaboration with this university began through his strong interest in a key Georgian national scientific topic – bacteriophage therapy. In 2024, TMA was awarded the national research grant “*Encapsulation of Salmonella phages in cationic liposomes*”, in which he serves as the principal investigator. The project is aimed at initiating research collaboration between TMA and the University of Zagreb. Starting this academic year, he has also taken on the role of lecturer at TMA for the course “*Actual Topics in Biomedicine*”.

Employment and Academic Positions



University of Zagreb, Faculty of Science, Department of Biology

2026	Professor Emeritus
2024	Retired
2014	Tenured Full Professor
2013-2015	Member of the University Council for Natural Sciences
2012-2014	Vice-Dean of the Faculty of Science
2010	Founder and Head of the Division of Microbiology at the Department of Biology
2009-2013	Member of the Biology Board at the National Scientific Council
2009	Full Professor
2008	Senior Scientific Advisor
2000-2002	Head of the Department of Biology
1998	Associate Professor
1997-2000	Deputy-Head of the Department of Biology
1995	Assistant Professor
1993	Research Associate
1984	Research Assistant

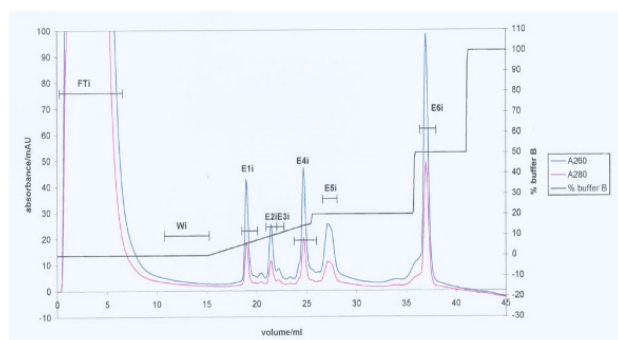


Tbilisi Medical Academy

2024	Principal investigator of <i>Georgian National Science Foundation</i> project (2024-26)
2024	Full Professor
2025	Lecturer of the course " <i>Actual Topics in Biomedicine</i> "

The most prominent scientific achievements

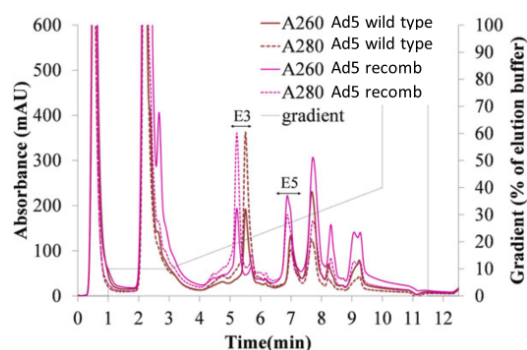
During the last decade, he has been dedicated to chromatography on monolithic supports and its appliance in separation of viral and subviral ribonucleic acids, as well as virus particles. By pioneering in RNA monolith chromatography, his team accomplished the first separation of RNA molecules differing in secondary/tertiary structure (*J Chromatogr A* 2007, 1144, 111-119).



The first chromatographic separation of RNA molecules, (both *Cucumber mosaic virus* and associated satellite single-stranded genomic, and double-stranded replicative forms, E1-E5 respectively) differing in secondary/tertiary structure (*J Chromatogr A* 2007, 1144, 111-119).

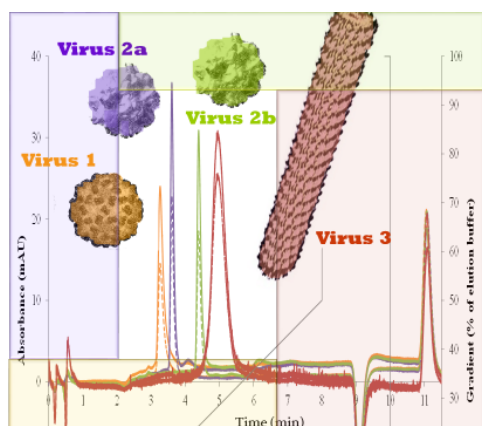
Later, he was leading the first chromatographic separation of mixed viruses from one another (*J Chromatogr A* 2015, 16, 1474-1480). International high-tech company *BIA Separations*, the leader in monolithic supports development and production, considered that as a *state-of-the-art* achievement in the field.

In the last original paper, it has been demonstrated how easy would it be to create targeted capsid modifications, consequently, to provoke adenovirus chromatographic shift from an interfering material (*J Sep Sci* 2016, 39(22), 4299-4304). By this proof of principle, the authors wanted to share an idea that there is a plenty of possibilities to “play” with an adenovirus vector, important in gene therapy trials, in order to improve its “chromatographic separability”, not only its therapeutic functionality. The abstract of the paper, together with some supplementary material, was selected to be republished in the *Biomedical Advances* review.



A shift in the chromatographic retention time of the unassembled hexon protein (E3), but not of the virion fraction (E5), obtained for “funny” double recombinant of the *Adenovirus type 5* – a cancelation of the opposing effects, provoked by each single modification that make retention time shortened and prolonged, respectively. A proof of principle – rearrangement of adenovirus vector, extremely important in gene therapy trials (*J Sep Sci* 2016, 39(22), 4299-4304).

For his recognised contribution to the topic, he has been invited to prepare a review article “*Application of monolithic chromatographic supports in virus research*” for the *Electrophoresis* journal – the Special Issue, dedicated to monolith chromatography.



The first separation of mixed viruses from each other - the cover image of the *Electrophoresis* journal (DOI: 10.1002/elps.201700152), chaperoning the review article “*Application of monolithic chromatographic supports in virus research*”.

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