

## ***Curriculum vitae***

Name: Ivan Mijakovic  
Date of birth: 08-08-1975  
Nationality: Croatian  
Residence: Frölundagatan 35C, 431 44 Mölndal, Sweden

### **Current positions**

2017-present Professor, Center for Biosustainability, Technical University of Denmark, Denmark  
2013-present Professor, Chalmers University of Technology, Sweden

### **Education and degrees**

2008 Professor Habilitation, University Claude Bernard Lyon, France  
2007 University Level Teaching Diploma (UdTU), Technical University of Denmark, Denmark  
2003 PhD degree in Molecular Microbiology, University Paris XI, Orsay, France  
1997 Engineering degree in Molecular Biology (Master degree), University of Zagreb, Croatia

### **Previous positions**

2013-2016 Professor with special responsibilities, Technical University of Denmark, Denmark  
2013-2016 Consulting Professor, AgroParisTech, France  
2008-2013 Professor of Systems Biology, AgroParisTech, France  
2007-2008 Associate Professor, Technical University of Denmark, Denmark  
2006-2007 Assistant Professor, Technical University of Denmark, Denmark  
2004-2005 Postdoctoral fellow, Technical University of Denmark, Denmark  
2000-2003 PhD student, INRA-CNRS, France  
1998-2000 Research associate, Faculty of Science and Mathematics, University of Zagreb, Croatia

### **Brief career synopsis and research interests**

In 1997 I obtained an Engineering degree in Molecular Biology from the University of Zagreb, Croatia. I graduated at the top of my class, and was honored as the Best Student at the University of Zagreb (25 000 students) by the Rector. After spending a brief period as Research Associate at the University of Zagreb, I moved to Paris, France, for my PhD studies. After obtaining a PhD degree in Molecular Microbiology from the University Paris XI in 2003, I moved to the Technical University of Denmark (DTU) as a postdoctoral fellow. In 2006 I became Assistant and in 2007 Associate Professor at the DTU. That is when I started my independent research group, so I have 11 years of experience as an independent group leader. In 2008 I accepted a Full Professorship from AgroParisTech, and moved to Paris as Professor of Systems and Synthetic Biology. In 2013, I accepted an offer to move to the Chalmers University of Technology, as Full Professor of Bacterial Systems Biology. At the same time, the DTU extended to me an offer to start a satellite group there, with a part-time position, first as Professor with special responsibilities (2013-2016), and from January 2017 as Full Professor. Currently I lead a research group implanted at two sites, Chalmers and DTU, with around 15 members, mostly postdoctoral fellows ([http://www.sysbio.se/Lab\\_Mijakovic/IM\\_lab.html](http://www.sysbio.se/Lab_Mijakovic/IM_lab.html)). The oldest and still dominant research topic in my group is bacterial protein phosphorylation, its physiological role and means to use it to engineer bacterial cell factories or to fight bacterial pathogens. My group is among the world leaders in this field, with pioneering contributions in methods to study protein phosphorylation and seminal studies elucidating its physiological role. More recent topics in my group are metabolic engineering of bacterial cell factories (for production of industrial enzymes, platform chemicals, nanoparticles) and bio-

applications of the advanced carbon material graphene (in collaboration with the EU Graphene Flagship) for antibacterial coatings, bio-sensors and extraction of oleochemicals from cell factories. We are increasingly using approaches of experimental evolution in our basic and applied science projects.

### **Distinctions and awards**

- 2019 "Spiridion Brusina Medal", Croatian Society of Natural Sciences
- 2007 "Skou Award", Danish Natural Science Research Council (FNU)
- 2007 "Jorcks pris" for excellence in teaching and research, award from Jorcks Foundation
- 2006 "Researcher of the Year 2006", BioCentrum, Technical University of Denmark
- 2005 "Teacher of the Year 2005", BioCentrum, Technical University of Denmark
- 2003 "Costa Award", Conference on Functional Genomics of Gram-positive Bacteria
- 1997 Rector's award for the best student at the University of Zagreb

### **Academic appointments and commissions of trust**

- 2019-present Head of Division of Systems and Synthetic Biology, Chalmers, Sweden
- 2018-present Member of the Scientific Advisory Board of the Chalmers Graphene Centre, Sweden
- 2015-present Associate Editor at *Frontiers in Microbiology* and *Periodicum Biologorum*
- 2014-present Chairman of the Scientific Committee for the International Conference Series on Post-translational Modifications in Bacteria
- 2018-2019 Member of the Board of Directors of the Sahlgrenska Science Park, Sweden
- 2018-2019 Member of the Advisory Board of the Vestra Götaland Region Innovation Platform, Sweden
- 2018-2019 Member of the Advisory Board of the Gothia Forum, Sweden
- 2016-2019 Director of the Chalmers Area of Advance Life Science Engineering, Sweden
- 2015-2018 Member of the Steering Committee of the BACELL Society
- 2013-2016 Chairman of the Section of Functional Genomics of the European Federation of Biotechnology
- 2012-2015 Member of the Steering Committee of the Centre of Excellence for Industrial Agrobiotechnology, France
- 2011-2013 Head of Division of Microbiology and Molecular Genetics, AgroParisTech, France
- 2003-present Reviewer for Molecular Microbiology, Molecular and Cellular Proteomics, Science Signalling, PLoS Genetics, Journal of Proteome Research, Journal of Proteomics, Journal of Biological Chemistry, Microbiology, Journal of Bacteriology, Biochemica & Biophysica Acta, Proteomics, PLoS Pathogens, Molecular & Cellular Biology, FEBS Letters, Frontiers in Microbiology, PLoS One and many other molecular biology and biochemistry journals.
- 2003-present Evaluator for funding agencies: ANR (Agence Nationale de la Recherche, France), ARC (Fondation pour la Recherche sur le Cancer, France), the Polish Natural Science Council, the Croatian Academy of Science and the Rumanian National Funding Agency.
- 2003-present Evaluator in recruitment committees for Assistant and Associate Professors at the University of Wageningen, Chalmers University of Technology, Technical University of Denmark, Lund University, and University of Lyon I.

### **Assistant/Associate Professors and Senior Researchers supervised**

- Dr. Carsten Jers (2019-present)
- Dr. Tao Chen (2016-2017)
- Dr. Sandrine Poncet (2011-2013)
- Dr. Yves Pagot (2011-2013)

**Postdoctoral fellows supervised**

Dr. Abhayraj Joshi (2019-present)  
Dr. Hongxia Zhang (2019-present)  
Dr. Julie Bonne K hler (2019-present)  
Dr. M ri m Senissar (2019-present)  
Dr. Abhroop Garg (2018-present)  
Dr. Shadi Rahimi (2018-present)  
Dr. Priyanka Singh (2016-present)  
Dr. Santosh Pandit (2015-present)  
Dr. Vaishnavi Ravikumar (2015-present)  
Dr. Abderahmane Derouiche (2014-present)  
Dr. Lei Shi (2009-present)  
Dr. Carsten Jers (2015-2019)  
Dr. Abida Sultan (2015-2019)  
Dr. Raghu Mokkaapati (2015-2018)  
Dr. HeeJin Hwang (2017-2018)  
Dr. Valentina Cantatore (2016-2017)  
Dr. Fen Yang (2015-2016)

**PhD students supervised**

Ivan Andreas Stancik (2017-2018)  
Aida Kalantari (2012-2016)  
Charlotte Cousin (2010-2014)  
Abderrahmane Derouiche (2010-2013)  
Ahasanul Kobir (2009-2012)  
Boumedi ne Soufi (2007-2010)  
Sujata Vijay Sohoni (2007-2010)  
Carsten Jers (2007-2010)  
Mette Erichsen Hansen (2006-2009)

**Master students supervised**

A total of 18 Master students graduated from my lab.

**Teaching experience**

I have experience of teaching at three European universities: The Technical University of Denmark (Denmark, 2006-2008), AgroParisTech (France, 2008-2013) and Chalmers University of Technology (Sweden, 2013-present). I have been appointed as course responsible for a number of courses at all three universities (currently responsible for two bachelor courses at Chalmers: UCM010 and KMG050).

**Course responsible**

2013-present	Chalmers University of Technology, Bachelor level advanced course in Cell and Molecular Biology II (KMG050), theoretical course (lectures), approx. 60 students per generation.
2016-present	Chalmers University of Technology, Bachelor level basic course in Cell and Molecular Biology I (UCM010), theoretical course (lectures), approx. 110 students per generation.
2010-2013	AgroParisTech, Bachelor level course in Molecular Genetics, theoretical course (lectures), approx. 350 students per generation.

2010-2013	AgroParisTech, Master level course in Bio-engineering, theoretical course (lectures), approx. 20 students per generation.
2012-2013	AgroParisTech, Master level course in Medical Systems Biology, theoretical course (lectures), approx. 80 students per generation.
2009-2013	AgroParisTech, Master level course in Functional Genomics, theoretical course (lectures), approx. 20 students per generation.
2006-2008	Technical University of Denmark, Master level course in Molecular and Cellular Biology, theoretical course (lectures), approx. 100 students per generation.
2006-2008	Technical University of Denmark, Master level course in Microbial Biotechnology, practical course (experimental), approx. 30 students per generation.

### **Leading functions in education**

2017-present	Responsible for joint education initiatives between Chalmers and the Sahlgrenska Academy/Sahlgrenska Hospital
2013-2017	Responsible for Chalmers bilateral Erasmus exchange agreements with AgroParisTech, France and University of Zagreb, Croatia.
2012-2013	Coordinator for educational activities in the partnership between AgroParisTech and the pre-industrial platform Metagenopolis.
2009-2013	Coordinator for Master programs: Mathematical Modeling at the Interface of Life Science and Economy (MMSEI) and Systems and Synthetic Biology (MSSB), AgroParisTech, France.
2009-2013	Responsible for the Erasmus Student exchange between AgroParisTech, France and University of Zagreb, Croatia.
2007-2008	Coordinator for foreign exchange students at the BioCentrum, Technical University of Denmark, Denmark.

### **Conference organization**

- Main organizer and Chairman of the scientific committee of the “4th International meeting on post-translational modifications in bacteria” (to be held in September 2020) Copenhagen, Denmark
- Chairman of the scientific committee of the “3rd International meeting on post-translational modifications in bacteria” (December 2018) Tübingen, Germany
- Main organizer of the “NanoMed North” conference (May 2017) Gothenburg, Sweden
- Chairman of the scientific committee of the “2nd International meeting on post-translational modifications in bacteria” (October 2016) Lyon, France
- Chairman of the scientific committee of the conference on “Metabolic engineering in bacteria” (April 2015) Amsterdam, The Netherlands
- Member of the organizing committee of the BACELL 2015 meeting (April 2015) Amsterdam, The Netherlands
- Chairman of the organizing committee of the “1st International meeting on post-translational modifications in bacteria” (September 2014) Göttingen, Germany
- Main organizer of the “Symposium on regulation and signalling in bacteria” (October 2013) Götteborg, Sweden

### **Selected keynote lectures at conferences**

- Materials for Tomorrow (November 2016), Gothenburg, Sweden
- 2nd International meeting on post-translational modifications in bacteria (October 2016) Lyon, France
- NanoMedNorth (June 2016) Copenhagen, Denmark

- Big Data & Biotechnology (January 2016), Tuval, Saudi Arabia
- UCD Symposium (December 2015), Dublin, Ireland
- Conference on Functional Genomics of Gram-positive Bacteria (June 2015) Montecatini, Italy
- Novo Nordisk Prize Symposium (December 2014), Copenhagen, Denmark
- Annual Meeting of the Croatian Society for Biochemistry and Molecular Biology, (September 2014) Zadar, Croatia
- SFM Mikrobiologisk Vårmöte (April 2014) Trollhättan, Sweden
- iBIOK: Innovative Bioproduction Kobe (January 2014) Kobe, Japan
- Symposium on Proteomics of Microorganisms (December 2013) Tübingen, Germany
- VAAM Annual Meeting (March 2013), Bremen, Germany
- Annual conference of the Croatian Society of Biology (September 2012) Sibenik, Croatia
- Conference on Transmembrane Proteins (October 2010) Maratea, Italy
- FEBS Meeting (July 2010) Gothenburg, Sweden
- ASM General Meeting (May 2009) Philadelphia, USA
- Plasmidtagung Conference (October 2008) Göttingen, Germany
- International conference on inhibitors of bacterial protein kinases (June 2007) Warsaw, Poland

#### **Ongoing scientific collaborations**

- Dr. Marie-Francoise Noirot-Gros, Argonne, USA
- Prof. Boris Macek, University of Tübingen, Germany
- Dr. Christophe Grangeasse, CNRS, France
- Dr. Damjan Franjevic, University of Zagreb, Croatia
- Dr. Tomislav Domazet-Loso, Rudjer Boskovic Institute, Croatia
- Dr. Markus Herrgard, DTU-Biosustain, Denmark
- Prof. Vladimir Bajic, KAUST, Saudi Arabia
- Prof. Takashi Gojobori, KAUST, Saudi Arabia
- Dr. Magnus Svensson, Wellspan Healthcare, Sweden
- Prof. Sun Nyunt Wai, Umeå University, Sweden
- Prof. Åsa Sjöling, Karolinska Institute, Sweden
- Prof. Avgust Yurgens, Chalmers MC2, Sweden
- Prof. Roland Kadar, Chalmers IMS, Sweden
- Dr. Vladimir Bidnenko, INRA, France

#### **Current funding (research grants)**

<b>Granting agency</b>	<b>Years</b>	<b>Amount</b>
Velux Foundation	2019-2021	500 k€
Lundbeckfonden	2019-2022	300 k€
VINNOVA	2017-2019	220 k€
Swedish research council VR	2106-2019	260 k€
FORMAS	2019-2022	300 k€
Danish research Council FTP	2018-2021	380 k€
Novo Nordisk Foundation	2015-2020	750 k€
Carl Tryggers Foundation	2018-2020	60 k€
Danish Research Council FNU	2019-2021	380 k€

VINNOVA Competence Center  
ÅForsk

2020-2025  
2019-2020

200 k€  
50 k€

**Career total of external funding raised for research as the main applicant: 10.1 M€.**

#### **Scientific collaboration with industrial partners**

- Wellspect, Mölndal, Sweden, 2015-present (advanced antibacterial coating of catheters and other biomedical devices)
- Christian Hansen A/S, Denmark: 2015-present (phosphoproteome analyses of industrial strains)
- Danisco A/S, Denmark: 2007-2009 (engineering of *Bacillus subtilis* for production of nisine)
- Novozymes A/S, Denmark: 2007-2008 (transcriptomics characterization of *Bacillus licheniformis* under heat stress and iron limitation)
- Christian Hansen A/S, Denmark: 2007-2008 (improvement of protein secretion and folding for heterologous protein expression in *Bacillus subtilis*)

#### **Patents**

- EU patent 19184488.5 – 1109 (2019) Antibacterial article comprising a polymer matrix with aligned nanoscale flakes of platelets. Inventors: Kadar R, **Mijakovic I**, Gaska K, Pandit S, Svensson M.

#### **Bibliometrics**

102 peer reviewed publications. Google Scholar: 4321 citations, H-index 37 (Google Scholar, October 2019).