

CURRICULUM VITAE

Name: **Pavel Dvořák**

Birth Date: August 9, 1983

Place of Birth: Kroměříž (Czech Republic)

Nationality: Czech, Marital status: married (two children)

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Researcher ID (WoS): AAO-7902-2020. (Scopus): 57189591444

Web site: <https://mik.sci.muni.cz/mbi> (Microbial Bioengineering Laboratory web)

Education

- 1.9.2009-7.11.2014: **Ph.D. in Molecular and Cellular Biology**, Thesis: *Engineering of the synthetic metabolic pathway for biodegradation of environmental pollutant*. Masaryk University (MUNI), Brno, Czech Republic (CR).
- 1.9.2007-22.6.2009: **M.Sc.** (graduated with honors), MUNI, CR.
- 1.9.2004-28.6.2007: **Bc.**, MUNI, CR.

Current and previous work positions

- 1.1.2019-now: **Assistant/Associate** (since 1.4.2023) **Professor and head of Microbial Bioengineering Laboratory**, Section of Microbiology, Department of Experimental Biology, Faculty of Science, MUNI, Kamenice 5/A25, Brno 62500, CR.
- 10.6.2015-31.12.2018: **postdoctoral researcher and Marie S. Curie Fellow (H2020-MSCA-IF-2015)**, Molecular Environmental Microbiology Laboratory, Systems Biology Program, Centro Nacional de Biotecnología (CNB), Agencia Estatal Consejo Superior de Investigaciones Científicas (CSIC), Campus Cantoblanco, C/ Darwin 3, Madrid 28049, Spain.
- 1.3.2015-31.5.2015: **research assistant**, Department of Experimental Biology, Faculty of science, MUNI, CR.
- 1.1.2013-31.12.2014: **research assistant**, Research Centre for Toxic Compounds in the Environment RECETOX, Faculty of Science, MUNI, CR.
- 1.3.2011-28.2.2015: **Ph.D. student**, International Clinical Research Center (FNUSA-ICRC), Brno, CR.
- 1.11.2009-28.2.2011: **research assistant**, Mendel's Centre for Education in Biology, Biomedicine and Bioinformatics, Department of Biology, Medical Faculty, MUNI, CR.

Teaching and mentoring experience

- 2019-now: Supervisor of 12 successfully defended Diploma and Bachelor Theses. Currently supervisor of 2 postdocs, 4 Ph.D. students, 4 Master students, and 2 Bachelor students. Faculty of Science, MUNI, CR.
- 2020 and 2021: One of three **PI supervisors of the first Brno iGEM team**, in 2020 our CYANOTRAP project won a gold medal and got amongst the TOP 5 environmental projects in the world (https://2020.igem.org/Team:Brno_Czech_Republic/Poster), MUNI, CR.
- 2020-now: Course **Bi7034 Introduction to the metabolic engineering and synthetic biology of microorganisms** (in Czech), guarantee and lecturer, autumn semester, MUNI, CR.
- 2019-now: Course and practices **Bi6721 and Bi6721c Special Methods for Analysis of Microorganisms** (in Czech), guarantee and lecturer, spring semester, MUNI, CR.
- 2019-now: Course **Bi1044 Introduction to the study of Microbiology specialization** (in Czech), lecturer, autumn semester, MUNI, CR.
- 2020-now: seminar **Bi7033 Seminar of the laboratories of the Section of Microbiology** (in English), guarantee and lecturer, spring and autumn semesters, MUNI, CR.
- 2012-now, course **Bi7430 Molecular Biotechnology** (in Czech), lecturer, 1-2 lectures on Metabolic Engineering and Synthetic Biology per autumn semester, MUNI, CR.
- 24.9.-1.10.2017 **EMBO Practical course: Synthetic Biology in action**, Heidelberg, Germany, supervisor and lecturer.
- 17.-21.6.2012 and 22.-26.6.2014 Loschmidt Laboratories **Summer School of Protein Engineering**; supervisor, mentor and lecturer, lecture Molecular Biology in Protein Engineering, MUNI, CR.

Awards and fellowships

- 2024: **MUNI Scientist**, award by the Masaryk University, Brno, CR, for outstanding research results
- 2023: **Jay Bailey Young Investigator Award in Metabolic Engineering** by International Metabolic Engineering Society
- 2022: **2.-3. Place, Werner von Siemens Award**, category The most significant result of basic research
- 2021: **Masaryk Award in Science and Humanities Junior** (MUNI, CR)
- 2019: **FEMS Congress Attendance Grant** for FEMS Congress 2019, Glasgow, UK.
- 2018: **MSCA IF Seal of Excellence** for the non-financed MSCA-IF-2018-EF-ST project TOGETHER (Proposal number: 835528)
- 2018: **EMBL Corporate Partnership Programme Travel Grant** for attendance of EMBL Course: Microbial Communities: Modelling Meets Experiments.
- 2018: **Young Czech and Slovak Microbiologist of the year 2017**, Czechoslovak Society for Microbiology.
- 2016: Awarded by a **two-year Marie S. Curie Individual Fellowship** (H2020-MSCA-IF-2015).
- 2014: **The Sigma-Aldrich and Czech Society for Biochemistry and Molecular Biology award of Gerty T. and Carl. F. Cori in the field of biochemistry and molecular biology**, Interdisciplinary Meeting of Young Biologists, Biochemists, and Chemists, Milovy, CR.
- 2014: Award **Top Paper in Environmental Technology** for ER's article in Environmental Science & Technology journal of American Chemical Society.
- 2013: **Fellowship ICRC Human Bridge III: Incubator of Young Talents** (CZ.1.07/2.3.00/20.0239) of International Clinical Research Center (FNUSA-ICRC, Brno, CR) for research stay in Centro Nacional de Biotecnología, Madrid, Spain.
- 2014, 2010, and 2009: **Awards of the Dean of the Faculty of Science** for exemplary representation of the faculty on international scientific conferences, successful organisation of the student scientific conference, and for excellent students of master studies and outstanding results in the field of study, respectively, MUNI, CR.
- 2008: **Award of the Czech Society for Biochemistry and Molecular Biology** for the best presentation at XII. Meeting of Biochemists and Molecular Biologists, Section of Young Investigators, Brno, CR.

Research projects and other grants

- 1.1.2025-31.12.2027: **Czech Science Foundation (GAČR) Standard project**. A new strategy for the assembly of biocatalytic scaffolds on bacterial surface for facilitated processing of polymeric waste; 25-16845S; principal investigator.
- 15.1.2024: **FEMS Meeting Organiser Grant** for the organization of Applied Synthetic Biology in Europe VII conference, Brno, 6.-8. November 2024, application ID: 4780, awarded amount 5,000 EUR.
- 1.1.2022-31.12.2024: **Czech Science Foundation (GAČR) Standard Project**. Synthetic consortium of *Pseudomonas putida* strains for biodegradation and co-utilisation of (hemi)cellulosic polymers.; 22-12505S; principal investigator.
- 1.1.2022-31.12.2024: **Czech Science Foundation (GAČR) Standard Project**. Unraveling the role of polyhydroxyalkanoates in *Schlegelella thermodepolymerans* – promising environmental bacterium for next generation biotechnology.; 22-12505S; co-investigator (PI prof. Stanislav Obruča, BUT Brno).
- 1.1.2022-31.12.2024: **Grant Agency of Masaryk University (GAMU), Masaryk Award in Science and Humanities (MASH) Junior**. A new generation bacterial platform for lignocellulose biotechnology, principal investigator.
- 1.1.2019-31.12.2021: **Czech Science Foundation (GAČR) Junior Project**. Orthogonalisation of carbohydrate metabolism in bacterial chassis *Pseudomonas putida* EM42 for co-utilisation of lignocellulose-derived sugars; GJ19-06511Y; principal investigator.
- 1.10.2016-30.9.2018: **Marie S. Curie Individual Fellowship (H2020-MSCA-IF-2015)**, project 704410: Refactoring *Pseudomonas putida* for biosynthesis of value-added polymers from cellulosic waste (acronym FUTURE), principal investigator.
- 2012-2016: **Czech Science Foundation (GAČR)**. Construction of a Synthetic Metabolic Pathway for Degradation of Important Environmental Pollutant by Protein and Metabolic Engineering; P503/12/0572; co-investigator (principal investigator prof. Jiri Damborsky). Project evaluated as excellent.
- 2010-2013: **Specific Research**, Category b) Support of specific research projects focused on organization of student scientific conferences. Masaryk University, Brno, Czech Republic.

- 2008-2009: **Masaryk University Rector's Program** for Support of Creative Activities of Students. Part A, Support of Excellent Diploma Theses. Semi-rational design and construction of haloalkane dehalogenases for biotechnological applications; 20081431A0006; principal investigator.
- I also participated in **three EU projects as a team member** (H2020-635536, H2020-704410, ARISYS-322797)

Organisation of scientific meetings

- 6.11.-8.11.2024: Chair of the Organizing and Scientific committee of the conference **Applied Synthetic Biology in Europe VII**, Brno Observatory and Planetarium, Brno, Czech Republic.
- 28.4.-29.4.2022: **The Biomania Student Scientific Meeting** on Biotechnology & Biomedicine 2022, Brno, Czech Republic. Chair of the Organizing Committee for Biotechnology session. (Book of Abstracts ISBN 978-80-280-0040-0) All Biomania conferences are reported on <http://www.biomania.cz/en/>.
- 30.9.-1.10.2019: **The Biomania Student Scientific Meeting on Biotechnology & Biomedicine and EUSynBioS Symposium 2019**, Brno, Czech Republic. Chair of the Organizing Committee. (Book of Abstracts ISBN 978-80-210-9373-7)
- 31.08.-1.9.2017: **EUSynBioS Symposium**, Madrid, Spain. Member of the Steering Committee.
- 3.10.2017 and 09/2015: **The Biomania Student Scientific Meeting** on Biotechnology and Biomedicine, Brno, Czech Republic. Member (2017) and Chair (2015) of the Organizing Committee. (Books of Abstracts ISBN 978-80-210-8737-8 and 978-80-210-7933-5)
- 10.-12.4.2013 and 12.-13.4.2012 **The International Student Scientific Conference on Biotechnology and Biomedicine**, member of Organizing committee (2012) and vice-chair of Organizing Committee (2013), Brno, Czech Republic. (Books of Abstracts ISBN 978-80-210-5811-8 and 978-80-210-6200-9)
- 7.-8.4.2011 **The Student Scientific Conference on Cancer Research**, member of Organizing committee, Brno, Czech Republic. (Book of Abstracts ISBN 978-80-210-5442-4)
- 8.-9.4.2010 **The Student Scientific Conference for Students Working with Genetically Modified Organisms (GMO)**, member of Organizing committee, Brno, Czech Republic. (Book of Abstracts ISBN 978-80-210-5160-7)

Patents

Dvorak, P., Krejci, P., Balek, L., Eiselleova, L., Konecna, Z., **Dvorak, P.**, Bednar, D., Brezovsky, J., Sebestova, E., Chaloupkova, R., Stepankova, V., Vanacek, P., Prokop, Z., Damborsky, J., Bosakova, M., 2022: Thermostable FGF2 Polypeptide, Use Thereof. **Masaryk University and Enantis, s.r.o., Brno, Czech Republic. Patent JP7131772.**

Dvorak, P., Krejci, P., Balek, L., Eiselleova, L., Konecna, Z., **Dvorak, P.**, Bednar, D., Brezovsky, J., Sebestova, E., Chaloupkova, R., Stepankova, V., Vanacek, P., Prokop, Z., Damborsky, J., Bosakova, M., 2023: Thermostable FGF2 Polypeptide, Use Thereof. **Masaryk University and Enantis, s.r.o., Brno, Czech Republic. Patent US 11,746,135 B2.**

Dvořák, P., de Lorenzo V., 2017: Recombinant *Pseudomonas putida* for the production of D-xylonate from D-xylose. **Consejo Superior de Investigaciones Científicas, Spain. Patent WO2019008131A1.** Spanish patent application No. ES1641.1300. Filing number PCT/EP2018/068347, claiming priority date 06/July/2017.

Dvorak, P., Krejci, P., Balek, L., Eiselleova, L., Konecna, Z., **Dvorak, P.**, Bednar, D., Brezovsky, J., Sebestova, E., Chaloupkova, R., Stepankova, V., Vanacek, P., Prokop, Z., Damborsky, J., Bosakova, M., 2021: Thermostable FGF2 Polypeptide. **Masaryk University and Enantis, s.r.o., Brno, Czech Republic. Patent SG 11201804402W.**

Damborsky, J., **Dvorak, P.**, Bednar, D., Brezovsky, J., Sebestova, E., Chaloupkova, R., Balek, L., Krejci, P., Dvorak, P., Konecna, Z., Eiselleova, L., Bosakova, M., Vanacek, P., Stepankova, V., Prokop, Z., 2020: Thermostable FGF2 Polypeptide, Use thereof and Culture Medium Containing Thermostable FGF2 Polypeptide. **Masaryk University and Enantis, s.r.o., Brno, Czech Republic. Patent EP3380508B1.**

Article in domestic non-peer reviewed journals

Sitte M., **Dvořák, P.**, 2024: Mikrobiální fosfoketolázy a jejich využití v biotechnologiích. *Bulletin of Czechoslovak Society for Microbiology.*

Pešta M., **Dvořák, P.**, 2021: Indukovaná bunková smrť baktérií a jej využitie v biotechnológiách. *Bulletin of Czechoslovak Society for Microbiology*.

Dvorak, P., 2015: Metabolické inženýrství. *Bulletin of Czech Society for Biochemistry and Molecular Biology*. ISSN 1211-2526.

Selected oral contributions at conferences and seminars

Dvořák, P. Synthetic biology in bioprocess engineering: from upstream to downstream processing. 27.8.2024 X. Escuela de Biología Sintética Integrativa (UIMP Synthetic Biology Summer School), Santander, Spain. (**invited talk**)

Dvořák, P., Burýšková, B., Popelářová, B., Ebert, B., Bujdoš, D., Botka, T., Benešík, M. Synthetically primed adaptation of bacterial metabolism to a non-native sugar substrate. 3.7.2024 European Congress on Biotechnology, Rotterdam, Netherlands (**invited talk**).

Dvořák, P., Burýšková, B., Popelářová, B., Bujdoš, D., Ebert, B., Sonnenschein, N., Benešík, M. Synthetically-primed adaptation of bacterial metabolism to non-native renewable substrates. 20.-21.5. NextGenBiocat, Heraklion, Crete.

Dvořák, P. Synthetically-primed adaptation of bacterial metabolism to renewable sugar substrates. Seminar of the Czech Advanced Technology Research Institute CATRIN, Olomouc, Czech Republic (29.4.2024, invited by Prof. Ivo Frébort)

Dvořák, P. Synthetically-primed adaptation of bacterial metabolism to renewable sugar substrates. 6th Annual Event in the Bioprocessing, Virtual Event Series (3.4.2024, online, invited by Prof. Frank Baganz)

Dvořák, P. Synthetically-primed adaptation of bacterial metabolism to renewable sugar substrates. Seminar of the IIMCB Warsaw, Poland (29.2.2024, online, invited by Dr. Jan Brezovský)

Dvořák, P. Synthetically-primed adaptation of bacterial metabolism to renewable sugar substrates. Seminar of the Department of Life Sciences, Faculty of Natural Sciences, Imperial College London (19.2.2024, invited by Dr. Jose Jimenez) and seminar of the Dept. of Biochemical Engineering, University College London (22.2.2024, invited by Dr. Leonardo Rios Solis).

Dvořák, P., Bujdoš, D., Popelářová, B., Volke, D.C., Nikel, P.I., Sonnenschein, N. PUSH-based Strategy to Increase Glycolytic Flux in *Pseudomonas putida* from Co-Utilized Cellulosic Sugars to Biopolymer Precursors at the European Symposium on Biopolymers 2023, 13.9.2023, Brno, Czech Republic (**invited lecture** and chairing of the session Synthetic Biology for Biopolymers Engineering and Production).

Dvořák, P., Burýšková, B., Popelářová, B., Bujdoš, D., Benešík, M. Upgrading *Pseudomonas putida* by systems metabolic engineering for lignocellulose biotechnology. FEMS Congress, 9.-13.7.2023, Hamburg, Germany (**lightning talk**).

Dvořák, P. Upgrading *Pseudomonas putida* by systems metabolic engineering for biotechnological processing of lignocellulosic sugars. 11.6.2023. Metabolic Engineering 15 conference, Marina Bay Sands, Singapore (**presentation – lightning talk**).

Dvořák, P. Knowledge-driven de-bottlenecking of engineered xylose and glucose metabolism in *Pseudomonas putida*. 8.12.2022. DTU Biosustain (CFB) seminar, Technical University of Denmark, Lyngby, Denmark (**invited lecture**).

Dvořák, P., Bujdoš, D., Popelářová, B., Volke, D.C., Nikel, P.I., Sonnenschein, N. Engineering of *Pseudomonas putida* for fast co-utilization of glucose and cellobiose yields aerobic overproduction of pyruvate. 1.7.2022. FEMS Conference on Microbiology, Belgrade, Serbia (**presentation**).

Dvořák, P. Knowledge-driven engineering of bacteria and their biochemical pathways for bioprocessing of waste compounds. 9.2.2022 Seminar of Institute of Organic Chemistry and Biochemistry (IOCB), Prague, Czech Republic. (**invited lecture**).

Dvořák, P. Knowledge-driven de-bottlenecking of semi-synthetic xylose and cellobiose metabolism in *Pseudomonas putida*. 19.11.2021 Seminar of the Systems and Synthetic Biology Programme, CNB-CSIC, Madrid, Spain. (**invited on-**

line presentation).

Dvořák, P., de Lorenzo, V. Upgrading *Pseudomonas putida* by synthetic biology for biotechnological processing of lignocellulosic substrates. 31.8.2021. XXVI. Annual Congress of Czech and Slovak Societies for Biochemistry and Molecular Biology with cooperation of Austrian and German Biochemical Section, České Budějovice, Czech Republic (**invited lecture**).

Dvořák, P. Engineering *Pseudomonas putida* whole-cell biocatalysts for biotechnological processing of lignocellulosic substrates. 16.6.2021. BioTech 2020, Prague, Czech Republic (**on-line presentation**).

Dvořák, P., de Lorenzo, V. Expanding the biocatalytic potential of *Pseudomonas putida* with surface-exposed designer protein scaffolds. 2.-4.11.2020 Applied Synthetic Biology in Europe V, Delft, The Netherlands (**on-line presentation**).

Dvořák, P. Re-factoring the interior and exterior of *Pseudomonas putida* for biotechnological processing of lignocellulosic waste. 29.10.2020: EUSynBioS webinar series (www.eusynbios.org, **on-line presentation**)

Dvořák, P., de Lorenzo, V. Engineering the interior and exterior of *Pseudomonas putida* for biotechnological processing of lignocellulosic substrates. 24.-26.9.2020 European Biotechnology Congress, Prague, CR (**on-line presentation**).

Dvořák, P., Engineering biocatalysts for biodegradation and valorization of recalcitrant waste compounds. 14.1.2020. DTU Biosustain seminar, Danish Technical University, Lyngby, Denmark (**invited lecture**).

Dvořák, P., Employing systemic biology in engineering bacteria and their biochemical pathways for biodegradation and valorization of recalcitrant waste compounds. 8.11.2019. Seminar of Institute of Molecular Biology and Biotechnology, Faculty of Biology, Adam Mickiewicz University, Poznan, Poland (**invited lecture**).

Dvořák, P., Martínez-García, E., de Lorenzo, V., Empowering *Pseudomonas putida* with surface-displayed designer protein scaffolds. 7.-11.7.2019 FEMS Congress, Glasgow, UK (**presentation**).

Dvořák, P., de Lorenzo, V., Refactoring metabolism of *Pseudomonas putida* for co-utilisation and valorization of lignocellulose-derived sugars. 24.-28.6.2018 Metabolic Engineering 12, Munich, Germany (poster, presented during **Rapid Fire Poster Session II**).

Dvořák, P., de Lorenzo, V., Making *Pseudomonas putida* like lignocellulose-derived sugars. 7.6.2018 Tomáškovy dny (domestic conference of Czechoslovak Society for Microbiology), Brno, Czech Republic (**invited lecture**).

Dvořák, P., de Lorenzo, V., Engineering *Pseudomonas putida* EM42 for co-utilization of lignocellulose-derived sugars. 2.5.2018 Symposium on Biotechnology for Fuels and Chemicals, Clearwater Beach, Florida, U.S.A. (**presentation**).

Dvorak, P., Re-factoring *Pseudomonas putida* for biosynthesis of value-added chemicals from lignocellulosic waste. 27.9.2017 EMBO Practical course: Synthetic Biology in action, Heidelberg, Germany (**invited lecture**).

Dvorak, P., Kurumbang, N.P., Bendl, J., Brezovsky, J., Prokop, Z., Damborsky, J., Computer-Assisted Engineering of a Synthetic Biodegradation Pathway: Revisiting Biodegradation with Synthetic Biology. EUSynBioS Symposium, 19.4.2016, Imperial College London, UK (**presentation**)

Dvorak, P., Kurumbang, N.P., Bendl, J., Brezovsky, J., Prokop, Z., Damborsky, J., Engineering of Biodegradation Pathway Using Methods of Synthetic Biology (in Czech). XXIV. Congress of the Czech and Slovak Societies of Biochemistry and Molecular Biology, 18.-21.9.2014. Bratislava, Slovakia (**presentation and chairing of the Biotechnology session of the congress**)

Dvorak, P., Kurumbang, N.P., Bendl, J., Brezovsky, J., Prokop, Z., Damborsky, J., Engineering of Metabolic Pathway for Biodegradation of Anthropogenic Pollutant Using Methods of Synthetic Biology (in Czech). *Interdisciplinary Meeting of Young Biologists, Biochemists, and Chemists*, 13.-16.5.2014. Milovy, Czech Republic (**presentation**)

Dvorak, P., Rational Engineering of Synthetic Biodegradation Pathway. Seminar of Centro Nacional de Biotecnología (CNB-CSIC), 7.10.2013, Madrid, Spain (**presentation**)

Dvorak, P., Kurumbang, N.P., Bendl, J., Brezovsky, J., Prokop, Z., Damborsky, J., *In Vitro* and *In Silico* Engineering of Multi-enzyme Reactions. *Biotrans*, 21.-25.7.2013. Manchester, UK (**presentation**)

Dvorak, P., Kurumbang, N.P., Bendl, J., Brezovsky, J., Prokop, Z., Damborsky, J., Rational Engineering of Synthetic Biodegradation Pathway. *Symposium Consistent Bioprocess Development*, 1.3.2013. Technische Universität Berlin, Germany (**invited lecture**)

Dvorak, P., Prokop, Z., Bednar, D., Brezovsky, J., Bidmanova, S., Damborsky, J., *In Vitro* Protein and Metabolic Engineering of Biodegradation Pathway. *Biotrans*, 2.-6.10.2011, Giardini Naxos, Italy (**presentation**)

Presentations for public

Dvořák, P. A journey into the world of microorganisms (in Czech Výprava do světa mikroorganismů). 30.1.2024 Presentation for third grade pupils of primary school Kaminky, Nový Lískovec, Brno, CR.

Dvořák, P. Engineering bacteria, their enzymes and metabolic pathways for modern biotechnology (in Czech). 24.3.2023, seminar for public, Days of electron microscopy, Brno Planetarium, Brno, CR.

Dvořák, P. Synthetic Biology and Biotechnologies for 21st Century (in Czech). 13.10.2022, seminar for public, Brno Planetarium, Brno, CR.

Dvořák, P. Genetically Modified Microorganisms and Their Use in Modern Biotechnologies (in Czech). Seminar for public during Day of Open Doors of MUNI 2019, MUNI, CR.

Dvořák, P. Synthetic Biology and Biotechnology for 21st Century (in Czech). Seminar of Science and Technology Club, Brno University of Technology, 11.4.2017, Brno, CR.

Short research stays

- 02/2024: One week stay at **Imperial College London** and **University College London**, UK, groups of Dr. Jose Jimenez and Dr. Leonardo Rios, respectively (contact persons).
- 11/2022: Two week stay at **DTU Biosustain** (CFB), Lyngby, Denmark, group of dr. Pablo I. Nikel (contact person).
- 01/2020: Two week stay at **DTU Biosustain** (CFB), Lyngby, Denmark, group of dr. Pablo I. Nikel (contact person).
- 07/2016: One-month research stay at **Weizmann Institute of Science**, Rehovot, Israel, group of prof. Edward A. Bayer (contact person).
- 09-11/2013: Research stay at the **Centro Nacional de Biotecnología**, Madrid, Spain, group of prof. Víctor de Lorenzo (contact person).
- 12/2010: One-week study stay at the **Wissenschafts Zentrum Straubing**, **Technische Universität München**, Germany, group of dr. Volker Sieber (contact person dr. Jan K. Gutterl.).

International courses

- 3.-7.12.2018: **EMBL course Microbial Communities: Modelling Meets Experiments**, EMBL Heidelberg, Germany.
- 15.-19.6.2014: **International Synthetic and Systems Biology Summer School**, Taormina, Sicily, Italy.
- 29.10.-2.11.2012: **Advanced Course Metabolomics for Microbial Systems Biology**, BSD-EDU, TU Delft, Delft, Netherlands.
- 6.-10.9.2010: **Protein Engineering - Rational Design & Directed Evolution**, Dechema Summer School, Institute of Biochemistry, Greifswald University, Germany.

Memberships in committees and societies

- 2024-now **Member of the Early Career Committee of the International Metabolic Engineering Society (IMES)**
- 2024 Member of the Ph.D Thesis evaluation committee of Maria Martin-Pascual, University of

Wageningen, Netherlands, thesis title: *Innovative Genetic Tools and Metabolic Engineering Strategies for Advanced Biomanufacturing*

- 2024-now Member of the Programme Board Microbiology, Faculty of Science, MUNI, Brno, CR
- 2023-now **Member of the Board of Bioengineering and Bioprocessing Division of the European federation of Biotechnology**
- 2019-now **Permanent member of the State Exam Committee** for Bachelor and Diploma study program B1530 B Experimental Biology, study field Special Biology, Microbiology, MUNI, CR.
- 2019-now Society for Applied Microbiology (SFAM, UK)
- 2018-now European Federation of Biotechnology
- 2017 Member of Steering Committee (Engagement Officer) of The European Association of Students and Post-docs in Synthetic Biology (EUSynBioS)
- 2011-now Czech Society for Biochemistry and Molecular Biology (FEBS)
- 2011-now Czechoslovak Society for Microbiology (FEMS)

Reviewer Activities (2015-2024)

2024 – now: **member of Editorial Board of Microbial Biotechnology** (Wiley)

Nature Communications (Nature), ACS Catalysis (ACS), Microbial Biotechnology (John Wiley & Sons), Nucleic Acids Research (Oxford Academic), ACS Synthetic Biology, Current Opinion in Chemical Biology (Elsevier), Biotechnology Journal (John Wiley & Sons), Journal of Biotechnology (Elsevier), Scientific Reports (Nature Publishing Group), Applied Microbiology and Biotechnology (Springer), Folia Microbiologica (Springer), ACS Omega (ACS), mSystems (American Society for Microbiology), MicrobiologyOpen (John Wiley & Sons), Journal of Chemical Technology & Biotechnology (Wiley), Biomass Conversion and Biorefinery (Springer), AMB Express (Springer Nature).