

**Co-applicant:** Assoc. Prof. Dr. Daniel Smrž, Ph.D.

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**W:** [https://www.researchgate.net/profile/Daniel\\_Smrz](https://www.researchgate.net/profile/Daniel_Smrz)  
<https://imunologie.lf2.cuni.cz/vyzkum/pracovni-skupiny-temata/nadorova-imunologie>  
<https://imunologie.lf2.cuni.cz/en/research/working-groups-and-topics/tumor-immunology>

### Education, Training, Employment, and Internship

- 1994 – 1997 B.Sc. (Chemistry), Faculty of Science, Charles University in Prague, Prague  
 1997 Summer internship (Organic synthesis and development of active pharmaceutical substances), Synthos BV, The Netherlands, Nijmegen  
 1997 – 1999 M.Sc. (Biochemistry), Faculty of Science, Charles University in Prague & Institute of Organic Chemistry and Biochemistry, Academy of Sciences of the Czech Republic, Prague; Supervised: doc. RNDr. Jan Konvalinka, Ph.D.  
 1999 – 2004 RNDr. (Doctor Rerum Naturalium) (Biochemistry), Faculty of Science, Charles University in Prague & Institute of Molecular Genetics, Academy of Sciences of the Czech Republic, Prague; Supervised: doc. RNDr. Petr Dráber, Ph.D., D.Sc.  
 1999 – 2007 Ph.D. (Biochemistry), Faculty of Science, Charles University in Prague & Institute of Molecular Genetics, Academy of Sciences of the Czech Republic, Prague; Supervised: doc. RNDr. Petr Dráber, Ph.D., D.Sc.  
 2007 Post-doctoral fellowship (Molecular Biology & Immunology), Institute of Molecular Genetics, Academy of Sciences of the Czech Republic, Prague; Principal investigator: doc. RNDr. Petr Dráber, Ph.D., D.Sc.  
 2008 – 2012 Post-doctoral fellowship (Molecular Biology & Immunology), Laboratory of Allergic Diseases, Mast Cell Biology Section, NIAID, NIH, Bethesda, Maryland, USA; Principal investigator: Alasdair M. Gilfillan, Ph.D., Mentor: Dean D. Metcalfe, M.D.  
 2013 – present Principal investigator, Department of Immunology, 2<sup>nd</sup> Faculty of Medicine of Charles University and Motol University Hospital, Prague  
 2022 – present Laboratory of Immunotherapy, Institute of Microbiology of the Czech Academy of Sciences, Prague, Czech Republic, part-time researcher

### Memberships of Scientific Societies

- 2013 – present Czech Society for Allergy and Clinical Immunology (CSAKI), Czech Republic  
 2013 – present Czech Society for Analytical Cytology (CSAC), Czech Republic  
 2012 – present The American Association of Immunologists (AAI), USA  
 2007 – present Czech Immunological Society (CIS)/ Czech Republic

### Inventions&Patents

**Czech patent (Charles University), Industrial Property Office of the Czech Republic No. 310055**– Cell line and use thereof, inventors: Assoc. Prof. Dr. Daniel Smrž, Ph.D. and Pavla Táborská, Ing., Ph.D. [PCT request for international protection: PCT/CZ2023/050092, Charles University]

**The Employee Discovery and Invention Report, 2013-0084 MTA-SLA MCBS1, NIAID/NIH**, a protected invention through Material Transfer Agreement (MTA), inventors: Daniel Smrž, Geethani Bandara, and Dean Metcalfe (NIAID); Shuling Zhang and Beverly Mock (NCI); and Michael Beaven (NHLBI), MCBS1 mast cells: a novel KIT-deficient murine mast cell line to examine human KIT-mediated activation responses.

### Supervision and Teaching Activities

- Present *Supervisor: 2 graduate students in the Ph.D. program* of the 2<sup>nd</sup> Faculty of Medicine of the Charles University, *Supervisor Consultant: 2 graduate students in the Ph.D. program* of the Department of Cell Biology, Faculty of Science, Charles University, Czech Republic, **2 Bachelor's degree student** at the Department of Cell Biology, Faculty of Science, Charles University, Czech Republic  
 2022 – 2023 *Supervisor: 3 undergraduate students* (Sorbonne Université, France) within the 4EU+ program, 6 months (autumn/winter 2022/2023)

2020 – 2023 *Supervisor: 1 undergraduate student* of the Department of Cell Biology, Faculty of Science, Charles University, Czech Republic,

2017 – present **Lecturer** at the 2<sup>nd</sup> Faculty of Medicine, Charles University, Czech Republic

#### Meeting Organization (2020–2024)

2024 **Organizing and Scientific Committee** of the 23rd International Conference on Progress in Vaccination Against Cancer, Sep 26–28, 2024, Prague, Czech Republic, <https://www.pivac-prague.cz/>

2024 **Organizing and Scientific Committee** of the 2nd CIS-IMIC Summer School on Tumor Microenvironment and Immunity, Jun 26–29, 2024, Chateau Nové Hradky in South Bohemia, <https://cis.mbu.cas.cz/en/events/letoe2>

#### Institutional Responsibilities (2020-2024)

2016 – present **Biosafety Evaluator** and Consultant for Working with and Handling Genetically Modified Organisms at the Institute of Immunology, Motol University Hospital, Prague

#### Reviewing and Editing Activities (2020-2024)

*Manuscript Reviewer in Scientific Journals*: Regular invitations to peer-reviewed manuscripts submitted to scientific journals (e.g., Blood, Scientific Reports, Allergy, International Immunology, International Journal of Allergy and Immunology). *Invited Grant Reviewer*: (2023) Project evaluator for the Croatian Science Foundation (HRZZ), (2022) Project evaluator for the Grant Agency of the Ministry of Health of the Czech Republic (AZV), *Editor*: (2023–2024) BMC Cancer guest editor.

#### Grants (2020-2024)

*NU23-08-00071*—Genetically downregulated expression of the immune checkpoint inhibitor LAIR-1 in tumor-specific T cells as a novel strategy for breaking the resistance of solid tumors to adoptive T cell immunotherapy; *NU22-03-00300–LL-37* as a novel and powerful molecular tool for boosting the performance of *ex vivo*-produced dendritic cells in immunotherapy of urogenital cancers (Ministry of Health of the Czech Republic; *GA UK No. 364218*—Isolation, characterization, and expansion of subsets of tumor-infiltrating lymphocytes of kidney cancer for the development of adoptive cell immunotherapy (The Charles University Grant Agency; 2018–2020); 202104/TP01010040—A new cell line of undifferentiated pleomorphic sarcoma (TA ČR, GAMA 2 (Charles University)).

#### Selected Publications (2020-2024)

1. Taborska, P., P. Lukac, D. Stakheev, L. Rajsiglova, K. Kalkusova, K. Strnadova, L. Lacina, B. Dvorankova, J. Novotny, M. Kolar, M. Vrana, H. Cechova, S. Ransdorfova, M. Valerianova, K. Smetana, Jr., L. Vannucci, and **D. Smrz**. 2023. Novel PD-L1- and collagen-expressing patient-derived cell line of undifferentiated pleomorphic sarcoma (JBT19) as a model for cancer immunotherapy. *Scientific reports* 13:19079. DOI: 10.1038/s41598-023-46305-7
2. Stakheev, D., P. Taborska, K. Kalkusova, J. Bartunkova, and **D. Smrz**. 2022. LL-37 as a Powerful Molecular Tool for Boosting the Performance of Ex Vivo-Produced Human Dendritic Cells for Cancer Immunotherapy. *Pharmaceutics* 14. DOI: 10.3390/pharmaceutics14122747.
3. Podrazil, M., P. Taborska, D. Stakheev, M. Rataj, J. Lastovicka, A. Vlachova, P. Pohunek, J. Bartunkova, and **D. Smrz**. 2022. Effectiveness and Durability of mRNA Vaccine-Induced SARS-CoV-2-Specific Humoral and Cellular Immunity in Severe Asthma Patients on Biological Therapy. *Frontiers in immunology* 13:892277. DOI: 10.3389/fimmu.2022.892277
4. Taborska, P., Z. Strizova, D. Stakheev, L. Sojka, J. Bartunkova, and **D. Smrz**. 2021. CD4(+) T Cells of Prostate Cancer Patients Have Decreased Immune Responses to Antigens Derived From SARS-CoV-2 Spike Glycoprotein. *Frontiers in immunology* 12:629102.10.3389/fimmu.2021.629102.
5. Taborska, P., D. Stakheev, H. Svobodova, Z. Strizova, J. Bartunkova, and **D. Smrz**. 2020. Acute Conditioning of Antigen-Expanded CD8(+) T Cells via the GSK3beta-mTORC Axis Differentially Dictates Their Immediate and Distal Responses after Antigen Rechallenge. *Cancers* 12. 10.3390/cancers12123766.