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Sex Male | **Date of birth** 22/06/1974 | **Nationality** Czech

MAIN RESEARCH ACTIVITIES

Screening of the biological activities of the small molecules, method development and data analysis, identification of molecular targets, drug resistance; development of the new proteomic methods for clinical diagnostics (hepcidin analysis in haematological diseases; analysis of amyloid deposits and with amyloid associated proteins; identification of plasma/serum biomarkers cancer diseases; proteomics analysis of exhaled breath condensate at lung diseases (asthma, cystic fibrosis, cancer)).

WORK EXPERIENCE

2008 – **Head of Laboratory of cell biology**

Laboratory of Experimental Medicine, Pediatric dpt., Faculty of Medicine and Dentistry, Palacky University in Olomouc, Czech Republic

2010 – **Leader of the research program – Chemical Biology and Experimental Therapeutics**

Institute of Molecular and Translational Medicine, Faculty of Medicine and Dentistry, Palacky University in Olomouc, Czech Republic, www.imtm.cz

2014-2015 **Physician**

Department of Genetics, Faculty Hospital in Olomouc

2001 - **Physician, Pediatrician, board certified**

Department of Pediatrics, Faculty Hospital in Olomouc

EDUCATION AND TRAINING

1994-2001 **General Medicine, M.D.**

Faculty of Medicine and Dentistry, Palacky University in Olomouc, Czech Republic.

2001-2007 **Doctoral student, Ph.D., thesis: “Plant derived anticancer drugs and their mechanisms of action.”**

Laboratory of Experimental Medicine, Pediatric dpt., Faculty of Medicine and Dentistry, Palacky University in Olomouc, Czech Republic.

2003-2013 **Pediatrics - board certified**

Pediatric dpt., Faculty of Medicine and Dentistry, Palacky University in Olomouc, Czech Republic

Training in:

MALDI-TOF/TOF; LC-MALDI; LC-ESI-MS; MALDI Imaging; Proteinscape; Flow cytometry, operator of FACS Calibur and FACS ARIA II sorter; according to law 246/1992, Eligible to work with experimental animals, certificate No. 99/20003 – V3, CZ01932;
1-7/2002 - Internship, Wolverhampton University, Birmingham University, Pharmacology dpt., UK
5-7/2008 - Internship, INSERM, Proteomic core facility, Rennes, France

PERSONAL SKILLS

Mother tongue(s) Czech

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C2	C2
Russian	A2	A2	A2	A2	A2

Organisational / managerial skills

- **Leadership** (currently responsible for a team of 20 people)
- **Co-founder** and share holder, IntellMed, s.r.o. (www.intellmed.cz): spin-off company focused on research, development and manufacturing of novel molecular diagnostics - >30 molecular diagnostics developed and introduced on the market, including several CE IVD certified.
- **Currently Supervisor** of 7 Ph.D. students, **member of Ph.D. committee** in Pediatrics, Faculty of Medicine and Dentistry, Palacky University in Olomouc. 5 Ph.D. students already defended their thesis.

ADDITIONAL INFORMATION

Conferences

2009 - Chairman of organising committee - Youth Scientific Forum –FEBS 2009, satellite meeting of 34th FEBS Meeting in Prague, Czech Republic.
 2009 – Member of the Organising Committee, 34th FEBS Meeting in Prague, Czech Republic
 2007 – 2017 – Member of the Organising Committee, III. – XIII. Symposium on Diagnostic, Predictive and Experimental Oncology, Olomouc, Czech Republic.

Honours and awards

Palacky University, Faculty of Medicine, Dean’s Award for Best Student Scientific Work (2006)
 Prix de Pharmacie 2007 Ambassade de France – Sanofi-aventis, Premier Prix (21. juin 2007)
 Palacky University, Faculty of Medicine, Dean’s Award for Best Scientific Work (2017)

Memberships

Czech Oncological Society, Czech Medical Association of J. E. Purkyne
 Czech Society of Analytical Cytology
 Active Member of American Association for Cancer Research (AACR)
 Member of Society for Laboratory Automation and Screening (SLAS)
 Czech Society for Biochemistry and Molecular Biology (FEBS adhering society), proteomics and bioinformatics section.
 Czech Free & Open Bioinformatic Association (FOBIA)

Peer-Reviewing

Regular reviewer for scientific journals (Journal of Proteomics, EJMCH), ad-hoc reviewer for granting agencies from Czech Republic (GACR, AZV, GAUK) and Slovakia

Publication

Author and co-author of more than 100 original investigations and review articles, 5 books chapters, 12 patents, utility models and other IP, more than 200 abstracts and/or oral presentations at meetings, >1818 citations, H-index 19, researcher id: D-2175-2013, ORCID ID: 0000-0002-3098-5969 full bibliography is available at <http://www.imtm.cz/users/petr-dzubak>.

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99. AGRAWAL, K., DAS, V., TABORSKA, N., GURSKY, J., DZUBAK, P., & HAJDUCH, M. (2018). Differential Regulation of Methylation-Regulating Enzymes by Senescent Stromal Cells Drives Colorectal Cancer Cell Response to DNA-Demethylating Epi-Drugs. *Stem Cells International*, 2018, 6013728. <http://doi.org/10.1155/2018/>
98. TEMIRGAZIYEV, B. S., KUCAKOVA, K., BAIZHIGIT, Y. A., JURASEK, M., DZUBAK, P., HAJDUCH, M., ... ADEKENOV, S. M. (2018). Bioavailability and structural study of 20-hydroxyecdysone complexes with cyclodextrins. *Steroids*. <http://doi.org/10.1016/j.steroids.2018.11.007>
97. KLOS, D., STASEK, M., LOVECEK, M., SKALICKY, P., VRBA, R., AUJESKY, R., ... DZUBAK, P. (2018). [Tumor cells transfer between the patient and laboratory animal as a basic methodological approach to the study of cancerogenesis and identification of biomarkers]. *Rozhledy v Chirurgii : Mesicnik Ceskoslovenske Chirurgicke Spolecnosti*, 95(12), 432–438.
96. KULTAN, J., KOLEK, V., DŽUBÁK, P., VÁCLAVKOVÁ, J., HAJDÚCH, M., & SZKORUPA, M. Možnosti neinvazivní detekce karcinomu plic. *Stud. Pneumol.Phthiseol.*, 2018, 78(3), 69–75. ISSN: 1213-810X
95. TOKARENKO, A., B. LIŠKOVÁ, S. SMOLEN, N. TÁBORSKÁ, M. TICHÝ, S. GURSKÁ, P. PERLIKOVÁ, I. FRYDRYCH, E. TLOUŠŤOVÁ, P. ZNOJEK, H. MERTLIKOVA-KAISEROVA, L. POSTOVA SLAVETINSKA, R. POHL, B. KLEPETAROVA, N. KHALID, Y. WENREN, R. LAPOSA, P. DŽUBÁK, M. HAJDÚCH a M. HOCEK. Synthesis and Cytotoxic and Antiviral Profiling of Pyrrolo- and Furo-fused 7-Deazapurine Ribonucleosides. *Journal of Medicinal Chemistry*. 2018, 61(20), 9347-9359. ISSN 0022-2623. IF: 6.253. PMID: 30281308
94. BRIZA, T., J. KRALOVA, S. RIMPELOVA, M. HAVLIK, R. KAPLANEK, Z. KEJIK, P. MARTASEK, I. MIKULA, P. DŽUBÁK, M. HAJDÚCH, T. RUML a V. KRAL. Pentamethinium salts as ligands for cancer: Sulfated polysaccharide co-receptors as possible therapeutic target. *Bioorganic Chemistry*. 2018, -, -. ISSN 0045-2068. IF: 3.929. PMID: 30273836
93. KONC, J., M. TICHÝ, R. POHL, J. HODEK, P. DŽUBÁK a M. HOCEK. Sugar modified pyrimido[4,5-b]indole nucleosides: synthesis and antiviral activity. *MedChemComm*. 2018, 8(9), 1856-1862. ISSN 2040-2503. IF: 2.342. PMID: 30108897
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and Oleanonic Acid. *ChemMedChem*. 2017, 12, 390-398. ISSN 1860-7179 . IF: 2.980. PMID: 28084676

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Patents, Utility models & other IP's :

[10] FLUORESCENT DERIVATIVE FOR NON-CATALYTIC LABELING OF NUCLEIC ACID AND PEPTIDE COMPONENTS, PUV 2016-32558

1. Utility Model: CZ 30 136, Granted: 13. 12. 2016, Ownership: Palacky University, Olomouc, Inventors: Jedináková Petra, Hlaváč Jan, Václavková Jana, Konečný Petr, Džubák Petr, Hajdúch Marián

Status: Available

[9] METHOD OF DETERMINATION OF CANCER CELL DRUG SENSITIVITY TOWARDS AURORA KINASE INHIBITORS AND OVERCOMING THEIR RESISTANCE, Appl. EP 12816228.6

1. Patent: EP 2788504, Granted: 17. 8. 2016, Ownership: Palacky University Olomouc, Institute of Animal Physiology and Genetics AS CR, Inventors: Kollaredy Madhu, Hajdúch Marián, Džubák Petr, Srovnal Josef, Hrabáková, Kovářová Hana

Status: Available

[8] CARBONIC ANHYDRASE INHIBITORS AND METHOD OF THEIR PRODUCTION, Priority Appl. CZ PV 2011-676

1. Patent: EP 2 771 015, Granted: 16. 3. 2016, Ownership: Institute of Organic Chemistry and Biochemistry AS CR, Institute of Molecular Genetics AS CR, Institute of Inorganic Chemistry AS CVR, Palacky University Olomouc, Inventors: Brynda Jiří, Cígler Petr, Gruner Bohumír, Maloy Řezáčová Pavlína, Mader Pavel, Šícha Václav, Bakardijev Mario, Džubák Petr, Hajdúch Marián
2. Patent: US 9,290,529, Granted: 22. 3. 2016, Ownership: Institute of Organic Chemistry and Biochemistry AS CR, Institute of Molecular Genetics AS CR, Institute of Inorganic Chemistry AS CVR, Palacky University Olomouc, Inventors: Brynda Jiří, Cígler Petr, Gruner Bohumír, Maloy Řezáčová Pavlína, Mader Pavel, Šícha Václav, Bakardijev Mario, Džubák Petr, Hajdúch Marián

Status: Available

[7] CULTURE DISH, Priority Appl. CZ PUV 2015-31565, Priority Appl. CZ PVZ 2015-40394

1. Utility Model: CZ 28 806, Granted: 10. 11. 2015, Ownership: Palacky University Olomouc, Inventors: Džubák Petr, Hajdúch Marián
2. Design: CZ 36 622, Granted: 28. 12. 2015, Ownership: Palacky University Olomouc, Inventors: Džubák Petr, Hajdúch Marián
3. Registered Community Design: RCD 003039577-0001, Granted: 23. 3. 2016, Ownership: Palacky University Olomouc, Inventors: Džubák Petr, Hajdúch Marián
4. Registered Community Design: RCD 003039577-0002, Granted: 23. 3. 2016, Ownership: Palacky University Olomouc, Inventors: Džubák Petr, Hajdúch Marián

Status: Available

[6] ASYMMETRIC TROGER BASES WITH HYDRAZONE GROUP AND THEIR USE IN THE TREATMENT OF ONCOLOGIC DISEASES, Priority Appl. CZ PV 2014-317

1. Patent: CZ 305 683, Granted: 23. 12. 2015, Ownership: Institute of Chemical technology Prague, Palacky University Olomouc, Institute of molecular genetics AS CR, Inventors: Rak Jakub, Kaplánek Robert, Štulcová Tereza, Drašar Pavel, Havlík Martin, Bříza Tomáš, [Džubák Petr](#), [Hajdúch Marián](#), [Konečný Petr](#), [Štěpánková Jana](#), Králová Jarmila, Král Vladimír

Status: Available

[5] DIOXYCyclobutenyl Hydrazones and their anticancer activity, Priority Appl. CZ PV 2014-321

1. Patent: CZ 305 626, Granted: 2. 12. 2015, Ownership: Institute of Chemical technology Prague, Palacky University Olomouc, Institute of molecular genetics AS CR, Inventors: Havlík Martin, Kaplánek Robert, Dolenský Bohumil, Rak Jakub, Bříza Tomáš, [Džubák Petr](#), [Hajdúch Marián](#), [Konečný Petr](#), [Štěpánková Jana](#), Králová Jarmila, Král Vladimír

Status: Available

[4] CAFFEINE-8-HYDRAZONES AS NOVEL CYTOSTATICS FOR THE TREATMENT OF ONCOLOGIC DISEASES, Priority Appl. CZ PV 2014-307

1. Patent: CZ 305 625, Granted: 2. 12. 2015, Ownership: Institute of Chemical technology Prague, Palacky University Olomouc, Institute of molecular genetics AS CR, Inventors: Rak Jakub, Kaplánek Robert, Štulcová Tereza, Drašar Pavel, Havlík Martin, Bříza Tomáš, [Džubák Petr](#), [Hajdúch Marián](#), [Konečný Petr](#), [Štěpánková Jana](#), Králová Jarmila, Král Vladimír

Status: Available

[3] CHOLYL HYDRAZONES AND THEIR USE IN THE TREATMENT OF TUMOR AND LEUKEMIA DISEASES, Priority Appl. CZ PV 2014-305

1. Patent: CZ 305 607, Granted: 25. 11. 2015, Ownership: Institute of Chemical technology Prague, Institute of molecular genetics AS CR, Palacky University Olomouc, Inventors: Rak Jakub, Kaplánek Robert, Štulcová Tereza, Drašar Pavel, Havlík Martin, Bříza Tomáš, [Džubák Petr](#), [Hajdúch Marián](#), [Konečný Petr](#), [Štěpánková Jana](#), Králová Jarmila, Král Vladimír

Status: Available

[2] BENZOTHIAZOLE-SUBSTITUTED CYCLOBUT-3-ENE-1, 2-DIONE-3-HYDRAZONES AND THEIR USE IN THE TREATMENT OF VARIOUS TYPES OF LEUKEMIA AND TUMOUR DISEASES, Priority Appl. CZ PV 2014-306

1. Patent: CZ 305 538, Granted: 14. 10. 2015, Ownership: Institute of Chemical Technology Prague, Palacky University Olomouc, Institute of Molecular Genetics AS CR, Inventors: Kaplánek Robert, Bříza Tomáš, Havlík Martin, Rak Jakub, Kejík Zdeněk, Krejčí Petr, [Džubák Petr](#), [Hajdúch Marián](#), [Štěpánková Jana](#), [Konečný Petr](#), Králová Jarmila, Král Vladimír

Status: Available

[1] SUBSTITUTED 7-DEZAPURIN RIBONUCLEOSIDES, Priority Appl. CZ PV 2013-845

1. Patent: CZ 305 466, Granted: 7. 9. 2015, Ownership: Institute of Organic Chemistry and Biochemistry AS CR, Palacky University Olomouc, Inventors: Hocek Michal, Nauš Petr, Caletková Olga, [Džubák Petr](#), [Hajdúch Marián](#)
2. Patent: AU 20142777740, Granted: 9. 6. 2016, Ownership: Institute of Organic Chemistry and Biochemistry AS CR, Palacky University Olomouc, Inventors: Hocek Michal, Nauš Petr, Caletková Olga, [Džubák Petr](#), [Hajdúch Marián](#)
3. Patent: US 9,586,986, Granted: **7. 3. 2017**, Ownership: Institute of Organic Chemistry and Biochemistry AS CR, Palacky University Olomouc, Inventors: Hocek Michal, Nauš Petr, Caletková Olga, [Džubák Petr](#), [Hajdúch Marián](#)

Status: Available

Mentoring of the students:

Defended bachelor thesis:

- 1) Alžběta KAMENÍČKOVÁ - Monitorování účinku potenciálních protinádorových léčiv indukujících změny v buněčném cyklu
- 2) Jana POTOČKOVÁ - Chinolony a studium jejich biologických (cytotoxických) účinků.
- 3) Veronika SLABÁ – Hodnocení mitochondriálních funkcí na izolovaných mitochondriích po treatmentu kyselinou betulinovou a jejími deriváty
- 4) Hana VÁGNEROVÁ – Metabolická aktivace triterpenů s protinádorovou aktivitou
- 5) Kateřina LÓNOVÁ - Příprava a základní charakterizace nádorové linie rezistentní na inhibitory CDK

Defended diploma thesis:

- 1) Barbora PASTORKOVÁ – Identifikace molekulárních cílů protinádorových léčiv afinitní purifikací
- 2) Eliška RŮŽIČKOVÁ – Hodnocení biologické aktivity demetylačních léčiv
- 3) Jana VÁCLAVKOVÁ – Proteomický profil protinádorového účinku klinicky používaných rostlinných alkaloidů
- 4) Jiří ŘEHULKA – Proteomické profilování nádorové buněčné linie CEM ošetřené triterpenoidními látkami s protinádorovou aktivitou
- 5) Alžběta KAMENÍČKOVÁ – Target identification of potential antitumor drugs inducing changes in the cell cycle
- 6) Veronika SLABÁ – Detailní studium mitochondriálních funkcí u nádorových buněk po působení triterpenů s cytotoxickou aktivitou.

Defended dissertation thesis:

- 1) Michaela ŠPENEROVÁ – Mechanismy účinku rotinádorových léčiv: molekulární mechanismy odpovědi na glukokortikoidy u dětské akutní lymfoblastické leukémie.
- 2) Petr KONEČNÝ – Screening of chemical compounds in vitro – Analysis of the biological activity of small molecules
- 3) Dušan HOLUB - Proteomics in translational and clinical research
- 4) Tomáš OŽDIAN - Nádorová proteomika v klinické a experimentální onkologii
- 5) Jiří ŘEHULKA - Nová protinádorová léčiva zasahující do buněčného cyklu

Ongoing diploma thesis:

- 1) Kateřina JEČMEŇOVÁ - Development and characterization of resistant cell lines to purine and pyrimidine cytotoxic drugs.

Mentor of ongoing PhD students:

- 1) Martina JAKOUBKOVÁ - Expression profiling effect of anticancer drugs
- 2) Jana KOTULOVÁ - Adenosine receptor inhibitors, the development and optimization
- 3) Gabriela RYLOVÁ - Identification of molecular targets of anticancer drugs by proteomic methods
- 4) Lenka ŘEHÁČKOVÁ - Mechanism of multidrug resistance (MDR) in cancer cells
- 5) Jarmila STANKOVÁ - Cytotoxic drugs molecular target identification by methods of cell biology and proteomics
- 6) Jana VÁCLAVKOVÁ - Identification of mechanisms of action of molecules with anticancer effect
- 7) Vaishali UNİYAL - Kinase inhibitors in treatment of neurodegenerative disease,