# CuRRiCULUM VITAE

*24. February 2023*

**1. Personal data:**

Name and surname: **PharmDr. Rudolf Vrabec, Ph.D.**

Date and place of birth: 23.4.1993, Hradec Králové, Czech Republic

**2. Contact:**

Address: Čsl. legií 132, Třebechovice pod Orebem 503 46, Czech Republic

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**3. Education:**

2022 Doctoral degree (Ph.D. & PharmDr.) from study program [Pharmacognosy and Nutraceuticals](https://www.faf.cuni.cz/Admission/Postgraduate/Programs/Pharmacognosy-and-Nutraceuticals/) at Charles University, Faculty of Pharmacy in Hradec Králové, Czech republic, Thesis: [Alkaloids from *Vinca minor* L. and their biological activity](https://dspace.cuni.cz/handle/20.500.11956/174751), supervisor: [prof. Dr. Lubomír Opletal](https://portal.faf.cuni.cz/Profile/Opletal-Lubomir/)

2017 Master's degree (Mgr./MSc.) from Pharmacy at Charles University, Faculty of Pharmacy, Thesis: [Antioxidant activity of explant cultures of *Hypericum perforatum*](https://dspace.cuni.cz/handle/20.500.11956/85287), Supervisor: Dr. Jan Martin

2012 [Grammar school of Božena Němcová](https://www.gybon.cz/) in Hradec Králové, graduation from Czech language, Mathematics, Biology, and Chemistry

**4. Courses:**

2019 Seminar TLC & HPTLC in practice, Snědovice. Czech Republic

**5. Job and teaching experience:**

2/2022 – CurrentlyAssistant professor (AP2) at Department of Pharmacognosy and Pharmaceutical botany, [Secondary metabolites of plants as potential drugs](https://portal.faf.cuni.cz/Groups/ADINACO/), Faculty of Pharmacy, Charles University

6/2022 – Currenty PostDoc researcher on project [InoMed](https://portal.faf.cuni.cz/Projects/InoMed/), Faculty of Pharmacy, Charles University

2017 – Currenty Teaching physico-chemical laboratory exercise and microscopy laboratory lessons from subjects Pharmacognosy I and II at Faculty of Pharmacy, Charles University

2021 – Currently Tutor or advisor of several diploma thesis at Department of Pharmacognosy and Pharmaceutical Botany, Faculty of Pharmacy, Charles University

6/2021 – 10/2021 Laboratory worker on project InoMed, Department of Pharmaceutical botany, Faculty of Pharmacy, Charles University

2016 – 2017 6-months professional experience as a part of university studies – in apothecaries in Hradec Králové, Czech Republic as a pharmacist

**6. Internships:**

11/2021 – 1/2022 3-months internship on Martin-Luther University, Halle, Germany, supervisor: [prof. Dr. Wolfgang Sippl](https://pc.pharmazie.uni-halle.de/medchem/sipple/)

**7. Scientific publications:**

**Vrabec, R.**, Blunden, G., Cahlíková, L. (2023). Natural Alkaloids as Multi-Target Compounds towards Factors Implicated in Alzheimer’s Disease. *International Journal of Molecular Sciences*, 24(5), 4399; [doi:10.3390/ijms24054399](https://doi.org/10.3390/ijms24054399)

IF2021 = 6.208; AIS2021 = 1.064 (wQ2)

Wijaya, V., Janďourek, O., Křoustková, J., Hradiská-Breiterová, K., Korábečný, J., Sobolová, K., Kohelová, E., Hošťálková, A., Konečná, K., Šafratová, M., **Vrabec, R.**, Kuneš, J., Opletal, L., Chlebek, J., Cahlíková, L. (2022). Alkaloids of *Dicranostigma franchetianum* (Papaveraceae) and Berberine Derivatives as a New Class of Antimycobacterial Agents. *Biomolecules*, 12(6), 844; [doi:10.3390/biom12060844](https://doi.org/10.3390/biom12060844)

IF2021 = 6.064; AIS2021 = 0.969 (wQ2)

Cahlíková, L., **Vrabec, R.**, Pidaný, F., Peřinová, R., Maafi, N., Al Mamun, A., Ritomská, A., Wijaya, V., Blunden, G. (2021). Recent Progress on Biological Activity of Amaryllidaceae and Further Isoquinoline Alkaloids in Connection with Alzheimer’s Disease. *Molecules*, 26(17), 5240; [doi:10.3390/molecules26175240](http://doi.org/10.3390/molecules26175240)

IF2021 = 4.927; AIS2021 = 0.671 (wQ3)

Šafratová, M., Křoustková, J., Maafi, N., Suchánková, D., **Vrabec, R.**, Chlebek, J., Kuneš, J., Opletal, L., Bucar, F., Cahlíková, L. (2022). Amaryllidaceae Alkaloids from *Clivia miniata* (Lindl.) Bosse (Amaryllidaceae): Isolation, Structural Elucidation, and Biological Activity. *Plants*, 11(22), 3034; [doi:10.3390/plants11223034](https://doi.org/10.3390/plants11223034)

IF2021 = 4.658; AIS2021 = 0.654 (wQ2)

**Vrabec, R.**, Maříková, J., Ločárek, M., Korábečný, J., Hulcová, D., Hošťálková, A., Kuneš, J., Chlebek, J., Kučera, T., Hrabinová, M., Jun, D., Soukup, O., Andrisano, V., Jenčo, J., Šafratová, M., Nováková, L., Opletal, L., Cahlíková, L. (2022). Monoterpene indole alkaloids from *Vinca minor* L. (Apocynaceae): identification of new structural scaffold for treatment of Alzheimer's disease. *Phytochemistry,* 194, 113017; [doi:10.1016/j.phytochem.2021.113017](https://doi.org/10.1016/j.phytochem.2021.113017)

IF2021 = 4.004; AIS2021 = 0.641 (wQ2)

**Vrabec, R.**, Vokurková, D., Tůmová, L., Cheel, J. (2022). *Ex-vivo* Immune-stimulating Activity of *Scutellaria baicalensis* and its Major Flavonoids on Human Immune Cells. *Records of Natural Products*, 16(2), 188–193; [doi:10.25135/rnp.264.21.02.1976](http://doi.org/10.25135/rnp.264.21.02.1976)

IF2021 = 2.000; AIS2021 = 0.236 (wQ4)

**8. Active attendance at conferences:**

2023 13th Postgradual and Postdoc conference in Hradec Králové, Short oral presentation: Cytotoxic alkaloids from *Vinca minor* L.

2022 70th International Congress and Annual Meeting of the Society for Medicinal Plant and Natural Product Research (GA) in Thessaloniki, Greece, Poster: Isolation and biological activity of alkaloids from *Vinca minor* L. related to Alzheimer’s disease

Workshop: Recent Progress in Pharmacognosy and Phytochemistry in Hradec Králové, Short oral presentation: Biological study of indole alkaloid from *Vinca minor* L. with anti-alzheimer´s potential.

12th Postgradual and 10th Postdoc conference in Hradec Králové, Short oral presentation: Alkaloids of *Vinca minor* L. – Identification of new anti-Alzheimer’s structural scaffold.

2021 49th Conference synthesis and analysis of drugs in Hradec Králove, Czech republic, Short online presentation: Indole alkaloid from *Vinca minor* L. with promising activity against Alzheimer's disease,

11th Postgradual and 9th Postdoc conference in Hradec Králové, Short online presentation: Indole alkaloids from *Vinca minor* L. and their biological activity.

2020 10th Postgradual and 8th Postdoc conference in Hradec Králové, Short oral presentation: Isolation of alkaloids from *Vinca minor* L. and their inhibitory activity on human cholinesterases.

2019 48th Conference synthesis and analysis of drugs in Bratislava, Slovak republic, Poster: Inhibition activity of alkaloids from *Vinca minor* L. against human cholinesterases.

9th Postgradual and 7th Postdoc conference in Hradec Králové, Short oral presentation: Immunomodulation activity of *Scutellaria baicalensis* and *Azorella compacta*.

2018 23rd Seminar – Current issues in the cultivation of medicinal, aromatic, and spicy plants in Olomouc, Czech republic, Poster: Immunomodulation activity of *Scutellaria baicalensis* and *Azorella compacta.*

**9. Language skills:**

English – C1

German – A2

**10. Laboratory skills and science experience:**

Chromatographic methods – column, thin layer, gas, and high performance liquid chromatography

Biological tests – antioxidant activity, immunomodulation activity, inhibition of AChE and BuChE by Ellman’s method

Basics of work with plant tissue cultures

Bacis knowledge of molecular docking and molecular dynamics simulation (software: AutoDock Vina, AutoDock Tools, PyMOL, BIOVIA Discovery studio, Schrödinger Maestro, Schrödinger Desmond, Gromacs, MOE, …)

Excelent knowledge and skill with computer-related work and orientation in scientific databases

**11. Research interest:**

Extraction and isolation of biologically active compounds from plants or other natural sources and testing their activity against major civilization diseases and toxicity.

Molecular docking and molecular dynamics simulation of the active compounds in the target proteins.

**12. Other competencies and skills:**

2011 Driving license B

… Medium knowledge in programming language Python

… Basics of website creation (HTML, CSS, JavaScript, framework Flask)

2003 – 2015 Elementary art school in Třebechovice p. O. – graduation from clarinet, saxophone, and guitar

**13. Personal interests:**

Music, programming, exercise, studying, nature, meeting with friends, videogames, movies