

## CURRICULLUM VITAE

**Prof. RNDr. Hana KOLÁŘOVÁ, CSc.**

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### EDUCATION

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| 1985 | M.Sc. (Master of Science), Degree in Biophysics and Chemical Physics, Department of Experimental Physics, Palacký University in Olomouc, Czech Republic                       |
| 1986 | RNDr. (Rerum Naturalium Doctoris), Department of Experimental Physics, Palacký University in Olomouc, Czech Republic                                                          |
| 1994 | CSc. (Candidate of Sciences degree - equivalent of Ph.D.), Institute of Biophysics of the CAS, Brno, Czech Republic<br>Thesis: Effect of laser radiation on biological object |
| 2011 | Prof. (Professor), Faculty of Medicine and Dentistry, Palacký University in Olomouc, Czech Republic                                                                           |

### RESEARCH AND ACADEMIC POSITIONS

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| 1985-1992    | Junior Researcher, Faculty of Medicine and Dentistry, Palacký University in Olomouc - research worker in the field of photobiology, dermatology, lasers in medicine                                                                                                                                                                                                                                   |
| 1992-2008    | Assistant Professor, Department of Medical Biophysics, Faculty of Medicine and Dentistry, Palacký University in Olomouc, Research & Teaching responsibilities                                                                                                                                                                                                                                         |
| 2008-present | Head of Department of Medical Biophysics, Faculty of Medicine and Dentistry, Palacký University in Olomouc, Research & Teaching responsibilities, supervisor of Ph.D. students                                                                                                                                                                                                                        |
| 2011-present | Vice-Dean for Study of General Medicine and Admissions, Faculty of Medicine and Dentistry, Palacký University in Olomouc                                                                                                                                                                                                                                                                              |
| Memberships  | International Academy for Laser Medicine and Surgery, Member of the Czech Medical Association of J.E. Purkyně, <a href="http://www.cls.cz">www.cls.cz</a> , member of the committee of the Czech Society of Medical Physics of the Czech Medical Society JEP, Czech Radiobiological Society, member of the committee of the Society for radiobiology and crisis plan in Czech medical society of JEP. |

### FIELD OF INTERESTS

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Medical biophysics, photobiology, molecular and cell biology, nanotechnology, photodynamic effect, ultrasound, lasers in medicine

### PUBLICATIONS

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She is the author or co-author of 124 original scientific reviewed publications (57 in journals with impact factor), author or co-author of 9 monograph, 5 patents, 2 utility models, 91 conference contributions. SCI: > 1085 citations, H-index: 21

### HONOURS AND AWARDS

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2017 The Dean's Award for outstanding publishing activity in 2016

## CURRICULLUM VITAE

### SELECTED PUBLICATIONS IN IMPACTED JOURNALS DURING LAST 5 YEARS

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1. MALÁ Z., ŽÁRSKÁ L. MALINA L. LANGOVÁ K. VEČEŘOVÁ R. KOLÁŘ P. HENKE, P. MOSINGER J. **KOLÁŘOVÁ H.** Photodynamic effect of TPP encapsulated in polystyrene nanoparticles toward multi-resistant pathogenic bacterial strains: AFM evaluation, *Scientific Reports*, 2021, DOI : 10.1038/s41598-021-85828-9, 11, 6786, 2045-2322, **IF: 3.998**, Q1.
2. ŽÁRSKÁ L. MALÁ Z., LANGOVÁ K., MALINA L., BINDER S., BAJGAR R, **KOLÁŘOVÁ H.** The effect of two porphyrine photosensitizers TMPyP and ZnTPPS 4 for application in photodynamic therapy of cancer cells in vitro, *Photodiagnosis and Photodynamic Therapy*, 2021, DOI: 10.1016/j.pdpdt.2021.102224, **IF: 2.894**, (Q2)
3. SNĚHOTA M., VACHUTKA J., DOLEŽAL L., BALÁŽOVÁ K., TRNEČKOVÁ M., **KOLÁŘOVÁ H.** Far field during sonication experiments in vitro – Is really far enough? *Ultrasonics*, 115, 2021, DOI: 10.1016/j.ultras.2021.106461, **IF 2,89** (Q1)
4. SNĚHOTA M., VACHUTKA J., TER. HAAR G., DOLEŽAL L., **KOLÁŘOVÁ H.** Therapeutic ultrasound experiments in vitro: Review of factors influencing outcomes and reproducibility. *Ultrasonics*. 107, 2020, DOI: 10.1016/j.ultras.2020.106167, **IF 3.065** (Q1)
5. VARVUOLYTE G., MALINA L., BIELIAUSKAS A., HOSIKOVA B., SIMERSKA H, **KOLÁŘOVÁ H.**, KLEIZIENE N., KRYSŤOF V., SACKUS A., ZUKAUSKAITE A. Synthesis and photodynamic properties of pyrazole-indole hybrids in the human skin melanoma cell line G361. *Dyes and Pigments*. 183, 2020, DOI: 10.1016/j.dyepig.2020.108666, **IF 4,614** (Q1)
6. KEJLOVA K., BENDOVA H., CHRZ J., DVORAKOVA M., SVOBODOVA L., VLKOVA A., KUBAC, L., KORINKOVA R., CERNY J., OCADLIKOVA D., RUCKI M., HEINONEN T., JIROVA D., LETASIOVA S., KANDAROVA H., **KOLÁŘOVÁ H.** Toxicological Testing of a Photoactive Phthalocyanine-Based Antimicrobial Substance , *Regulatory Toxicology and Pharmacology*, 2020, 115, 104685, 0273-2300 , **IF: 2.652**, Q1.
7. PERLOVSKÁ HARVANOVÁ M., JIRAVOVÁ J., MALOHLAVA J., BARTOŇ TOMÁNKOVÁ K., JÍROVÁ D., **KOLÁŘOVÁ H.** Raman imaging of cellular uptake and studies of silver nanoparticles effect in BJ human fibroblasts cell lines *International Journal of Pharmaceutics*. 2017, 528 (1-2): 280-286. ISSN 0378-5173. **IF 4,845** (Q1)

### SELECTED BOOK CHAPTERS, for the last 5 years

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Navratil L., Rosina J. et al. Medical Biophysics, 2nd, completely revised and supplemented edition. Chapter in the textbook – Imaging methods, p. 285-329, Optics and biophysics of vision, p. 157-197, Acoustics, p.199-233, Structure of matter, molecular biophysics. p. 23-44, In Czech. Grada Publishing, a.s., 2019. ISBN: 978-80-271-0209-9.

### SELECTED PATENTS DURING LAST 5 YEARS

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1. Kolarova H, Bajgar R, Tomankova K, Bolek L, Dejmek J, Bolek M, Ruzicka J, Benes J. Mobile hyperbaric miniature chambre. Patent n. CZ 305989, Czech Republic, 2016.
2. Bajgar R, Kolarova H, Kolar P, Pizova K, Hanakova A. Planar light source intended particularly for in vitro induction and monitoring photodynamic phenomena. Patent n. 305993, Czech Republic, 2016.

### RUNNING PROJECTS

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| 2018-2023 | Co-investigator, CZ.02.1.01/0.0/0.0/16_019/0000868 - "Molecular, Cell and Clinical Approach to Healthy Aging – WP4/2A Strategies modifying photoaging" |
| 2021-2024 | Investigator, NU21-09-00357- "Advantages of photodynamic and sonodynamic therapy in multidrug-resistant microorganisms"                                |