



ÚOCHB <sup>AV</sup>  
IOCB PRAGUE

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# Meeting with Group Leaders

Pavλίna Řezáčová | February 23, 2024

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# Agenda

- Most Significant Papers
- Project Office updates
- New Research Core Facility
- Students
- HR Award news
- Construction updates
- Safety updates
- Miscellanea

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# IOCB Most Significant Papers 2023

# IOCB Most Significant Publications 2023

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<b>PHYS</b>	Physical and Theoretical Chemistry
<b>CHEM</b>	Medicinal and Organic Chemistry
<b>BIO</b>	Biochemistry and Molecular Biology

## 2023: 39 Nominations

- **PHYS**      **10 submissions** [9 in 2022]
- **CHEM**      **15 submissions** [10 in 2022]      (*1 nomination published in 2024 was excluded*)
- **BIO**      **14 submissions** [9 in 2022]      (*2 nominations published in 2024 were excluded*)

**Please check, whether all your submissions are included!**

<https://uschovna.uochb.cas.cz/files/30/Y9mJeqAOZJq>

# Nominations 2023 – PHYS

Group	Full Citation
Tomáš Slanina	Dunlop, D., Ludvíková, L., Banerjee, A., Ottosson, H., Slanina, T. Excited-State (Anti)Aromaticity Explains Why Azulene Disobeys Kasha's Rule. <i>Journal of the American Chemical Society</i> . 2023, 145(39), 21569-21575. <a href="https://doi.org/10.1021/jacs.3c07625">https://doi.org/10.1021/jacs.3c07625</a>
Pavel Jungwirth	Tempra, C., Cruces Chamorro, V., Jungwirth, P. Effects of Water Deuteration on Thermodynamic and Structural Properties of Proteins and Biomembranes. <i>Journal of Physical Chemistry B</i> . 2023, 127(5), 1138-1143. <a href="https://doi.org/10.1021/acs.jpcc.2c08270">https://doi.org/10.1021/acs.jpcc.2c08270</a>
Petr Cígler	Kropáček, J., Maslen, C., van Dijk, B., Iniguez-Rabago, A., Overvelde, J. T. B., Zubov, A., Vrba, J., Cígler, P., Štěpánek, F., Řehoř, I. Hydrogel Microrobots Self-Assembled into Ordered Structures with Programmable Actuation. <i>Advanced Intelligent Systems</i> . 2023, 5(9), 2300096. <a href="https://doi.org/10.1002/aisy.202300096">https://doi.org/10.1002/aisy.202300096</a>
Pavel Hobza	Mallada Faes, B. J., Ondráček, M., Lamanec, M., Gallardo Caparrós, A. J., Jimenez-Martin, A., De La Torre Cerdeño, B., Hobza, P., Jelínek, P. Visualization of pi-hole in molecules by means of Kelvin probe force microscopy. <i>Nature Communications</i> . 2023, 14(1), 4954. <a href="https://doi.org/10.1038/s41467-023-40593-3">https://doi.org/10.1038/s41467-023-40593-3</a>
Petr Bouř	Yang, Q., Bloino, J., Šestáková, H., Šebestík, J., Kessler, J., Hudecová, J., Kapitán, J., Bouř, P. Combination of Resonance and Non-Resonance Chiral Raman Scattering in a Cobalt(III) Complex. <i>Angewandte Chemie - International Edition</i> . 2023, 62(45), e202312521. <a href="https://doi.org/10.1002/anie.202312521">https://doi.org/10.1002/anie.202312521</a>
Lubomír Rulíšek	Jaroš, A., Sasar, M., Tučková, L., Bonab, E. F., Badri, Z., Straka, M., Foroutan-Nejad, C. Spinristor: A Spin-Filtering Memristor. <i>Advanced Electronic Materials</i> . 2023, 9(8), 2300360. <a href="https://doi.org/10.1002/aelm.202300360">https://doi.org/10.1002/aelm.202300360</a>
Lubomír Rulíšek	Kipouros, I., Stanczak, A., Dunietz, E. M., Ginsbach, J. W., Srnec, M., Rulíšek, L., Solomon, E. I. Experimental Evidence and Mechanistic Description of the Phenolic H-Transfer to the Cu <sub>2</sub> O <sub>2</sub> Active Site of oxy-Tyrosinase. <i>Journal of the American Chemical Society</i> . 2023, 145(42), 22866-22870. <a href="https://doi.org/10.1021/jacs.3c07450">https://doi.org/10.1021/jacs.3c07450</a>
Ivo Starý	Houska, V., Ukraintsev, E., Vacek, J., Rybáček, J., Bednářová, L., Pohl, R., Stará, I. G., Rezek, B., Starý, I. Helicene-based $\pi$ -conjugated macrocycles: their synthesis, properties, chirality and self-assembly into molecular stripes on a graphite surface. <i>Nanoscale</i> . 2023, 15(4), 1542-1553. <a href="https://doi.org/10.1039/d2nr04209f">https://doi.org/10.1039/d2nr04209f</a>
Jiří Kaleta	Perego, J., Bezuidenhout, C. X., Bracco, S., Piva, S., Prando, G., Aloisi, C., Carretta, P., Kaleta, J., Le, T. P., Sozzani, P., Daolio, A., Comotti, A. Benchmark Dynamics of Dipolar Molecular Rotors in Fluorinated Metal-Organic Frameworks. <i>Angewandte Chemie - International Edition</i> . 2023, 62(5), e202215893. <a href="https://doi.org/10.1002/anie.202215893">https://doi.org/10.1002/anie.202215893</a>
Jiří Kaleta	Lončarić, D., Movahedifar, F., Štoček, J. R., Dračinský, M., Cvačka, J., Guan, S., Bythell, B. J., Císařová, I., Masson, E., Kaleta, J. Solvent-controlled formation of alkali and alkali-earth-secured cucurbituril/guest trimers. <i>Chemical Science</i> . 2023, 14(35), 9258-9266, d3sc02032k. <a href="https://doi.org/10.1039/d3sc02032k">https://doi.org/10.1039/d3sc02032k</a>

# Nominations 2023 – CHEM

Group	Full Citation
Tomáš Slanina	Žrauskas, J., Boháčová, S., Wu, S., Butera, V., Schmid, S., Domanski, M., Slanina, T., Barham, J. P. Electron-Poor Acridones and Acridiniums as Super Photooxidants in Molecular Photoelectrochemistry by Unusual Mechanisms. <i>Angewandte Chemie - International Edition</i> . 2023, 62(44), e202307550.
Zlatko Janeba	Škácel, J., Djukic, S., Baszczyński, O., Kalčic, F., Bílek, T., Chalupský, K., Kozák, J., Dvořáková, A., Tloušťová, E., Král'ová, Z., Šmídková, M., Voldřich, J., Rumlová, M., Pachel, P., Brynda, J., Vučková, T., Fábry, M., Snášel, J., Pichová, I., Rezáčová, P., Mertlíková-Kaiserová, H., Janeba, Z. Design, Synthesis, Biological Evaluation, and Crystallographic Study of Novel Purine Nucleoside Phosphorylase Inhibitors. <i>Journal of Medicinal Chemistry</i> . 2023, 66(10), 6652-6681. <a href="https://doi.org/10.1021/acs.jmedchem.2c02097">https://doi.org/10.1021/acs.jmedchem.2c02097</a>
Petr Beier	Motornov, V., Klepetářová, B., Beier, P. Cu(III) Trifluoromethyl Complexes with 1,3-Diketonate Ligands and Their Versatile Reactivity in C–H Trifluoromethylation. <i>Advanced Synthesis &amp; Catalysis</i> . 2023, 365(17), 2858-2864. <a href="https://doi.org/10.1002/adsc.202300695">https://doi.org/10.1002/adsc.202300695</a>
Tomáš Pluskal	Schmid, R., Heuckeroth, S., Korf, A., Smirnov, A., Myers, O., Dyrland, T. S., Bushuiev, R., Murray, K. J., Hoffmann, N., Lu, M., Sarvepalli, A., Zhang, Z., Fleischauer, M., Dührkop, K., Wesner, M., Hoogstra, S. J., Rudt, E., Mokshyna, O., Brungs, C., Ponomarev, K., Mutabdzija, L., Damiani, T., Pudney, C. J., Earll, M., Helmer, P. O., Fallon, T. R., Schulze, T., Rivas-Ubach, A., Bilbao, A., Richter, H., Pluskal, T. Integrative analysis of multimodal mass spectrometry data in MZmine 3. <i>Nature Biotechnology</i> . 2023, 41(4), 447-449. <a href="https://doi.org/10.1038/s41587-023-01690-2">https://doi.org/10.1038/s41587-023-01690-2</a>
Milan Vrábel	Šlachtová, V., Bellová, S., La-Venia, A., Galeta, J., Dračínský, M., Chalupský, K., Dvořáková, A., Mertlíková-Kaiserová, H., Rukovanský, P., Dzijak, R., Vrábel, M. Triazinium Ligation: Bioorthogonal Reaction of N1-Alkyl 1,2,4-Triazinium Salts. <i>Angewandte Chemie - International Edition</i> . 2023, 62(36), e202306828. <a href="https://doi.org/10.1002/anie.202306828">https://doi.org/10.1002/anie.202306828</a>
Pavel Hobza	Civiš, S., Lamanec, M., Špirko, V., Kubišta, J., Špetko, M., Hobza, P. Hydrogen Bonding with Hydridic Hydrogen—Experimental Low-Temperature IR and Computational Study: Is a Revised Definition of Hydrogen Bonding Appropriate? <i>Journal of the American Chemical Society</i> . 2023, 145(15), 8550-8559. <a href="https://doi.org/10.1021/jacs.3c00802">https://doi.org/10.1021/jacs.3c00802</a>
Eva Kudová	Abramová, V., Leal Alvarado, V., Hill, M., Smejkalová, T., Malý, M., Valeš, K., Dittert, I., Božíková, P., Kysilov, B., Hřčka Krausová, B., Vyklický, V., Balík, A., Fili, K., Kořínek, M., Choudounská, H., Kudová, E., Číž, D., Martinovič, J., Černý, J., Bartůněk, P., Vyklický ml., L. Effects of Pregnanolone Glutamate and Its Metabolites on GABAA and NMDA Receptors and Zebrafish Behavior. <i>ACS Chemical Neuroscience</i> . 2023, 14(10), 1870-1883. <a href="https://doi.org/10.1021/acschemneuro.3c00131">https://doi.org/10.1021/acschemneuro.3c00131</a>
Zlatko Janeba	Prener, L., Baszczyński, O., Kaiser, M. M., Dračínský, M., Stepan, G., Lee, Y. J., Brumshtein, B., Yu, H., Jansa, P., Lansdon, E. B., Janeba, Z. Design and Synthesis of Novel HIV-1 NNRTIs with Bicyclic Cores and with Improved Physicochemical Properties. <i>Journal of Medicinal Chemistry</i> . 2023, 66(3), 1761-1777. <a href="https://doi.org/10.1021/acs.jmedchem.2c01574">https://doi.org/10.1021/acs.jmedchem.2c01574</a>
Michal Hocek	Brunderová, M., Krömer, M., Vlková, M., Hocek, M. Chloroacetamide-Modified Nucleotide and RNA for Bioconjugations and Cross-Linking with RNA-Binding Proteins. <i>Angewandte Chemie - International Edition</i> . 2023, 62(7), e202213764. ISSN 1433-7851. <a href="https://doi.org/10.1002/anie.202213764">https://doi.org/10.1002/anie.202213764</a>
Michal Hocek	Kuprikova, N., Ondruš, M., Bednářová, L., Riopedre Fernández, M., Poštová Slavětínská, L., Sýkorová, V., Hocek, M. Superanionic DNA: enzymatic synthesis of hypermodified DNA bearing four different anionic substituents at all four nucleobases. <i>Nucleic Acids Research</i> . 2023, 51(21), 11428-11438. <a href="https://doi.org/10.1093/nar/gkad893">https://doi.org/10.1093/nar/gkad893</a>
Josef Michl	Kaleta, J., Dudič, M., Ludvíková, L., Liška, A., Zaykov, A., Rončević, I., Mašát, M., Bednářová, L., Dron, P. I., Teat, S. J., Michl, J. Phenyl-Substituted Cibalackrot Derivatives: Synthesis, Structure, and Solution Photophysics. <i>Journal of Organic Chemistry</i> . 2023, 88(11), 6573-6587. <a href="https://doi.org/10.1021/acs.joc.2c02706">https://doi.org/10.1021/acs.joc.2c02706</a>
Josef Michl	Magnera, T. F., Dron, P. I., Bozzone, J. P., Jovanovic, M., Rončević, I., Tortorici, E., Bu, W., Miller, E. M., Rogers, C. T., Michl, J. Porphene and porphite as porphyrin analogs of graphene and graphite. <i>Nature Communications</i> . 2023, 14(1), 6308. <a href="https://doi.org/10.1038/s41467-023-41461-w">https://doi.org/10.1038/s41467-023-41461-w</a>
Martin Dračínský	Socha, O., Osifová, Z., Dračínský, M. NMR-Challenge.com: An Interactive Website with Exercises in Solving Structures from NMR Spectra. <i>Journal of Chemical Education</i> . 2023, 100(2), 962-968. <a href="https://doi.org/10.1021/acs.jchemed.2c01067">https://doi.org/10.1021/acs.jchemed.2c01067</a>
Jiří Kaleta	Severa, L., Santos Hurtado, C., Rončević, I., Mašát, M., Bastien, G., Štoček, J. R., Dračínský, M., Houska, V., Kaletová, E., Garza, D. J., Císařová, I., Cimatu, K. L. A., Bastl, Z., Kaleta, J. Regular Arrays of Rod-Shaped Molecular Photoswitches: Synthesis, Preparation, Characterization, and Selective Photoswitching within Mono- and Bilayer Systems. <i>Chemistry - A European Journal</i> . 2024, 30(4), e202302828. <a href="https://doi.org/10.1002/chem.202302828">https://doi.org/10.1002/chem.202302828</a>
Ulrich Jahn	Klychnikov, M., Pohl, R., Císařová, I., Hájek, M., Jahn, U. Concise Total Syntheses of (+)-Brefeldin A, Diastereomers and Analogs and Their Biological Activity. <i>ChemistryEurope</i> . 2023, 1(2), e202300030. <a href="https://doi.org/10.1002/ceur.202300030">https://doi.org/10.1002/ceur.202300030</a>
Radim Nencka	Mejdrová, I., Dušek, J., Škach, K., Štefela, A., Škoda, J., Chalupský, K., Dohnalová, K., Pavková, I., Kronenberger, T., Rashidian, A., Smutná, L., Duchoslav, V., Smutný, T., Pávek, P., Nencka, R. Discovery of Novel Human Constitutive Androstane Receptor Agonists with the Imidazo[1,2-a]pyridine Structure. <i>Journal of Medicinal Chemistry</i> . 2023, 66(4), 2422-2456. <a href="https://doi.org/10.1021/acs.jmedchem.2c01140">https://doi.org/10.1021/acs.jmedchem.2c01140</a>

# Nominations 2023 – BIO

Group	Full Citation
Jiří Jiráček	Potalitsyn, P., Mrázková, L., Selicharová, I., Tencerová, M., Ferenčáková, M., Chrudinová, M., Turnovská, T., Brzozowski, A. M., Marek, A., Kaminský, J., Jiráček, J., Žáková, L. Non-glycosylated IGF2 prohormones are more mitogenic than native IGF2. <i>Communications Biology</i> . 2023, 6, 863. <a href="https://doi.org/10.1038/s42003-023-05239-6">https://doi.org/10.1038/s42003-023-05239-6</a>
Pavína Řezáčová	Koutná, E., Lux, V., Kouba, T., Škerlová, J., Nováček, J., Srb, P., Hexnerová, R., Šváchová, H., Kukačka, Z., Novák, P., Fábry, M., Poepsel, S., Veverka, V. Multivalency of nucleosome recognition by LEDGF. <i>Nucleic Acids Research</i> . 2023, 51(18), 10011-10025. <a href="https://doi.org/10.1093/nar/gkad674">https://doi.org/10.1093/nar/gkad674</a>
Tomáš Slanina	Wohlrábová, L., Okoročenkova, J., Palao, E., Kužmová, E., Chalupský, K., Klán, P., Slanina, T. Sulfonothioated meso-Methyl BODIPY Shows Enhanced Uncaging Efficiency and Releases H2Sn. <i>Organic Letters</i> . 2023, 25(36), 6705-6709. <a href="https://doi.org/10.1021/acs.orglett.3c02511">https://doi.org/10.1021/acs.orglett.3c02511</a>
Evžen Bouřa	Šilhán, J., Klíma, M., Otava, T., Škvára, P., Chalupská, D., Chalupský, K., Kozic, J., Nencka, R., Bouřa, E. Discovery and structural characterization of monkeypox virus methyltransferase VP39 inhibitors reveal similarities to SARS-CoV-2 nsp14 methyltransferase. <i>Nature Communications</i> . 2023, 14(1), 2259. <a href="https://doi.org/10.1038/s41467-023-38019-1">https://doi.org/10.1038/s41467-023-38019-1</a>
Lenka Maletínská	Freitas-Lima, L. C., Pačesová, A., Staňurová, J., Šácha, P., Marek, A., Hubálek, M., Kuneš, J., Železná, B., Maletínská, L. GPR160 is not a receptor of anorexigenic cocaine- and amphetamine-regulated transcript peptide. <i>European Journal of Pharmacology</i> . 2023, 949(June), 175713. <a href="https://doi.org/10.1016/j.ejphar.2023.175713">https://doi.org/10.1016/j.ejphar.2023.175713</a>
Tomáš Pluskal	Kouba, P., Kohout, P., Haddadi, F., Bushuiev, A., Samusevich, R., Sedlář, J., Damborský, J., Pluskal, T., Sivič, J., Mazurenko, S. Machine Learning-Guided Protein Engineering. <i>ACS Catalysis</i> . 2023, 13(21), 13863-13895. <a href="https://doi.org/10.1021/acscatal.3c02743">https://doi.org/10.1021/acscatal.3c02743</a>
Pavel Jungwirth	Ticháček, O., Mistrík, P., Jungwirth, P. From the outer ear to the nerve: A complete computer model of the peripheral auditory system. <i>Hearing Research</i> . 2023, 440(December), 108900. <a href="https://doi.org/10.1016/j.heares.2023.108900">https://doi.org/10.1016/j.heares.2023.108900</a>
Petr Cígler	Majer, J., Kindermann, M., Pinkas, D., Chvátíl, D., Cígler, P., Libusová, L. Cellular uptake and fate of cationic polymer-coated nanodiamonds delivering siRNA: a mechanistic study. <i>Nanoscale</i> , 2024, 16, 2490-2503. <a href="https://doi.org/10.1039/D3NR05738K">https://doi.org/10.1039/D3NR05738K</a>
Eva Kudová	Solntseva, E. I., Bukanova, J. V., Kondratenko, R., Kudová, E. Corticosteroids as Selective and Effective Modulators of Glycine Receptors. <i>ACS Chemical Neuroscience</i> . 2023, 14(17), 3132-3142. ISSN 1948-7193. E-ISSN 1948-7193. <a href="https://doi.org/10.1021/acscchemneuro.3c00287">https://doi.org/10.1021/acscchemneuro.3c00287</a>
Michal Hocek	Kuba, M., Khoroshyy, P., Lepšík, M., Kužmová, E., Kodr, D., Kraus, T., Hocek, M. Real-time Imaging of Nascent DNA in Live Cells by Monitoring the Fluorescence Lifetime of DNA-Incorporated Thiazole Orange-Modified Nucleotides. <i>Angewandte Chemie - International Edition</i> . 2023, 62(38), e202307548. <a href="https://doi.org/10.1002/anie.202307548">https://doi.org/10.1002/anie.202307548</a>
Michael Mareš	Buša, M., Matoušková, Z., Bartošová-Sojková, P., Pachel, P., Řezáčová, P., Eichenberger, R. M., Deplazes, P., Horn, M., Štefanič, S., Mareš, M. An evolutionary molecular adaptation of an unusual stefin from the liver fluke <i>Fasciola hepatica</i> redefines the cystatin superfamily. <i>Journal of Biological Chemistry</i> . 2023, 299(3), 102970. <a href="https://doi.org/10.1016/j.jbc.2023.102970">https://doi.org/10.1016/j.jbc.2023.102970</a>
Michael Mareš	Martins, L. A., Buša, M., Chlastáková, A., Kotál, J., Beránková, Z., Stergiou, N., Jmel, M. A., Schmitt, E., Chmelař, J., Mareš, M., Kotsyfakis, M. Protease-bound structure of Ricistatin provides insights into the mechanism of action of tick salivary cystatins in the vertebrate host. <i>Cellular and Molecular Life Sciences</i> . 2023, 80(11), 339. <a href="https://doi.org/10.1007/s00018-023-04993-4">https://doi.org/10.1007/s00018-023-04993-4</a>
Sebastian Zoll	Sülzen, H., Began, J., Dhillon, A., Kereiche, S., Pompach, P., Votrubová, J., Zahedifard, F., Šubrtová, A., Šafner, M., Hubálek, M., Thompson, M., Zoltner, M., Zoll, S. Cryo-EM structures of <i>Trypanosoma brucei</i> gambiense ISG65 with human complement C3 and C3b and their roles in alternative pathway restriction. <i>Nature Communications</i> . 2023, 14(1), 2403. <a href="https://doi.org/10.1038/s41467-023-37988-7">https://doi.org/10.1038/s41467-023-37988-7</a>
Robert Hanus	Macháček, S., Tupec, M., Horáček, N., Halmová, M., Roy, A., Machara, A., Kyjaková, P., Lukšan, O., Pichová, I., Hanus, R. Evolution of Linoleic Acid Biosynthesis Paved the Way for Ecological Success of Termites. <i>Molecular Biology and Evolution</i> . 2023, 40(4), msad087. <a href="https://doi.org/10.1093/molbev/msad087">https://doi.org/10.1093/molbev/msad087</a>
Radim Nencka	Inniss, N. L., Kozic, J., Li, F., Rosas-Lemus, M., Minasov, G., Rybáček, J., Zhu, Y., Pohl, R., Shuvalova, L., Rulíšek, L., Brunzelle, J. S., Bednárová, L., Štefek, M., Kormaník, J. M., Andris, E., Šebestík, J., Li, A. S. M., Brown, P. J., Schmitz, U., Saikatendu, K., Chang, E., Nencka, R., Vedadi, M., Satchell, K. J. F. Discovery of a Druggable, Cryptic Pocket in SARS-CoV-2 nsp16 Using Allosteric Inhibitors. <i>ACS Infectious Diseases</i> . 2023, 9(10), 1918-1931. <a href="https://doi.org/10.1021/acscinfecdis.3c00203">https://doi.org/10.1021/acscinfecdis.3c00203</a>
Hana Cahová	Potužník, J.F., Nešuta, O., Škríba, A., Voleníková, B., Mititelu, M.B., Mancini, F., Serianni, V., Fernandez, H., Spustová, K., Trylčová, J., Vopálenský, P., Cahová, H. <i>Angewandte Chemie - International Edition</i> 2024, 63, e202314951. <a href="https://doi.org/10.1002/anie.202314951">https://doi.org/10.1002/anie.202314951</a>

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# Project Office updates

# GA ČR Calls for proposals 2025 are open

EX|PRO

JUNIOR  
STAR 

Standard  
Projects 

POSTDOC  
INDIVIDUAL FELLOWSHIP 

International  
Projects 

- Standard projects
- EXPRO projects
- International projects - bilateral and Lead Agency
- JUNIOR STAR projects (only to institutions outside IOCB)
- Postdoctoral Individual Fellowship (incoming + outgoing)

Deadline for submission: 3 Apr 2024 (straight after Easter)

Further details are available on the [Intraweb](#). (Calls and How to apply)

Please follow the IOCB internal deadlines!

# GA ČR Calls for proposals 2025 are open

## IOCB internal deadlines:

### Thu 29 Feb 2024

- ✓ inform us about your **intention to apply** and your choice of evaluation panel  
[projectoffice@uochb.cas.cz](mailto:projectoffice@uochb.cas.cz)

### Thu 7 Mar 2024

- ✓ **budget** for checking

### Thu 14 Mar 2024

- ✓ formal check of whole **proposal except part C1** (project description)

### Mon 25 Mar 2024 8:00 AM

- ✓ **formal check of part C1** (structure - mandatory items)

### Wed 3 Apr 2024

- ✓ GA ČR deadline

# Call for nominations

## Otto Wichterle Award

- **IOCB internal deadline: 15 March 2024**
- CAS Deadline: 31 March 2024
  
- for early career researchers up to the age of 35 years
- mandatory approval by IOCB Board (CAS regulation)
- send your application by email to the IOCB Board
- application should include: nomination template, CV of the candidate and list of publications
- more info on [intra](#)web
- inform us about your intention to apply at [projectoffice@uochb.cas.cz](mailto:projectoffice@uochb.cas.cz)



# Call for nominations

## Neuron Prizes



- **Deadline: 31 March 2024**
- **Prize for Talented Scientist:** for early career researchers up to 10 years from obtaining PhD
- **Neuron Prize:** for long-term contributions to (Czech) science
- **Prize for Connecting Science and Business:** for a successful transfer of a scientific result into the commercial realm

## Alfred Bader Prize for Bioinorganic & Bioorganic Chemistry 2024



- for Czech researchers up to the age of 35 years

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# **New Research Core Facility: Electron Microscopy**

# Transmission Electron Microscopy (TEM)

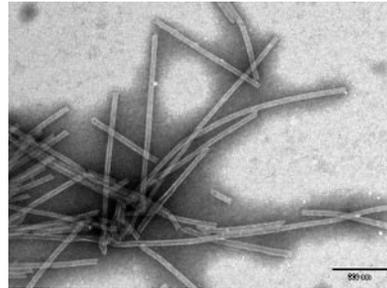
New Research Core Facility in Iva Pichová Group

The team has advanced expertise in cell and materials electron microscopy: sample preparation, surface imaging and high-resolution ultrastructure of samples, to analysis of the acquired data.

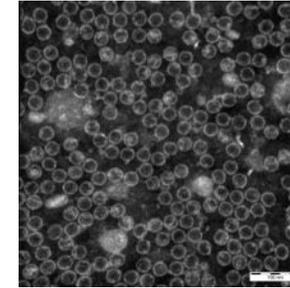
## They can analyze:

- Proteins and macromolecular complexes
- Viruses, exosomes, liposomes
- Bacteria and yeast cells
- Molds and plants
- Adherent and suspension cells
- Tissues
- Organoids and small organisms
- Nanoparticles, materials

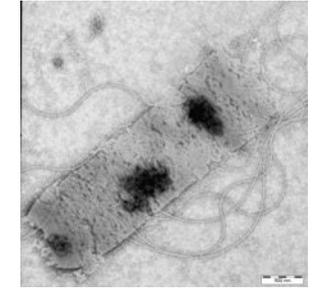
## Negative staining



HIV CANC protein

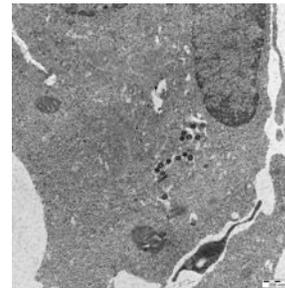


HBV core protein

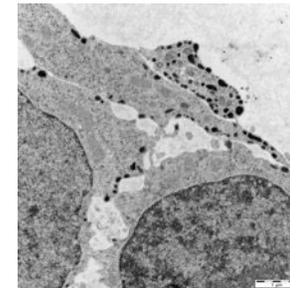


*Bacillus subtilis* treated with antimicrobial peptides

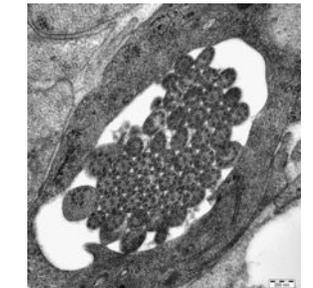
## Ultra-thin sections



Assembled M-PMV particles  
in HEK 293 cells



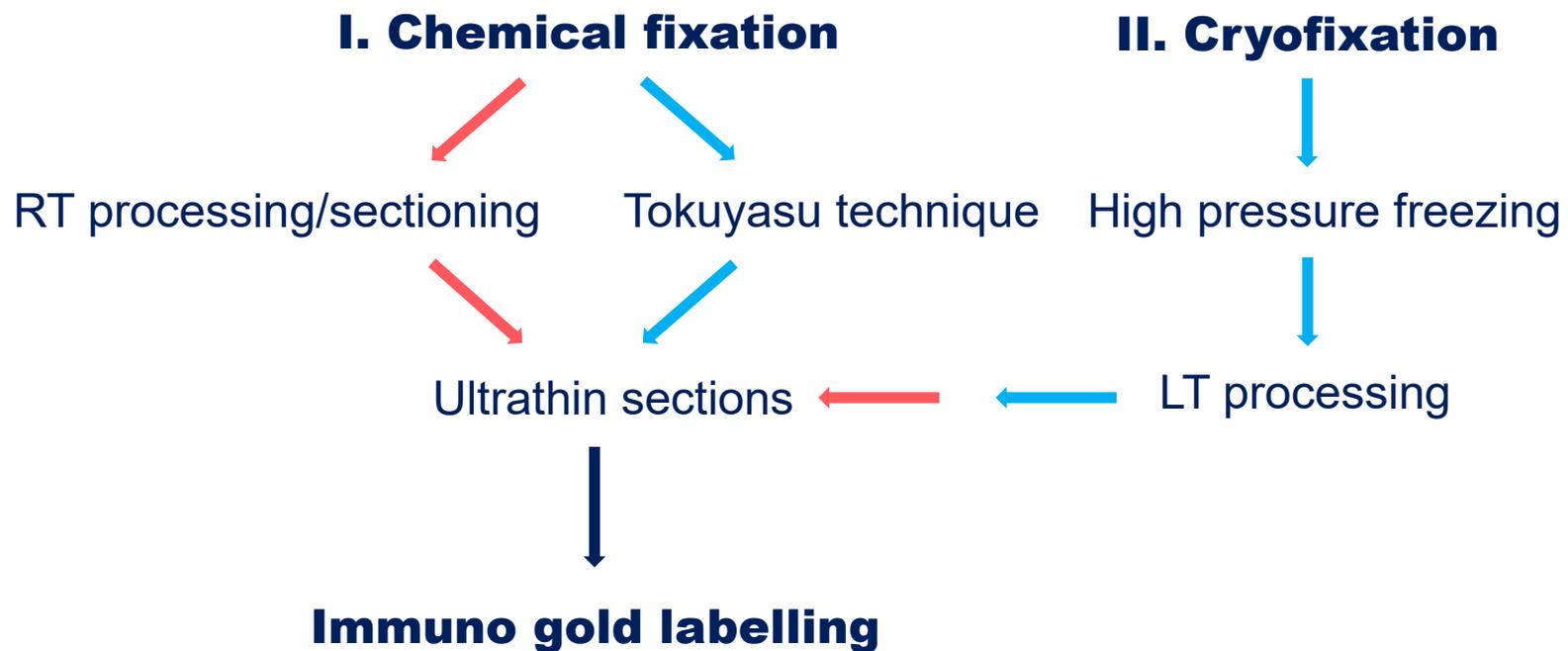
Pancreatic  $\beta$ - cells  
INS-1E



*Schistosoma mansoni*

# Transmission Electron Microscopy (TEM)

New Research Core Facility in Iva Pichová Group



Serine beta-lactamase-like protein (LACTB) in mitochondria of Mcf7 cells

**Contact:** [romana.hadravova@uochb.cas.cz](mailto:romana.hadravova@uochb.cas.cz)

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# Students

# PhD projects - Call for Applications 2024



- So far we have about 100 applications, mostly from India and Pakistan.
- Application deadline: **Sunday, March 3**
- Selection deadline: **Friday, March 8** (only 5 days to shortlist the invited candidates)

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# HR Award news



HR EXCELLENCE IN RESEARCH

- **EC Consensus Report received on 4 January 2024**
- The outcome: **“HRS4R embedded, corrective actions needed:** The organisation is, for the most part, progressing with appropriate and quality actions as described in its Action Plan, but could benefit from alterations as advised through the Assessment process. There is some evidence that the HRS4R is further embedded.”
- Critical points: missing OTM-R policy (Recruitment), better impact monitoring of the action plan, more quantitative indicators etc.
- Next Internal Review deadline: **4 January 2027**

**04**  
JAN  
2024

**HRS4R EMBEDDED, CORRECTIVE ACTIONS NEEDED**  
Action performed by: RTD Charter

### Interim Assessment

Interim Assessment: EC Consensus Report

EC Consensus Report	Status	Date	EC	General Assessment
EC Consensus Report	Consensus validated by EC	04/01/2024	RTD Charter	HRS4R embedded, corrective actions needed

EC Consensus Outcomes ▾

**04**  
JAN  
2027

**PENDING**

### Internal Review for Renewal Assessment: Design

Previous Assessment EC Consensus Outcome: HRS4R embedded, corrective actions needed

Document	Status	Submission Information
Internal Review	Pending	

Show Document Status Explanation ▾

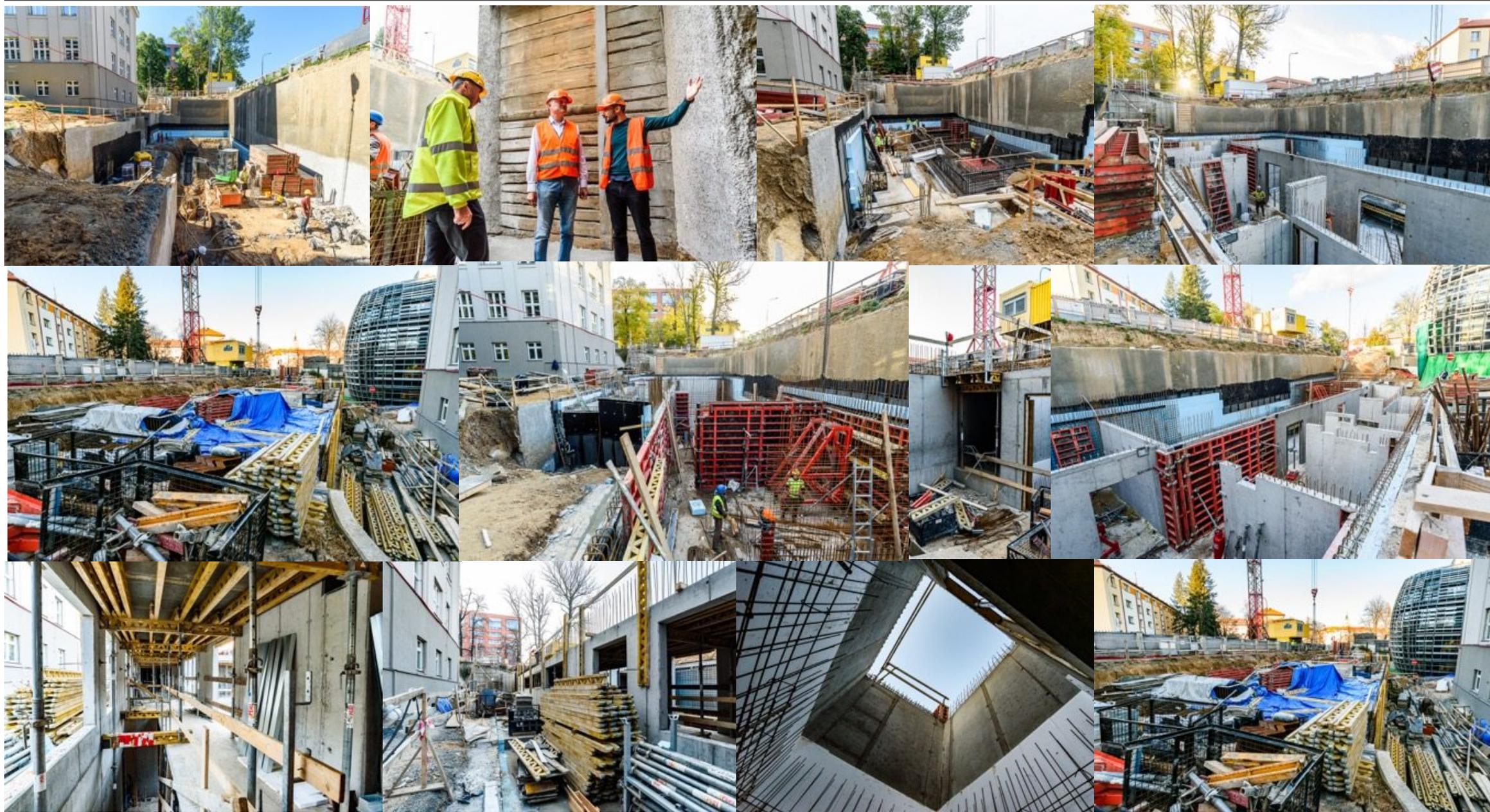
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# Construction updates

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# Construction – Building K

- Rough construction already completed
- The installation of the inner technologies is now underway
- Completion date: autumn 2024

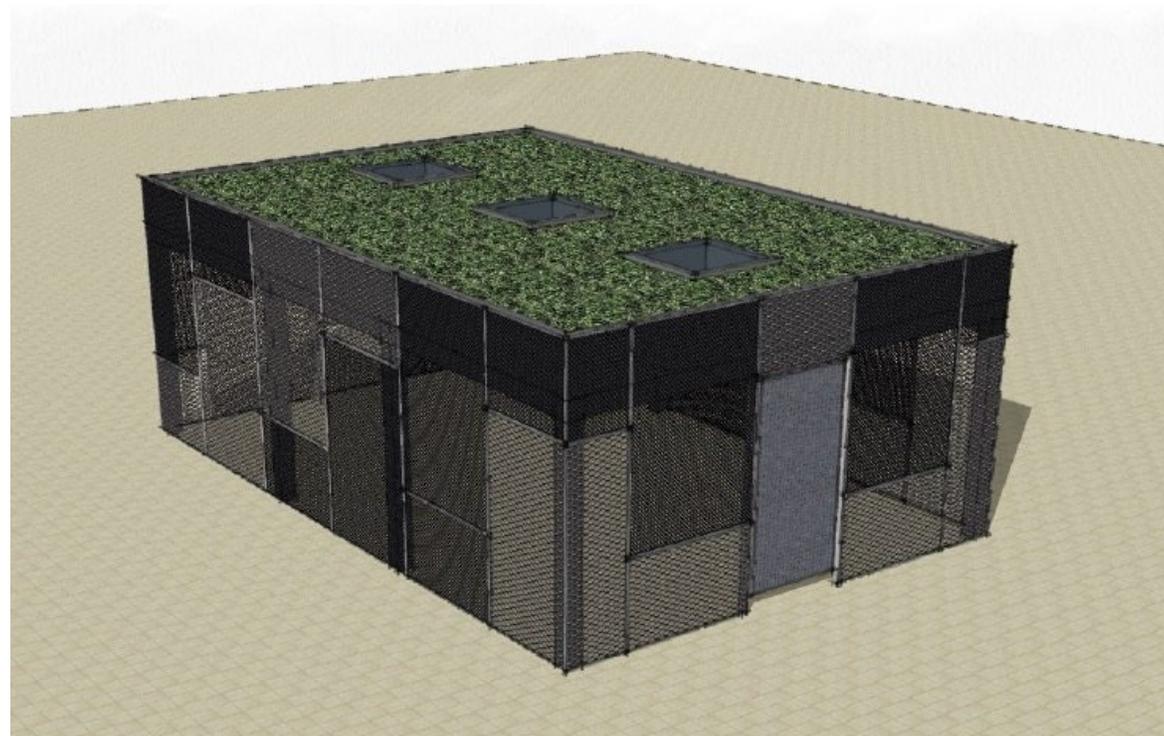


# Bike shelter



- Between building C and D
- Green roof
- Start of the construction: autumn 2024
- Completion date: autumn 2025

- Space for approx. 40 bikes
- Chargers for electric bikes
- Access with IOCB card

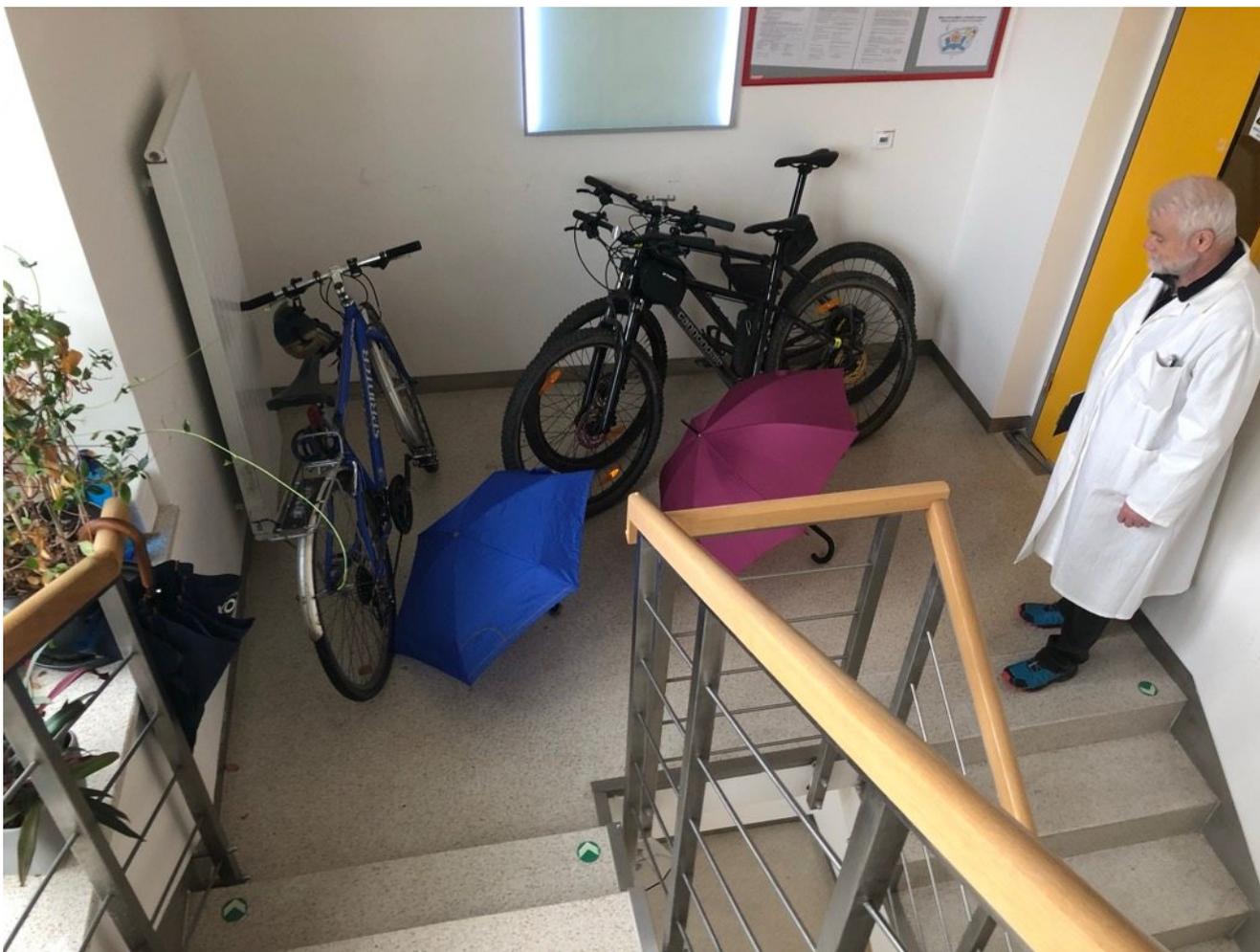


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# Safety updates

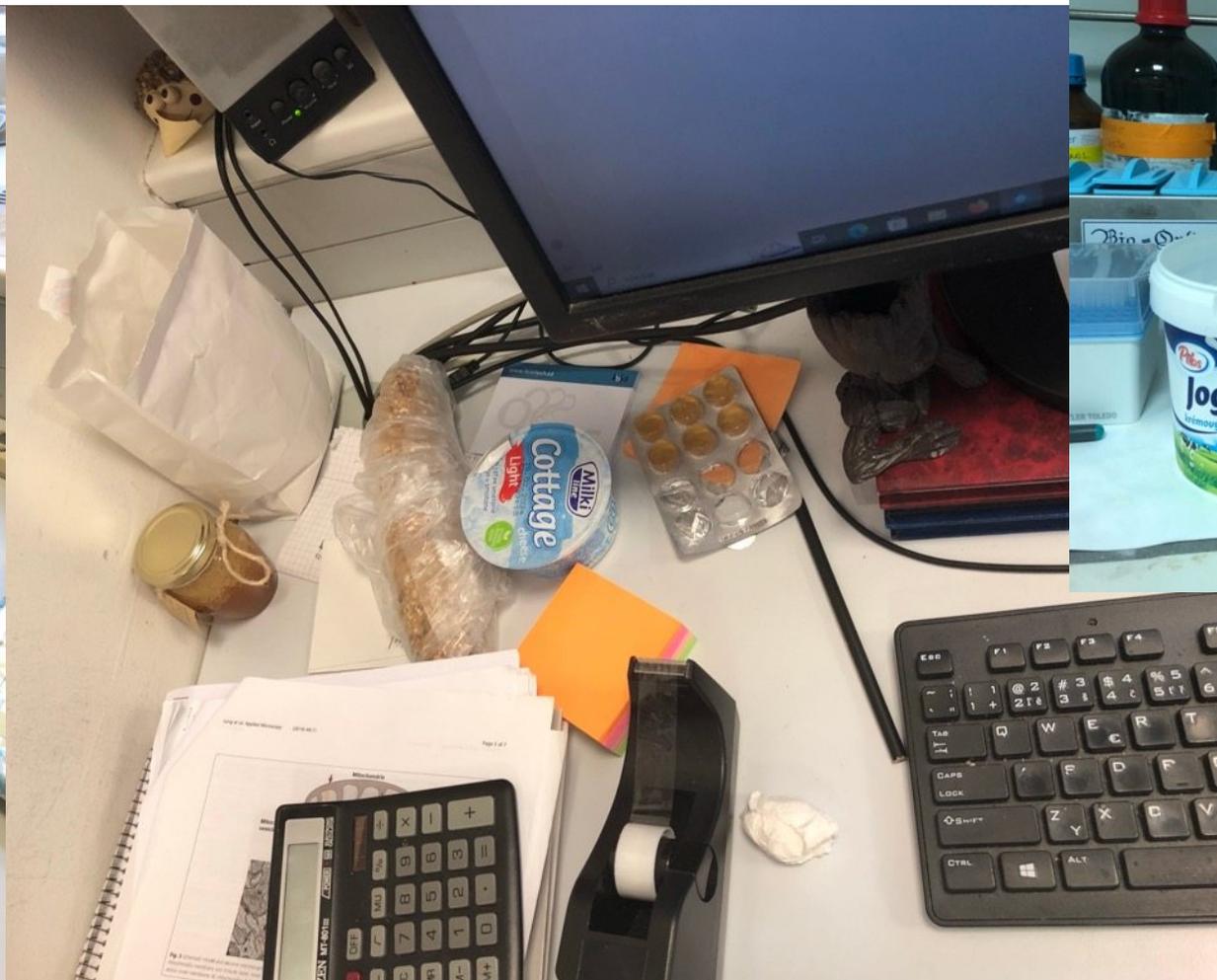
# Safety updates – Building C

- Old classics – blocked evacuation routes



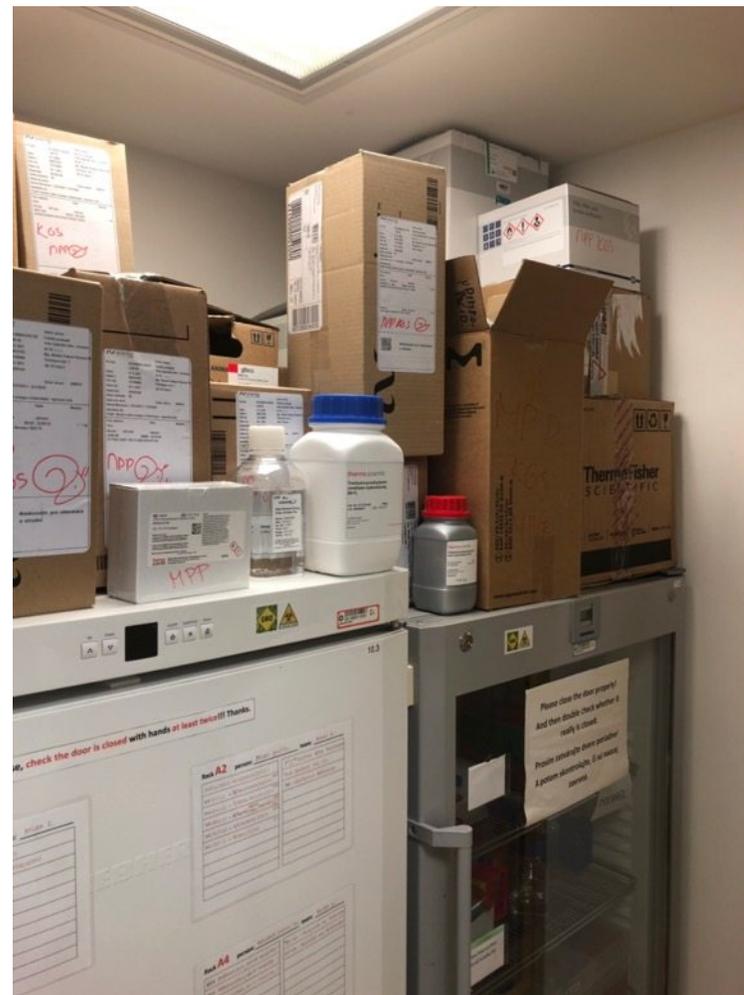
# Safety updates – Building C

- Old classics – eating in the lab and using food containers



# Safety updates – Building C

- Old classics – refrigerators and paper boxes



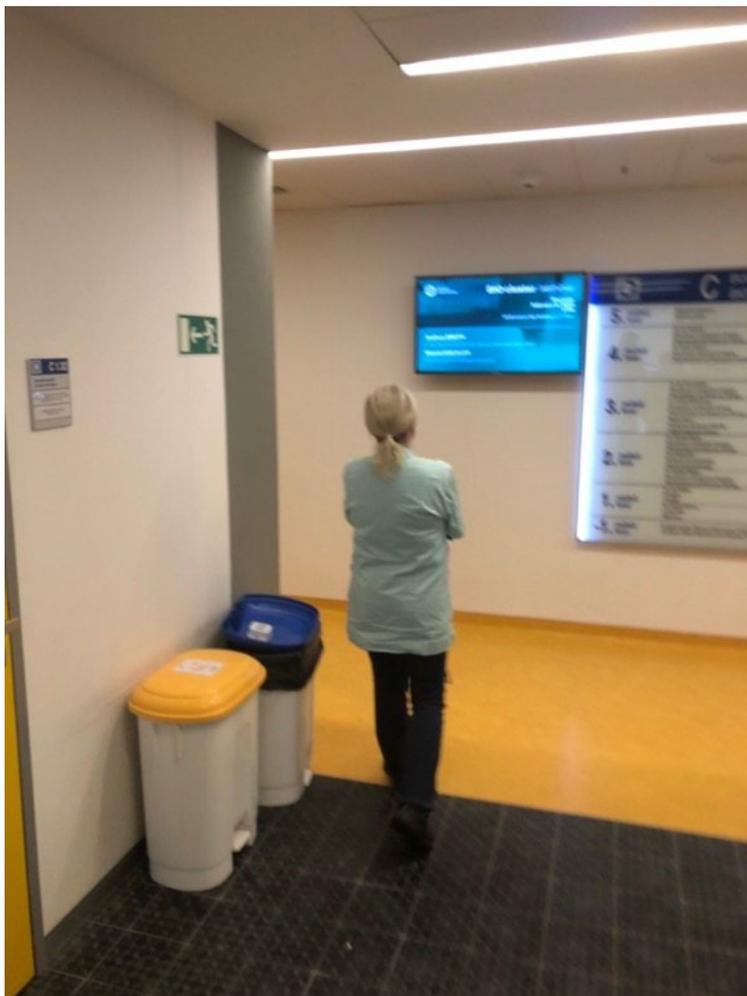
# Safety updates – Building C

- Old classics – Cold Room and its use



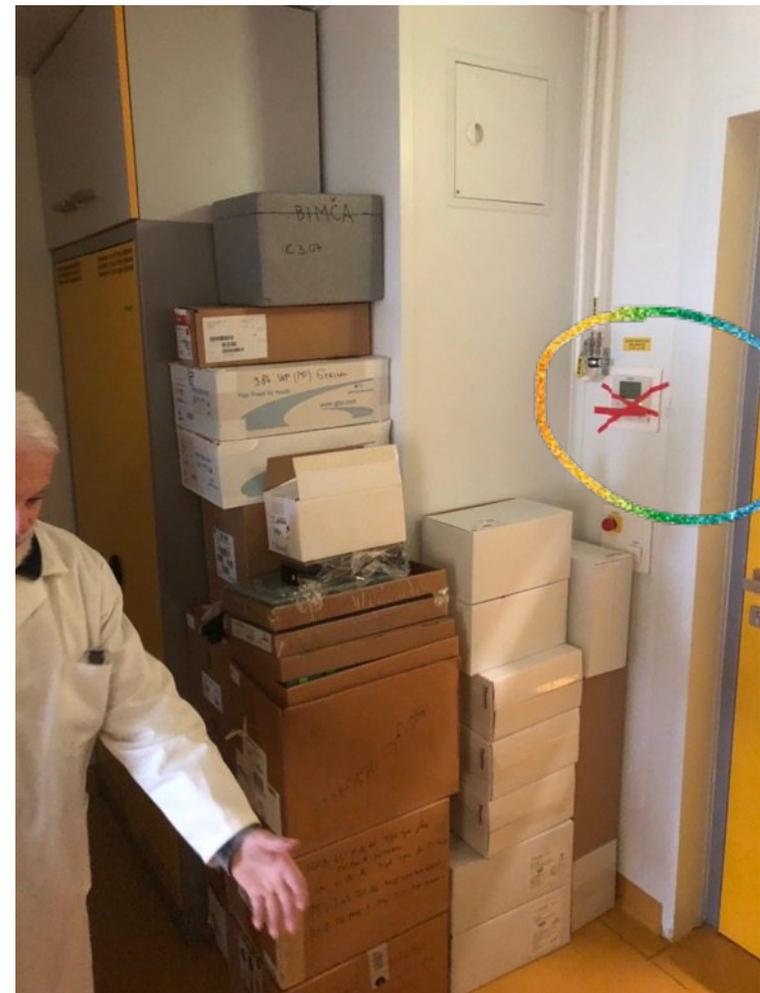
# Safety updates – Building C

- And some new sins:



...running around in  
GMO work clothing

...or fixing the equipment  
with a duct tape



# Safety updates – Building C

- Ajatin or Savo, but never both
- And to be sure, block the access



# Firefighting Training

- In April, we will organise a firefighting practical training
- Capacity: 50 people
- Land next to the Development Center (Papírenská)
- Real fire extinguishing with fire extinguisher and fire blanket
- Please give priority to organic chemists
- Will be repeated in September and next year



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# Miscellanea

# Planning a workshop? Amazing! Please do not forget:

## Step 1: Fill in a form

(Documents > Forms > Other > *Request template for permission to organize a Professional event on the IOCB premises*)



## Step 2:

### Contact Economy Dpt.

- Budgeting and payments



### Contact Technical Dpt.

- Operational measures
- Special requests
- Cleaning



### Contact ITS

- Entry control process
- AV equipment

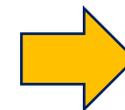


**Step 3: Submit the signed form to the Director for final approval**



## Science

- On-site organization of the event
- Communication with speakers, etc.



## Other tasks

- Reserve a venue
- Contact Michal Hoskovec (IOCB calendar, screens, Noticeboard)
- Contact Communications (event on IOCB website, promotion on social networks)

*\*Please refer to Internal Directive S2018-02*

# Stella Gonsales Group: Introductory Talk



- 12 March 2024 10 AM, IOCB Lecture Hall
- Introduction of Stella Gonsales Group – joint laboratory of UCT Prague and IOCB Prague
- **Speaker:** Stella de Almeida Gonsales
- **Topic:** Chemical Recycling of Plastic Waste and Sustainable Polymers
- If you are interested in joining a lunch after the lecture, please get in touch with Petra Ben-Ari (an e-mail invitation will follow)



# GraphPad Prism

## Academic group license types

### *permanent*

- one-time payment, limited or no upgrades, **\$1600**

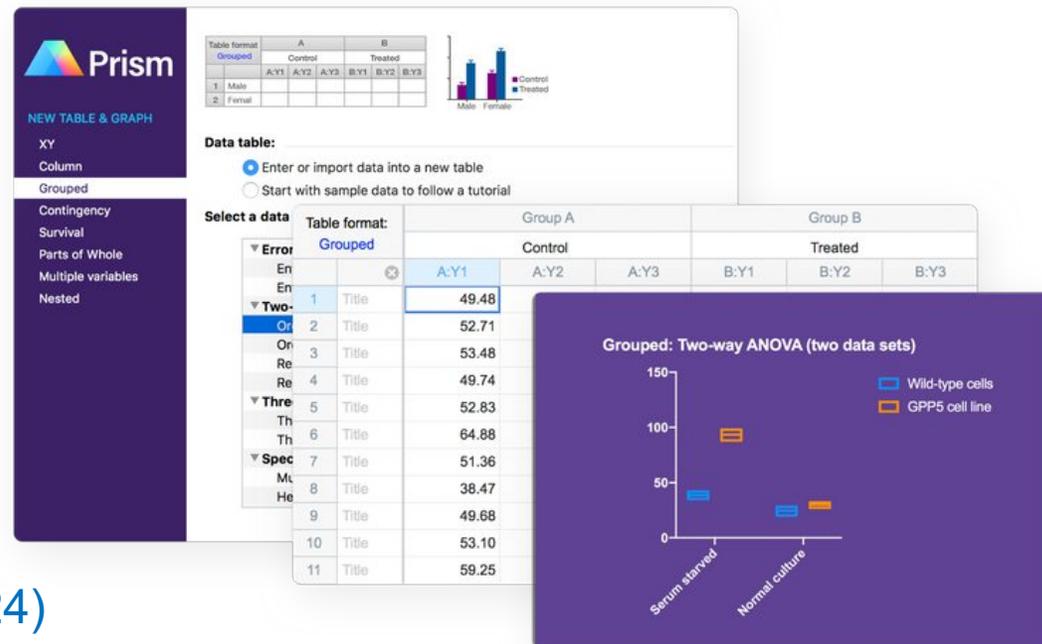
### *subscription / computer-based*

- can be activated on a single computer (license key)
- unregistered computers cannot be re-registered
- \$230 (1) - \$170 (25+) - **\$130 (50+)** / license / year (2024)

### *subscription / user-based*

- assigned to a named user identified/authenticated by an e-mail address
- can be activated on up to 2 computers (if used by the same person)
- \$240** / user / year, **no volume discount**

Questions/requests to [jiri.polach@uochb.cas.cz](mailto:jiri.polach@uochb.cas.cz).



# Dana Hocková Lecture Series

- Morning lecture & Afternoon career workshop
- Maximum 3 per year
- Most suitable candidates: Female scientists with inspiring career path
- If you already invited a speaker who would be a good candidate for the career workshop, we can organize it
- Please use [nomination form](#) either for Dana Hocková lecture series, or for career workshop

Next one:

**Dr. Hana Lísalová**

**7<sup>th</sup> March at 10 am and at 3 pm**

▪ **Also planned:** Career workshops

– Darlene Solomon (Agilent, June 7 at 10 am)

– Marisa Kozlowski (Upenn, end of July).

## Dana Hocková Lectures



Dr. Dana Hocková (1970-2021)

The Dana Hocková lecture series started in 2023 to commemorate Dr. Dana Hocková (1970–2021), who was an accomplished scientist and role model to others at IOCB Prague and beyond. Her untimely death in May 2021 left a huge gap in the hearts of many colleagues as well as in the world of science.

Dana was not just a brilliant scientist but also a great role model to junior researchers, showing her colleagues that it is possible to do great science and be a good parent at the same time.

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# Purchases from IOCB Store

## Reminder:

- It is not allowed to buy goods from IOCB Store (e-shop) from VEJ.
- Marketed products are designated for public/private sale only.

# IOCB Events 2024

- 1/3 IOCB General Assembly (NTK)
- 5/3 IOCB Invited Lecture: David Ron – Regulation of Protein Synthesis and Proteostasis by the Integrated Stress Response
- 7/3 Dana Hocková Lecture Series: Hana Lísalová From antifouling (nano-)coatings to smart biosensing in complex media
- 7/3 Career Workshop: Hana Lísalová – Being blond and pushing science forward
- 12/3 Introduction of the new Joint Laboratory (IOCB & UCT) – Stella Gonsales
- 26/3 IOCB Invited Lecture: Matthias Wolf – WALC – A New Paradigm for Single Particle Analysis of Large Molecular Assemblies
- 9–10/4 Final Adher'nRise Meeting
- 15–17/4 Prague Workshop for Computational Mass Spectrometry
- 16/4 Cross Campus & opening of Vektor Technická
- 18/5 Open House Praha
- 20–23/5 23<sup>rd</sup> Interdisciplinary meeting of young life scientists (Milovy)
- 27–31/5 IOCB Retreat (Valeč u Hrotovic)
- 30/5–1/6 Science Fair (EXPO Letňany)
- 19/6 ScienceFest (Vítězné náměstí)
- 20/6 IOCB Family Day
- 2–6/9 10<sup>th</sup> Prague-Weizmann Summer School (NTK)
- 11/9 IOCB Invited Lecture: Leo Gross – Chemical Reactions and Synthesis by Atom Manipulation
- 18–20/9 IAB Visit & Evaluation of Research Groups
- 24/9 IOCB Invited Lecture: Hiroyuki Isobe – Synthesis-Driven Chemistry of Nanocarbon Molecules
- 27/9 European Researchers' Night
- 7–10/10 PhD Bootcamp (Dolní Malá Úpa)
- 15/10 IOCB Invited Lecture: Henrik Ottosson – Excited State Aromaticity and Antiaromaticity: From Pitfalls to Scopes
- 4–10/11 Week of the CAS & Openhouse Days
- 28/11 IOCB Invited Lecture: Connor W. Coley – Artificial Intelligence for Synthetic Organic and Analytical Chemistry
- 13/12 Christmas gathering

# Mtgs with GLs – Schedule

## 2024

- March 22
- April 26
- May 24
- June 21

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# Thank you!