



ÚOCHB AV
IOCB PRAGUE

Meeting with Group Leaders

Jan Konvalinka | April 28, 2023

Agenda

- New member of IAB
- Audit of services provided at IOCB
- IOCB Most Significant Publications
- Safety updates
- GSRC – Call for new projects
- 70 years of IOCB Prague and beyond
- Construction of building K
- IOCB Data Management Groupwork
- Miscellanea

The new Member of IAB

- IOCB Prague welcomes **Prof. Robert A. Weinberg**, one of the world's most distinguished biologists, as a new member of its International Advisory Board.



[Robert A. Weinberg](#) is Daniel K. Ludwig **Professor for Cancer Research at Whitehead Institute for Biomedical Research at MIT, MA, USA**. In his research, he is focused on the origin and spread of cancer and is known for his discoveries of the first human oncogene Ras and the first tumor suppressor gene Rb. Prof. Weinberg is a member of the American Philosophical Society, U.S. National Academy of Sciences, and Royal Swedish Academy of Sciences. He is also a laureate of numerous science awards, e.g. Breakthrough Prize in Life Sciences (2013) or most recently Japan Prize (2021).

- <https://www.uochb.cz/en/news/482/robert-a-weinberg-is-the-new-member-of-the-international-advisory-board>

Audit of services provided at IOCB

Audit of services initiated by management and supported by IOCB Board

- Motivation is to unify group financing, service advertising, approach, training
- Steering towards optimal services to IOCB scientific community

Process/progress

- Report on services submitted by each group (November 7th)
- Individual discussion and negotiations about 2023 budget with management (November- December)
- Service days (introducing services) were organized in February
- Intraweb updated – now all services are presented at intwaweb

NEXT STEP:

- Gathering feedback from service users (May)

Questionnaires will be distributed among users.

Please provide feedback!

Feedback will help as a guidance to plan for changes in year 2023



Thanks to M. Hoskovec, J. Cvačka

IOCB Most Significant Publications

IOCB Most Significant Publications 2022 Contest – updates

6

PHYS – Physical and Theoretical Chemistry:	9 submissions (10 for 2021)
CHEM – Medicinal and Organic Chemistry:	10 submissions (12 for 2021)
BIO – Biochemistry and Molecular Biology:	9 submissions (10 for 2021)

Please check whether all your submissions are included!

Most Significant Publications 2022				
Author	Laboratory	Article / Publication	Journal	Citation
Vladimir Motornov	Beier Petr	Access to Fluoroalkylated Azoles and 2-Acylaminoketones via Fluorinated Anhydride-Mediated Cleavage of NH-1,2,3-Triazoles	OL	<i>Org. Lett.</i> 2022 , 24, 1958–1963
Duy Dinh Do Pham	Domink Rejman	LEGO-Lipophosphonoxins A Novel Approach in Designing Membrane Targeting Antimicrobials	Journal of Medicinal Chemistry	<i>J. Med. Chem.</i> 2022 , 65, 10045–10078
Marek Ondruš	Hocek Michal	Traceless enzymatic synthesis of monodispersed hypermodified oligodeoxyribonucleotide polymers from RNA templates	Chemical Communications	<i>Chem. Commun.</i> , 2022 , 58, 11248
Chao Yang	Hocek Michal	Synthesis of Polycyclic Hetero-Fused 7-Deazapurine Heterocycles and Nucleosides through C–H Dibenzo thiophenation and Negishi Coupling	JACS	<i>J. Am. Chem. Soc.</i> 2022 , 144, 19437–19446
Tomáš Klejch	Janeba Zlatko	Stereo-Defined Acyclic Nucleoside Phosphonates are Selective and Potent Inhibitors of Parasite 6-Oxopurine Phosphoribosyltransferases	Journal of Medicinal Chemistry	<i>J. Med. Chem.</i> 2022 , 65, 4030–4057
Kateřina Radilová	Konvalinka Jan	Thermodynamic and structural characterization of an optimized peptide-based inhibitor of the influenza polymerase PA-PB1 subunit interaction	Antiviral Research	Antiviral Research 208 (2022) 105449
Milan Dejmek	Nencka Radim	Discovery of isonucleotidic CDNs as potent STING agonists with immunomodulatory potential	Structure	<i>Volume 30, Issue 8, 4 August 2022, Pages 1146-1156.e11</i>
Jan Kretschmer	Polášek Miloslav	Paramagnetic Encoding of Molecules	Nature Communications	<i>NATURE COMMUNICATIONS</i> (2022) 13:3179
Anna Poryvai	Slanina Tomáš	Red-Shifted Water-Soluble BODIPY Photocages for Visualisation and Controllable Cellular Delivery of Signaling Lipids	Anwegandte Chemie	<i>Angew. Chem. Int. Ed.</i> 2022 , 61, e202205855
Daisuke Sakamoto	Starý Ivo	Cycloiridated Helicenes as Chiral Catalysts in the Asymmetric Transfer Hydrogenation of Imines	ACS Catalysis	<i>ACS Catal.</i> 2022 , 12, 10793–10800

		Most Significant Publications 2022		
Author	Laboratory	Article / Publication	Journal	Citation
Andrea Huskova	Bouřa Evžen	Model of abasic site DNA cross-link repair; from the architecture of NEIL3 DNA binding domains to the X-structure model	Nucleic Acids Research	<i>Nucleic Acids Research</i> , 2022, Vol. 50, No. 18 10436–10448
Maria-Bianca Mititelu	Cahová Hana	Arabidopsis thaliana Nudixes have RNA-decapping activity	RSC Chemical Biology	<i>RSC Chem. Biol.</i>
Klaudia Kvakova	Cígler Petr	Visualization of Sentinel Lymph Nodes with Mannosylated Fluorescent Nanodiamonds	Advanced Functional Materials	<i>Adv. Funct. Mater.</i> 2022, 32, 2109960
Valentina Cutano	Kečkéšová Zuzana	LACTB exerts tumor suppressor properties in epithelial ovarian cancer through regulation of Slug	Life Science Alliance	LACTB regulates Slug Cutano et al. vol 6 no 1 e202201510
Bohdan Kysilov	Kudová Eva	Pregnane-based steroids are novel positive NMDA receptor modulators that may compensate for the effect of loss-of-function disease-associated GRIN mutations	BJP	<i>Br J Pharmacol.</i> 2022;179:3970–3990.
Rana Rais	Majer Pavel	Discovery of DRP-104, a tumor-targeted metabolic inhibitor prodrug	SCIENCE ADVANCES	<i>Rais et al., Sci. Adv.</i> 8, eabq5925 (2022)
Andrea Pačesová	Maletínská Lenka	Age-related metabolic and neurodegenerative changes in SAMP8 mice	AGING	<i>AGING</i> 2022, Vol. 14, No. 18 <i>Aging (Albany NY).</i> 2022 Sep 16; 14:7300-7327
Michal Tupec	Pichová Iva	Understanding desaturation/hydroxylation activity of castor stearyl Δ^9 - Desaturase through rational mutagenesis	CSBJ	<i>Computational and Structural Biotechnology Journal</i> 20 (2022) 1378–1388
Edita Poláchová	Stříšovský Kvido	Chemical Blockage of the Mitochondrial Rhomboid Protease PARL by Novel Ketoamide Inhibitors Reveals Its Role in PINK1-Parkin-Dependent Mitophagy	Journal of Medicinal Chemistry	<i>J. Med. Chem.</i> 2023, 66, 251–26

		Most Significant Publications 2022		
Author	Laboratory	Article / Publication	Journal	Citation
Monika Krupová	Andrushchenko Valery	Vibrational Circular Dichroism Unravels Supramolecular Chirality and Hydration Polymorphism of Nucleoside Crystals	Chemistry—A European Journal	<i>Chem. Eur. J.</i> 2022 , e202201922
Pavel Michal	Bouř Petr	Low-frequency Raman optical activity provides insight into the structure of chiral liquids	PCCP	<i>Phys. Chem. Chem. Phys.</i> 2022 , 24, 19722–19733
Tao Wu	Bouř Petr	Resolving Resonant Electronic States in Chiral Metal Complexes by Raman Optical Activity Spectroscopy	JPCL	<i>J. Phys. Chem. Lett.</i> 2022 , 13, 3873–3877
Ondrej Pavelka	Cígler Petr	Optically coupled gold nanostructures: plasmon enhanced luminescence from gold nanorod-nanocluster hybrids	Nanoscale	<i>Nanoscale</i> , 2022 , 14, 3166
Jan Blahut	Dračínský Martin	Sensitivity-Enhanced Multidimensional Solid-State NMR Spectroscopy by Optimal-Control-Based Transverse Mixing Sequences	JACS	<i>J. Am. Chem. Soc.</i> 2022 , 144, 17336–17340
Jakub Radek Štoček	Dračínský Martin	Importance of Nuclear Quantum Effects for Molecular Cocrystals with Short Hydrogen Bonds	JACS	<i>J. Am. Chem. Soc.</i> 2022 , 144, 7111–7116
Rabindranath Lo	Hobza Pavel	The stability of covalent dative bond significantly increases with increasing solvent polarity	Nature Communications	<i>Nature Communications</i> (2022) 13:2107
Tatiana Nemirovich	Jungwirth Pavel	Bridging Electrochemistry and Photoelectron Spectroscopy in the Context of Birch Reduction: Detachment Energies and Redox Potentials of Electron, Dielectron, and Benzene Radical Anion in Liquid Ammonia	JACS	<i>J. Am. Chem. Soc.</i> 2022 , 144, 22093–22100
Ioannis Kipouroso	Rulíšek Lubomír	Elucidation of the tyrosinase/O ₂ /monophenol ternary intermediate that dictates the monooxygenation mechanism in melanin biosynthesis	PNAPS	<i>PNAS</i> 2022 Vol. 119 No. 33 e2205619119

GSRC – Call for new projects

Background:

Gilead + IOCB partnered Oct 2022 to develop up to 4 project together

1st round of selections October 2022

3 projects have been selected Radek Pohl, Radim Nencka, Gabriel Birkus
evaluation every 6 month

total years of the GSRC 5 years

New call for projects will be announced – preferable in the field of oncology

Dues: September 2023

IOCB Tech can help with Market analysis + preparation of the budget

Safety Updates

Waste disposal

We keep mixing chlorinated organics with normal solvents. Once the Cl content reaches 1%, it has to be qualified as chlorinated (double disposal cost) - IOCB pays much over 1 M CZK for solvent disposal.



Standard chlorinated solvents

There should be “0%“ !!!!

Chlorinated solvents do not belong to the water sink either !!!! In some measurements we exceeded the permitted chlorine limits in waste water 1000x !!!!



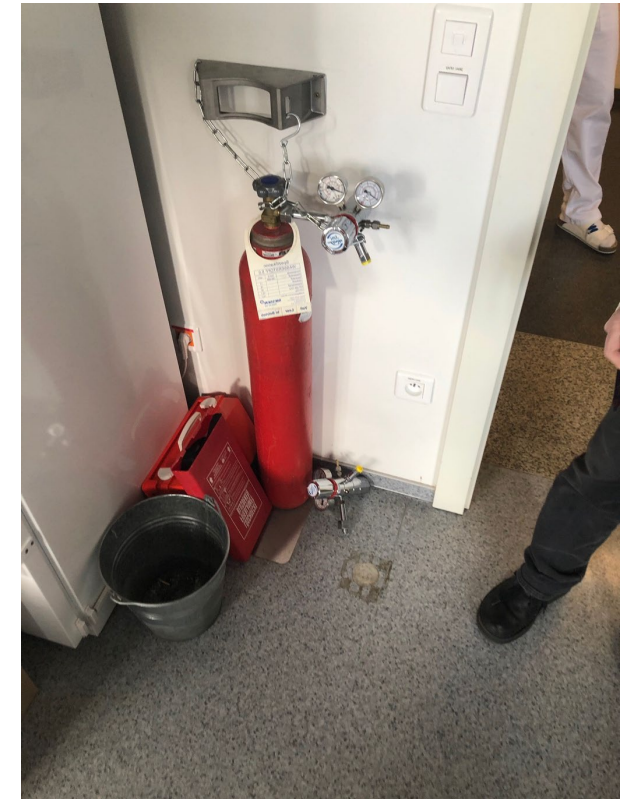
Waste disposal

- Please manage the chlorinated organics in your group properly. Waste water company knows that we are a sinner and checks our water more frequently. The worst case scenario: shutting down the operation of the whole institute by decree.
- Request from Waste management group: when you do not need the chemical anymore, please mark carefully the content of the container and put your name. If there is no marking, we do not know how to dispose it !!!!!
- The same is valid for aqueous solutions. The quantity of aq. waste is exploding. How you want to dispose it if we do not know what is inside!!! In case of doubt, please talk to Mr. Šimek.

Safety audit in labs – Building A

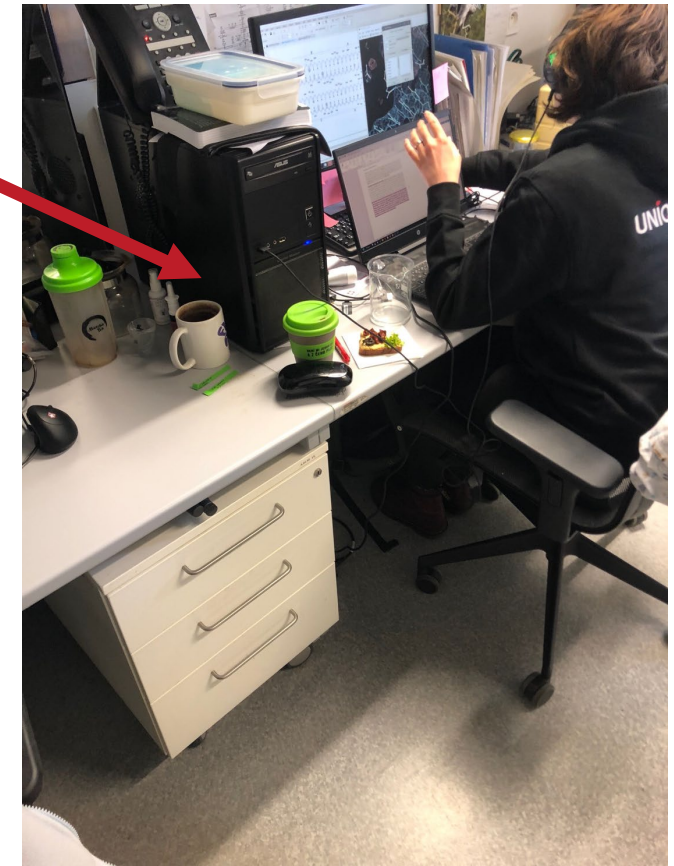
Old problems in new packaging !!! Please work on eliminating the problems, this is the objective of this exercise.

Gas containers not properly fastened, risk of the damaging of the red. valve and gas emission !!!



Safety audit in labs – Building A

Food and drinks do not belong to the laboratory !!! Please enjoy them in other rooms.



Symposium 70 years of IOCB Prague and beyond



31 May 2023

- Based on received abstracts, the program committee selected four IOCB speakers:
 - **Hana Cahová**
 - **Tomáš Slanina**
 - **Miloslav Polášek**
 - **Milan Vrábel**
- Poster session: **42 groups** have submitted a poster abstract
- **Registration form is now open to all IOCB staff (on IntraWeb)**
- Balling Hall can host 230 attendees

ÚOCHB
IOCB PRAGUE

Vyhledat

EN

Rozcestník

Nástěnka

Události

Vedení

Administrativa

Věda

Personální & mzdy

ITS

Kontakty

Ostatní

Dokumenty

/ Úvod / Rozcestník

nástěnka

události

mapa

kontakty

formuláře

Albina

OKbase

granty

rezervace

knihovna

webmail

inzeráty

obrazovky

kavárna

70 years

Epic
Happy Hours

31 May 2023
18:00–22:00

on IOCB premises

↑

All information
about the
symposium can
be found in
IntraWeb

Building K – Cryo-EM

Construction of Building K – Cryo-EM Facility

- Construction works will start on Tuesday, 2nd May 2023
- To ensure the passage of construction trucks and essential contractor vehicles, strict no car entry & parking policy on the IOCB premises will be imposed
- Exception of underground parking permission granted to limited number of employees who have been notified and instructed personally
- Please address any questions to Karel Šobíšek



Miscellanea

IOCB Data Management

- **Workgroup** for „IOCB Data Management“: Effective May 1, 2023
- The chairman of the workgroup: **prof. Jiří Vondrášek**
- Appointed members of the workgroup:
 - Anna Strachotová
 - Jiří Polách
 - Tomáš Kouba
 - Hector Martinez - Seara
 - Kvido Stříšovský
 - Michal Tichý
- **Tasks:**
 - long-term solution for data management at the institute
 - introduction of **Electronic Laboratory Diary**
 - local data **repository** solution
 - the first outputs by the end of June 2023

IOCB Events 2023

- 4. 5. IOCB Invited Lecture: Prof. Lisa Stowers (The Scripps Research Institute, San Diego, USA)
- 16. 5. Dana Hocková Seminar: Prof. Štěpánka Vaňáčová (CEITEC, Brno)
- 20. 5. Open House Praha
- 21. 5. Elegance of the molecule (reserved performance for IOCB & Experientia in Dejvice Theatre)
- 31. 5. Symposium 70 years of IOCB Prague and beyond (NTK), Tony Holý Lecture by Tomáš Cihlář
- 1. 6. Children's Day in Kampus Dejvice
- 8.–10. 6. Science Fair 2023 (Expo Letňany)
- 21. 6. VědaFest (Vítězné náměstí)
- 30. 7. – 3. 8. Prague-Weizmann Summer School 2023 (in Rehovot, Israel)
- 22. 9. IOCB Invited Lecture: Prof. Makoto Fujita (University of Tokyo, Japan)
- 6.–9. 9. IAB visit at IOCB
- 5.–6. 10. Joint Symposium with KU Leuven (final date)**
- 16.-19.10 Gilead visit at IOCB**
- 1.–5. 11. Molecular Rotor Workshop 2023
- 6.–11. 11. Week of the CAS & IOCB Openhouse Days
- 8. 11. Martin Franc: 70 let ÚOCHB (in Czech)
- 4.–5. 12. Dream Chemistry Award Finals

Mtgs with GLs – 2023 Schedule

23

- May 26
- June 29

Coffee with the director – new round

- Expect email with a possibility to sign up to shared table
- First come, first served basis, priority to those who did not participated in the first round
- Coffee or tea accepted, cookies welcome, science required

Thank you!