ÚOCHB AV ČR
IOCB PRAGUE

Meeting with Group Leaders

Zdenek Hostomsky | April 30, 2018

Agenda

- IOCB Research Group Output 2015-2017 (modified)
- IOCB Most significant publications 2017
- New rules with advent of OP VVV (Iva Pichová)
- Miscellanea

Evaluation of research output 2018

Directive S2018-01

- Group performance index (GPI) quantitative aspect of group evaluation

GPI = J+B+C+D+P+T+S+L

J – journal articles x IF
B - books
C – book chapters
D – article in proceedings
P – awarded patents
T – verified technology
S – industrial prototype or software
L – income from licenses and IP

The Quantitative Group Evaluation 2015-2017

Group	Award (CZK)	GPI per year	Group	Award (CZK)	GPI per year
Hobza	390 767	156,288	Pichová	43 637	17,453
Jungwirth	270 367	108,134	Rulíšek	42 974	17,188
Hocek	244 788	97,904	Vondrášek	41 273	16,507
Bouř	224 643	89,847	Hanus	39 700	15,878
Michl	199 603	79,832	Weiss	39 185	15,672
Maletínská	153 440	61,369	Mertlíková Kaiserová	38 455	15,380
Šaman	141 813	56,719	Jiráček	32 354	12,940
Janeba	92 815	37,122	Vrábel	30 132	12,051
Cígler	91 007	36,398	Střížovský	26 727	10,690
Kašička	89 350	35,736	Marek	25 406	10,161
Konvalinka	88 028	35,207	Havlas	23 118	9,264
Starý	70 711	28,281	Macíčková Cahová	20 410	8,163
Majer	67 813	27,122	Mareš	16 584	6,633
Řezáčová	62 781	25,109	Curtis	16 354	6,541
Cvačka	59 725	23,887	Kotora	15 132	6,052
Teplý	0	23,735	Yushchenko	13 691	5,476
Valterová	0	23,462	Weber	12 104	4,841
Beier	57 405	22,959	Čeřovský	8 987	3,594
Jahn	54 396	21,756	Lazar	7 001	2,800
Nencka	50 525	20,208	Matějková	5 211	2,084
Rosenberg	46 664	18,663	Birkuš	1 221	0,489
Bouřa	43 703	17,479		3 000 000	

Group Evaluation 2014-2016

Group	Award (CZK)	Numerator per year	GEF (B)	Group	Award (CZK)	Numerator per year	GEF (B)
Hobza	362 324	137,07	26,706	Nencka	47 795	18,08	9,392
Hocek	325 919	123,30	37,512	Rosenberg	47 180	17,85	6,299
Jungwirth	266 664	100,88	23,961	Starý	46 215	17,48	6,002
Bouř	257 543	97,43	38,095	Jiráček	44 061	16,67	10,362
Michl	158 578	59,99	15,815	Majer	39 441	14,92	13,786
Šaman	152 264	57,60	45,015	Vondrášek	39 203	14,83	16,057
Janeba	98 314	37,19	21,270	Hanus	36 971	13,99	8,096
Řezáčová	97 623	36,93	24,081	Weiss	33 057	12,51	10,056
Konvalinka	94 964	35,93	10,241	Stříšovský	29 337	11,10	7,464
Cígler	91 538	34,63	20,908	Havlas	27 694	10,48	4,894
Jahn	78 424	29,67	10,962	Mareš	26 675	10,09	6,626
Pichová	76 919	29,10	15,305	Bouřa	24 721	9,35	5,152
Valterová	70 653	26,73	10,967	Mertlíková Kaiserová	23 601	8,93	15,023
Kašička	70 182	26,55	12,823	Macíčková Cahová	17 149	6,49	45,69
Teplý	58 442	22,11	12,608	Vrábel	15 602	5,90	4,609
Cvačka	56 617	21,42	19,147	Weber	12 574	4,76	4,685
Beier	54 390	20,58	9,046	Yushchenko	9 540	3,61	2,172
Rulíšek	51 433	19,46	12,409	Curtis	8 108	3,07	2,341
Maletínská	48 284	18,27	9,514		3 000 000	1134,96	

Comparison with last year

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Junior Research Groups highlighted

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Research - Service Groups highlighted

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Targeted Research and Service Groups highlighted

Most significant publications in 2017

- **PHYS** Physical and Theoretical Chemistry
- **CHEM** Medicinal and Organic Chemistry
- **BIO** Biochemistry and Molecular Biology

Each group may submit 1 most significant paper published in 2017 per category, but no more that 2 papers total. Semi-autonomous units within larger groups may submit their own paper if the group leader is not listed as co-author. The papers will be pre-screened internally before they are sent to the external panel (IAB members, *ad hoc* reviewers) as well as to an internal IOCB panel (group leaders and management). 3 to 5 papers in each category will be awarded prizes in the form of group money.

Most significant publications 2017

- **PHYS** (8 for 2016) **5** submissions → **3** awards
- **CHEM** (8 for 2016) **10** submissions → **5** awards
- **BIO** (7 for 2016) **8** submissions → **4** awards

PHYS

part 1

Listed alphabetically by first author

Rendler T, Neburkova J, Zemek O, Kotek J, Zappe A, Chu* Zhiqin, Cigler* P, and Wrachtrup J

Optical imaging of localized chemical events using programmable diamond quantum nanosensors

Nat Commun 2017, 8, 1-8

Tesei G, Vazdar M, Jensen MR, Cragnell C, Mason PE, Heyda J,Skepö M, Jungwirth* P, and Lund* M

Self-association of a highly charged arginine-rich cell-penetrating peptide

Proc Natl Acad Sci USA 2017, 114, 11428-11433

Director's Award

Šebera J, Hattori Y, Sato D, Řeha D, Nencka, Kohno T, Kojima* C, Tanaka* Y, and Sychrovský* V

The mechanism of the glycosylase reaction with hOGG1 base-excision repair enzyme: concerted effect of Lys249 and Asp268 during excision of 8-oxoguanine

Nucl Acids Res 2017, 45, 5231-5242

Most Significant Publications 2017

CHEM

part 1

Listed alphabetically by first author

Kaleta* J, Chen J, Bastien G, Dračínský M, Mašát M, Rogers C T, Feringa* B L, and Michl J

Surface Inclusion of Unidirectional Molecular Motors in Hexagonal Tris(o-phenylene)cyclotriphosphazene

J Am Chem Soc 2017, 139,10486-10498

Tichá A, Stanchev S,Vinothkumar KR, Mikles DC, Pachl P, Began J,Škerle J, Švehlová K, Nguyen MTN, Verhelst SHL, Johnson DC, Bachovchin DA, Lepšík M, Majer P, and Štříšovský* K

General and Modular Strategy for Designing Potent, Selective, and Pharmacologically Compliant Inhibitors of Rhomboid Proteases

Cell Chem Biol 2017, 24, 1-24

Listed alphabetically by first author

Vázquez A, Dzijak R, Dračínský M, Rampmaier R, Siegl SJ, and Vrábel* M

Mechanism-Based Fluorogenic *trans*-Cyclooctene-Tetrazine Cycloaddition

Angew Chem Int Ed 2017, 56, 1334-1337

CHEM Director's Awards part 3

Mejdrová I, Chalupská D, Plačková P, Müller C, Šála M, Klíma M, Bäumlová A, Hřebabecký H, Procházková, Dejmek M, Strunin D, Weber J, Lee G, Matoušová M, Mertlíková-Kaiserová H, Ziebuhr J, Birkus G, Bouřa* E, and Nencka* R

Rational Design of Novel Highly Potent and Selective Phosphatidylinositol 4-Kinase IIIb (PI4KB) Inhibitors as Broad-Spectrum Antiviral Agents and Tools for Chemical Biology

J Med Chem 2017, 60, 100-118

Špaček P, Keough DT, Chavchich M, Dračínský M, Janeba Z, Naesens L, Edstein MD, Guddat* LW, and Hocková* D

Synthesis and Evaluation of Asymmetric Acyclic Nucleoside Bisphosphonates as Oinhibitors of *Plasmodium falciparum* and Human Hypoxanthine-Guanine-(Xanthine) Phosphoribosyltransferase

J Med Chem 2017, 60, 7539-7554

Most Significant Publications 2017

BIO

part 1

Listed alphabetically by first author

Johnson N, Březinová J, Stephens E, Burbridge E, Freeman M, Adrian C, and Stříšovský* K

Quantitative proteomics screen identifies a substrate repertoire of rhomboid protease RHBDL2 in human cells and implicates it in epithelial homeostasis

Sci Reports 2017, 7, 1-13

Klima* M, Chalupska D, Róžicki B, Humpolickova J, Rezabkova L, Silhan J, Baumlova A, Dubankova A, and Boura* E

Kobuviral Non-structural 3A Proteins Act as Molecular Harnesses to Hijack the Host ACBD3 Protein

Structure 2017, 25, 1-12

Listed alphabetically by first author

Navrátil* V, Schimer J, Tykvart J, Knedlík, Vik V, Majer P, Konvalinka* J, and Šácha* P

DNA-linked Inhibitor Antibody Assay (DIANA) for sensitive and selective enzyme detection and inhibitor screening

Nucl Acids Res 2017, 45, 1-13

Director's Award

Lubyova* B, Hodek J, Zabransky A, Prouzova H, Hubalek M, Hirsch I, and Weber* J

PRMT5: A novel regulator of Hepatitis B virus replication and an arginine methylase of HBV core

PLoS ONE 2017, 12, 1-28

Rationale behind Director‘s Awards

- Highly rated by some of the judges, usually the ones with the best understanding of the topic, but with not sufficient overall support to influence the composite vote

- Director‘s conviction that this is a high quality publication with an important impact for the field which may have been overlooked by others

OPVVV fallout

Iva Pichová

New rules for purchasing material
(chemicals, biochemical, plastics, glassware etc.)

- according to the law, all larger scale purchases paid from public money should undergo tender (open competition of suppliers)

- IOCB so far applied this only for expensive instruments (investment), solvents, gases, and stationery goods (Activa)
- all other material costs so far were purchased as “unique” items (and thus not subject to tender because of small scale) – however, in many cases, the same chemical/material has been purchased repeatedly and the total accumulated costs were often significant (subject to tender)!

- with the start of the OPVVV project (which is even stricter in terms of control of spending the budget), we had to look into this issue (which we would have to do anyway but the start of the OPVVV only catalyzed the process) and we made an analysis of the repeated material purchases and identified ca. 200 items which were purchased >6x in the last 3 years – these items will be defined as repeatedly purchased and will have to be competed in tender

- please note that the vast majority (the other ca. 56,000) of items which were not purchased repeatedly, will remain in the category of “random” or “unanticipated” purchases and will be purchased in the same way as we did it so far

New rules for purchasing material
(chemicals, biochemical, plastics, glassware etc.)

- we are now getting data and sorting the items into categories for the planned tenders (the responsible person for biochemicals is Pavel Šácha and for chemicals Michal Tichý).

- When the categorization is finished, we will still send it to all group leaders to check which items are subject to tender and to check the definition of purity etc.

- after the tender, each category of the repeated items will be “won” by one supplier from which those items listed in that category must be purchased (nobody likes it but it is the law...). There will be a list of items subject to that.

- - still all other ca. 56 thousand “random” items (not listed there) you can freely buy from whoever you like.

- before the tenders are finished, you can purchase your materials freely (from all grants - except for the OPVVV !!!)

- from OPVVV you can now purchase only the non-listed “random” chemicals (the “repeated” items must wait for the tender or be purchased from other grants)

Important Reminders

- **Tony Holy Lecture – Prof. Klebe**
  - Fri May 11, 2018
- **PhD Science Club**
  Wed May 16, 2018
- **Happy Hours**
  Thu May 24, 2018
- **IOCB Retreat in Valeč**
  May 28-31, 2018
- Next meeting with Group Leaders
  Monday, May 21, 2018 10:00 a.m.

Mtgs w GLs - 2018 Schedule

- January 15
- February 19
- March 26
- April 30
- May 21
- June 25
- September 10
- October 15
- November 12
- December 17

Always on Mondays at 10:00 am in the Director‘s Boardroom

Institute of Organic Chemistry and Biochemistry

of the Czech Academy of Sciences