International Institute of Molecular and Cell Biology in Warsaw - strong partner in biomedical collaboration

Jacek Kuznicki

7th European Networking Event, 5-6 November 2015
Number and average IF of journals with IIMCB’s publications 2000-2014

Hirsch index = 62
Average citation per paper 22

Recent paper from the Chacinska’s group:
Mistargeted mitochondrial proteins activate a proteostatic response in the cytosol.
### Running international grants in 2014

<table>
<thead>
<tr>
<th>Program/Grant Description</th>
<th>Institution</th>
<th>Amount</th>
<th>Start-End</th>
</tr>
</thead>
<tbody>
<tr>
<td>7FP (Collaborative project)</td>
<td>Jaworski</td>
<td>774 818 EUR</td>
<td>2013-2018</td>
</tr>
<tr>
<td>7FP (Collaborative project)</td>
<td>Witt</td>
<td>321 720 EUR</td>
<td>2012-2015</td>
</tr>
<tr>
<td>7FP (ERC)</td>
<td>Nowotny</td>
<td>1 498 000 EUR</td>
<td>2012-2016</td>
</tr>
<tr>
<td>7FP (Cooperation, FishMed)</td>
<td>Kuznicki</td>
<td>3 574 100 EUR</td>
<td>2012-2016</td>
</tr>
<tr>
<td>EC Joint Programming</td>
<td>Kuznicki</td>
<td>240 804 PLN</td>
<td>2012-2015</td>
</tr>
<tr>
<td>7FP (EraNetRus)</td>
<td>Kuznicki</td>
<td>134 443 EUR</td>
<td>2012-2014</td>
</tr>
<tr>
<td>7FP (ERC) + Proof of concept</td>
<td>Bujnicki</td>
<td>1 500 000 EUR</td>
<td>2011-2015</td>
</tr>
<tr>
<td>7FP (EU-Ukraine)</td>
<td>Kuznicki</td>
<td>80 036 EUR</td>
<td>2011-2014</td>
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<tr>
<td>7FP (EraNetNeuron)</td>
<td>Jaworski</td>
<td>1 419 075 PLN</td>
<td>2011-2014</td>
</tr>
<tr>
<td>7FP (EraNetNeuron)</td>
<td>Kuznicki</td>
<td>973 080 PLN</td>
<td>2011-2014</td>
</tr>
<tr>
<td>7FP (MC/ITN)</td>
<td>Miaczynska</td>
<td>225 523 EUR</td>
<td>2010-2014</td>
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<td>Wellcome Trust</td>
<td>Nowotny</td>
<td>3 369 854 PLN</td>
<td>2013-2018</td>
</tr>
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<td>HHMI</td>
<td>Nowotny</td>
<td>715 000 USD</td>
<td>2012-2017</td>
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<tr>
<td>ICGEB</td>
<td>Jaworski</td>
<td>48 000 EUR</td>
<td>2012-2015</td>
</tr>
<tr>
<td>Polish-Swiss Research Fund</td>
<td>Miaczynska</td>
<td>6 040 091 PLN</td>
<td>2012-2016</td>
</tr>
<tr>
<td>EMBO Installation Grant</td>
<td>Chacinska</td>
<td>250 000 EUR</td>
<td>2010-2014</td>
</tr>
</tbody>
</table>
Ongoing R&D projects

• Novel means and methods for treating diseases of the central nervous system, metabolic and cardiac diseases and ageing (WO 2013/139929 A1)

• European patent for a method of proteolysis, a peptidase, a composition for use as a bacteriostatic or bactericidal agent, a kit and the uses of the active form of LytM of S. aureus or a derivative thereof (PCT/PL2012/000026)

• Sequence-specific engineered ribonuclease H and the method for determining the sequence preference of DNA-RNA hybrid binding proteins (PCT/PL2012/050019)
Our recent papers

Brendel, Jaworska, Herms … Mol Psychiatry 2015
Brendel, Jaworska, Herms … Mol Psychiatry 2015
Nagalski et al.
Honarnejad et al.
Mills et al.
Czeredys et al.
Honarnejad et al.
Honarnejad et al.
Jaworska et al.

Brain Struct Funct 2015
Transl Psychiatry 2014
PNAS USA 2014
Front Mol Neurosci 2013
PLoS One 2013
Biomol Screen 2013
BBA MCR 2013
Titles of our recent papers

• Cognitive flexibility and LTD are impaired following β-catenin stabilization in vivo
• Molecular anatomy of the thalamic complex and underlying transcription factors
• FRET-based Ca imaging: a tool for Htscreening phenotypic drug screening in AD
• Identification of tetrahydrocarbazoles as novel drug candidates for treatment of AD
• Development and implementation of a high-throughput compound screening assay for targeting disrupted ER Ca in AD
• Ca homeostasis in fresh lymphocytes from SAD patients
• Cognitive performance and functional status are major factors predicting survival of centenarians in Poland
• Expression of genes encoding the calcium signalosome in transgenic models of HD
Some topics to explore in H2020

- **Ageing** - data analysis of 6000 randomly selected 65+ years individuals living in Poland

- **Ageing** - SOCE machinery as target for correcting of Ca$^{2+}$ homeostasis in neurodegenerative diseases

- **Bipolar disease** - molecular mechanism of Li$^+$ actions

- **Psychiatric diseases** - models in zebrafish

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Honarnejad et al. PLoS One 2013
Development and implementation of a high-throughput compound screening assay for targeting disrupted ER calcium homeostasis in AD.

Honarnejad J Biomol Screen 2013
FRET-based Ca imaging: a tool for HT/content phenotypic drug screening in AD.

Jaworska et al. BBA MCR 2013
Analysis of Ca homeostasis in fresh lymphocytes from patients with sporadic AD.

Brendel, Jaworska Herms et al. Mol Psychiatry 2015
Monitoring of chronic γ-secretase modulator treatment by serial amyloid-PET.

Brendel M, Jaworska A, Herms et al. Mol Psychiatry 2015
Amyloid-PET predicts inhibition of de novo plaque formation upon chronic γ-secretase.