



## INNOVABALT Report Summary

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### Periodic Report Summary 1 - INNOVABALT (Strengthening the research and innovation capacities of the Latvian Institute of Organic Synthesis, the leading Baltic regional centre for drug discovery)

#### Project Context and Objectives:

From 01.09.2013 Latvian Institute of Organic Synthesis (LIOS) started the FP7 project „Strengthening the research and innovative capacities of the Latvian Institute of Organic Synthesis, the leading Baltic regional centre for drug discovery” (InnovaBalt) implementation. The general objective of the InnovaBalt project is to strengthen the multidisciplinary research capacities, management of intellectual property as well as human resources in the innovative drug discovery at LIOS.

LIOS is the leading regional research centre for drug discovery, which works in the field of organic synthesis, medicinal chemistry and the pharmaceutical development of compounds designed for the treatment of cancer, cardiovascular diseases and CNS disorders. LIOS has a clear vision of its mission: to perform sustained research activities in the domain of innovative drug discovery.

InnovaBalt project includes the following objectives:

1. Establishing of the long-lasting scientific collaboration and strategic partnerships between LIOS and 50 outstanding research institutions to increase the visibility of LIOS in the European Research Area (ERA);
2. Upgrading the research infrastructure and improvement of qualification of human resources at LIOS in the fields of modern process chemistry, green chemistry, biophysical chemistry, in silico drug discovery and advanced forms for drug delivery to promote the capacity for high-level research on innovative drug development;
3. Increasing the LIOS research capacity and experience in new drug discovery directions by recruitment of experienced researchers and post-doctoral researchers;
4. Ensuring the synergy between research on innovative drug development and end-users to meet the socio-economic needs of Baltic region.

#### Project Results:

During the first InnovaBalt period 14 long-lasting (2-5 months) outgoing visits to 12 our partnering institutions have been implemented. In its turn, LIOS has hosted 20 visitors from 11 partnering and networking organizations.

For the implementation of the major research directions of the InnovaBalt project 8 experienced researchers and 4 post-doctoral scientists have been recruited through the qualifying competition.

The acquisition of modern equipment has been completed. It includes

- computer cluster for molecular modeling purposes;
- crystallization robot and a light microscope for protein crystallography;
- system for light scattering measurement of hydrodynamic size, zeta potential and molecular weight of proteins and nanoparticles;
- fluorescence molecular tomography (in vivo imaging system).

In the first period of InnovaBalt 5 international events have been organised. Joint seminars and workshops were primarily intended as scientific events with the emphasis on innovation, and in addition they were targeted to the education of early-stage researchers.

Presence of participants from industry (Grindex and Olainfarm from Latvia, as well as InhibOx, F. Hoffmann-La Roche, GlaxoSmithKline) in the organized events has provided the grounds for effective industry-academia collaboration and active knowledge-transfer process. The invited speakers are leading specialists in drug discovery field. Besides their contribution in the seminars and workshops, the potential for further joint projects and collaboration with LIOS have been discussed as well. InnovaBalt organized events are listed below:

- Workshops “Publication writing for scientific journals and grant proposals” (about 45 participants);
- Seminar „800 MHz NMR Spectrometer Inauguration Symposium” (about 70 participants from 7 countries);
- Seminar „Advanced anti-infective drug design” (about 70 participants from 8 countries);
- Workshop „Competitive proposal preparation for Horizon 2020” (about 30 participants);
- Balticum Organicum Syntheticum-2014 pre-BOS meeting (about 60 participants from 8 countries, one of the participants was Professor Ei-ichi Negishi (Purdue University, USA; 2010 Nobel prize in chemistry).
- Seminar „Intellectual property rights (IPR) management and commercialization processes” to improve the knowledge

of researchers on IPR issues (about 30 participants).

To provide the information about drug discovery topics for a broader society the event Café Scientifique "Discovery of new drugs - lucky fortune or regularity?" was organized in the University of Latvia. InnovaBalt manager, Professor Maija Dambrova and LIOS Leading Researcher Dr. Ronalds Zemribo, together with collaboration partners from Riga Technical University and from pharmaceutical companies "Grindeks" and "OlainFarm" told exciting stories about drug discovery from the history and shared experience from LIOS project practice. Audience of event actively asked questions and highly appreciated this possibility to get new knowledge about the process of drug discovery. The event got coverage in national information channels.

#### Potential Impact:

- Implementation of InnovaBalt project provides a better integration of the LIOS in European Research Area (long lasting partnerships). Together with InnovaBalt partnering institutions several proposals for Horizon2020 calls have been submitted. One of them, Innovative training network "Interdisciplinary Training Network for Validation of Gram-Negative Antibacterial Targets" (INTEGRATE) has been already funded, 223 578 EUR.

- Promotion of exchange of expertise and to know-how experience has been performed by the long-lasting (4-5 months) outgoing visits and incoming visits of researchers from InnovaBalt partnering institutions. During incoming visits the outstanding researchers have delivered lecture courses, participated in the seminars, workshops and meetings. The incoming researchers have assessed the work performed in LIOS and have given the recommendations for the further development.

- Recruited researchers, upgraded scientific equipment and trainings of researchers have increased the research capacities and capabilities of LIOS.

Research proposal prepared by the InnovaBalt recruited researcher H. Biverstål got funding in the European Economic Area (EEA) and Norway Grant program. Implementation of the project "Benefits and detrimental effects of sequence variants of Amyloid- $\beta$ : towards the use of small peptides for aggregate dissolution therapy in dementia" will start from the May 2015, total financing 499 000 EUR.

- Increased visibility of LIOS has been reached through the regular participation and exploitation of research results in the international conferences and by the organization of international events in Latvia.

- Contribution in the regional economical development is ensured by tight collaboration with industry in the InnovaBalt organized events. The thematic of InnovaBalt and innovative drug discovery in LIOS complies with a 3S priority of Latvia: Biomedicine, medical technologies and biotechnology <http://s3platform.jrc.ec.europa.eu/regions/lv/tags/lv>

#### List of Websites:

[www.innovabalt.eu](http://www.innovabalt.eu)

## Related information

### Documents and

- [periodic1-innovabalt-in-photo.pdf](#)

### Publications

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