

Polish-Norwegian Research Fund



Creating an academia-based platform to discover substances acting on serotonergic or glutamatergic systems as potential new antidepressant or anxiolytic drugs

The project entitled: *Creating an academia-based platform to discover substances acting on serotonergic or glutamatergic systems as potential new antidepressant or anxiolytic drugs* is supported by the grant PNRF-103-AI-1/07 from Norway through the Norwegian Financial Mechanism within the Polish-Norwegian Research Fund.

PROJECT DETAILS:

The Project is carried out as a Consortium and involves three partners: the Institute of Pharmacology of the Polish Academy of Sciences in Kraków; the Institute of Medical Biology, the Faculty of Health Science of the University of Tromsø; and the National Medicines Institute in Warsaw.

MAIN OBJECTIVE:

To create an academia-based platform for discovering new antidepressant and/or anxiolytic agents with a shorter onset of action and fewer adverse effects.

On the basis of the accumulated knowledge, experience and validated experimental methods developed by the above-mentioned scientific institutions, we have re-scaled the existing research capabilities to a multi-level screening platform which facilitates the process of antidepressant and anti-anxiety drug discovery. Using molecular modeling techniques, we perform a virtual screening of compound libraries on the basis of our own pharmacophores and receptor models. In order to examine a broad range of chemical structures, the compound acquisition system is being constantly developed. The therapeutic potential of both in-house and externally synthesized compounds is first evaluated in vitro and subsequently by *in vivo* tests.

INVITATION TO PARTICIPATE IN THE SCREENING PROGRAM:

One of the keys to hit identification (potential new drugs) is the chemical diversity of evaluated compounds. To this end we have initiated an extensive screening program addressed to research institutes in Poland and Norway, in which we offer a free testing of compounds.



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INVITATION TO PARTICIPATE IN THE SCREENING PROGRAM

The screening program is directed to research institutions from Poland and Norway, and compounds will be tested free of charge.

In the Project we focus on two main molecular targets which are recognized as important in antidepressant/anxiolytic mechanism of action:

- the serotonergic system compounds with dual SERT/5-HT_{1A} antagonistic activity, and ligands of 5-HT₆ and 5-HT₇ receptors;
- the glutamatergic system in which we concentrate mainly on groups II and III of metabotropic glutamate receptors (mGluR).



The chemical structures of the submitted compounds are considered as an intellectual property of a Participant and will be protected as stated in the *General Principles of Co-operation*, which can be downloaded from the Project's web-page.

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