Phosphodiesterase inhibitors for neglected parasitic diseases

At a Glance

- **Status**: Active Consortium
- **Year Launched**: 2014
- **Initiating Organization**: VU University Amsterdam
- **Initiator Type**: Academia
- **Rare disease**
- **Location**: International

Abstract

The PDE4NPD consortium develops a new class of drugs targeting 4 neglected diseases: Sleeping sickness, Leishmaniasis, Chagas disease and Schistosomiasis.

The consortium will (1) optimize already-validated lead compounds for clinical trials and (2) investigate the druggability of parasite PDEomes for NPDs by screening compound libraries and performing phenotypic screening on a large number of parasites.

As the consortium will create more drug development opportunities than it can reasonably manage to progress towards clinical development, there will be a strong focus on communication and data sharing. In order to accomplish this, one of the partners will develop an open innovation platform that will enable other NPD projects to share data and discuss further research opportunities, stimulating the further development of drugs targeting neglected diseases.
Mission

To develop drugs for four neglected parasitic diseases

Consortium History

March 1st 2014: Start of the project
April 1st 2015: Protein production for two parasite PDEs succesful
March 1st 2016: First three validated PDE targets established
March 1st 2016: PDE toolbox filled and ready for use
June 1st 2016: First hit series for two parasite PDEs identified

Structure & Governance

Coordinating entity: VU University Amsterdam
Principal Investigator: Prof Rob Leurs (VU Amsterdam)
Managing Entity: Lygature
Work Packages: 8

Scientific Advisory Board:
Dr. Eric Chatelain (Drugs for Neglected Diseases initiative, Geneva, Switzerland)
Prof. Dr. Michael Pollastri (Northeastern University, Boston, United states)
Prof. Dr. Thomas Seebeck (University of Bern, Bern, Switzerland)
Dr. Jose Julio Martin-Plaza (GlaxoSmithKline Tres Cantos Open Lab Foundation, Madrid, Spain)
Dr. David Manallack (Monash Institute of Pharmaceutical Sciences, Parkville, Australia)
Prof. Dr. Paul Selzer (Boehringer Ingelheim Animal Health, Germany)

Financing

The PDE4NPD project is supported by the European Union 7th Framework Program (FP7/2007-2013) under grant agreement n° 602666.
Total budget: €7.6 million

**Data Sharing**

As the consortium will create more drug development opportunities than it can reasonably manage to progress towards clinical development, there will be a strong focus on communication and data sharing. In order to accomplish this, one of the partners will develop an open innovation platform that will enable other NPD projects to share data and discuss further research opportunities, stimulating the further development of drugs targeting neglected diseases.

All structures that the consortium can not work on will be uploaded to the CDD Vault, and the ChemBL database.

**Links/Social Media Feed**

Website: [http://www.pde4npd.eu](http://www.pde4npd.eu)

**Points of Contact**

Project Office: pde4npd@gmail.com  
Communications office: pde4npd@lygature.org  
Principal Investigator: r.leurs@vu.nl  
Program Management: pde4npd@lygature.org  
Program Manager: herman.verheij@lygature.org

**Sponsors & Partners**

Project Partners:

- VU University, Amsterdam, The Netherlands,
- University of Glasgow, Glasgow, United Kingdom,
- University of Kent, Kent, United Kingdom,
- The Spanish National Research Council, Madrid, Spain,
- Theodor Bilharz Research Institute, Imababa, Egypt,
- University of Antwerp, Antwerp, Belgium,
- Instituto Oswaldo Cruz, Rio de Janeiro, Brazil,
- Foundation Lygature, Leiden, The Netherlands,
- Fraunhofer IME, Hamburg, Germany,
- IOTA Pharmaceuticals, Cambridge, United Kingdom

Collaborating partner: Collaborative Drug Discovery, Inc.

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