PRISM:
PSYCHIATRIC RATINGS USING INTERMEDIATE STRATIFIED MARKERS

Photo: destina | Fotolia

BACKGROUND

Most mental health conditions are still classified and diagnosed solely based on the symptoms observed, as there are few objective biomarkers for these conditions compared to other conditions, such as diabetes. Although many different neuropsychiatric diseases share symptoms, there is still limited knowledge about the underlying biological causes of a specific disease.

Social withdrawal is a common early symptom of many neuropsychiatric disorders, including schizophrenia (SZ), Alzheimer's disease (AD), and major depressive disorder (MD). However, the underlying biological causes of this symptom are still poorly understood and may differ from one disease to another.

Photo: sudok1 | Fotolia

OBJECTIVES

The PRISM Project aims to demonstrate that quantitative biological parameters of shared symptom domains across neuropsychiatric disorders (SZ, AD, and MD) can be used to create biologically meaningful clusters blind to the starting diagnosis.

- Proof-of-concept analyses to cluster and differentiate SZ and AD patients on the basis of quantitative biological parameters
- Explore dimensional relationships between pathology (e.g. cognitive deficits) and social withdrawal
- Develop a deeper understanding of the quantitative biology of social withdrawal using clinical data from SZ, AD and MD patients and by establishing a network of pre-clinical research sites able to perform high-quality back-translation studies
- Develop the regulatory path for social withdrawal across disorders

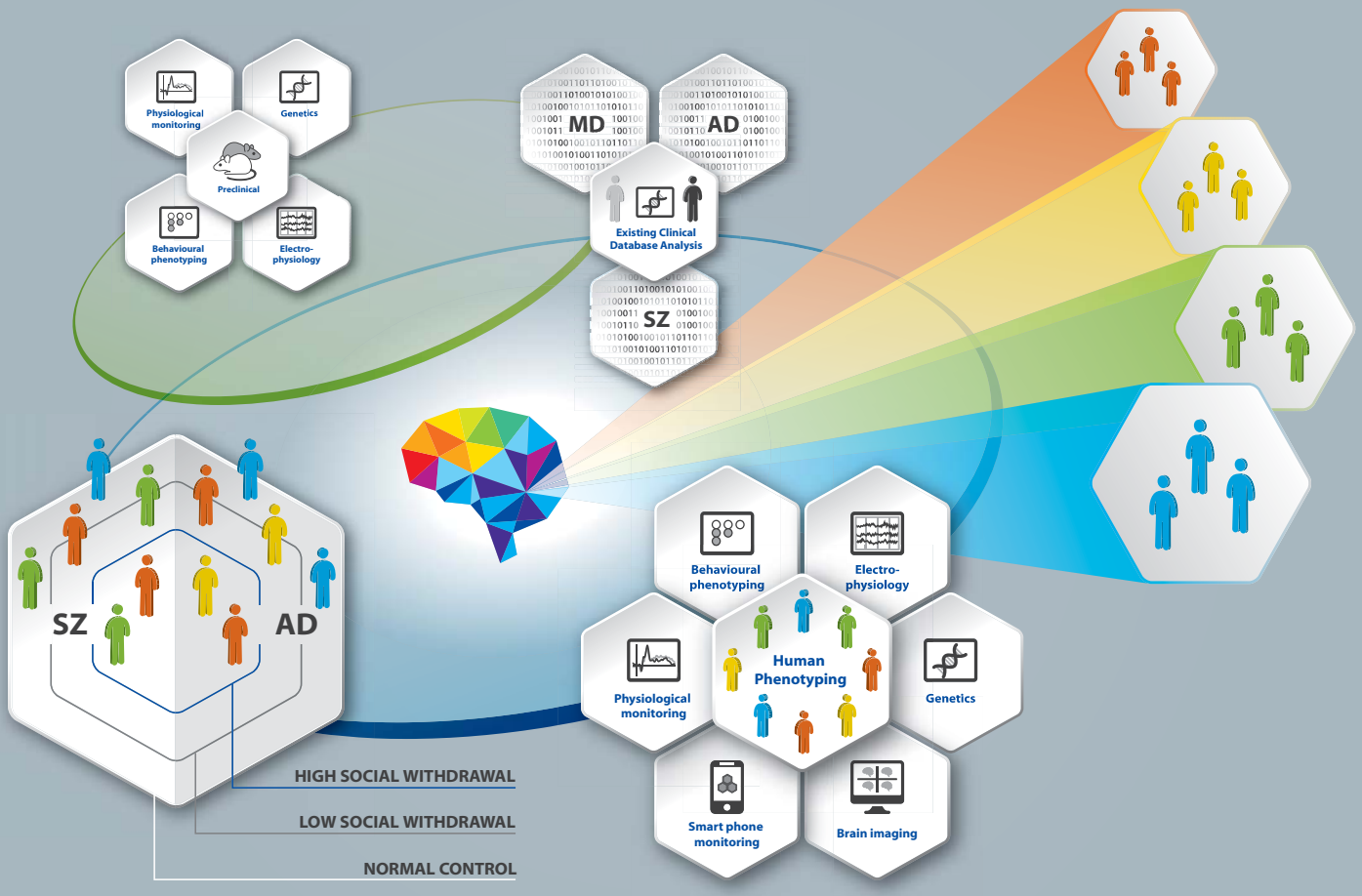
SCHEMATIC REPRESENTATION
OF THE PROJECT OUTLINE

In order to provide new classification tools for neuropsychiatric disorders based on quantitative biological parameters, schizophrenia (SZ) and Alzheimer's disease (AD) patients with high or low social withdrawal will be selected for a deep phenotyping study.

This study will focus on assessing social withdrawal, attention, sensory processing, working memory and epigenetic biomarkers. In addition, a cross-disorder genome-wide genetic analysis will be performed in the largest world-wide available samples of SZ, AD, and major depression (MD) patients to identify shared genetic factors potentially related to the common social withdrawal symptom observed in these disorders. Data integration of genetic and epigenetic studies through a molecular landscape building approach will lead to new biological substrates and candidate genes for construct validation studies in genetic rodent models.

Together, these studies will provide new classification and assessment tools for social and cognitive performance across neuropsychiatric disorders, clinically relevant substrates for treatment development, and predictive, preclinical animal systems for subsequent neurobiological and pharmacological testing.

MD: Major depression
AD: Alzheimer's disease
SZ: Schizophrenia



COLLABORATORS

PRISM has assembled a strong multidisciplinary team of outstanding researchers from 23 pharmaceutical companies, research institutions and small and medium-sized enterprises to exploit the rich expertise across sectors and enhance knowledge transfer between academia and industry.

Universities, Research Organisations, Public Bodies & Non-Profit

- Erasmus University Medical Center, Netherlands
- European College of Neuropsychopharmacology, Netherlands
- Leiden University Medical Center, Netherlands
- Radboud University Medical Center, Netherlands
- Spanish Mental Health Network – cibersam, Spain
- University Medical Center Utrecht, Netherlands
- University of Bologna, Italy
- University of Exeter, United Kingdom
- University of Groningen, Netherlands
- VU University Medical Center, Netherlands

European Federation of Pharmaceutical Industries and Associations (EFPIA)

- Boehringer Ingelheim Pharma GmbH & Co. KG, Germany
- Eli Lilly and Company Limited, United Kingdom
- F. Hoffmann-La Roche, Switzerland
- Janssen Research and Development, Belgium
- Novartis Pharma AG, Switzerland
- Pfizer Limited, United Kingdom
- Takeda Development Centre Europe Ltd, United Kingdom

Small and Medium Enterprises

- Biotrial SAS, France
- concentris research management GmbH, Germany
- Drug Target ID BV, Netherlands
- P1vital Limited, United Kingdom
- SBGNeuro Limited, United Kingdom

Patient Family Organisation

- European Federation of Associations of Families of People with Mental Illness, Belgium

PRISM is an Innovative Medicines Initiative of European Union's Horizon 2020 research and innovation programme and EFPIA

Photo: Mopic | Fotolia

KEY FACTS ON PRISM

Duration	**Phase 1:** 3 years (04/2016 – 03/2019) **Potential Phase 2:** 2 years (2019 – 2021)
Estimated costs	€ 16.5 million
Project coordinator	University of Groningen, Netherlands, Prof. Dr. Martien Kas
Project leader	Eli Lilly and Company Ltd., Dr. Hugh Marston
Project office	concentris research management GmbH, Germany, Dr. Barbara Heißerer
Funding	Innovative Medicines Initiative 2 Joint Undertaking (www.imi.europa.eu) under grant agreement No 115916: European Union's Horizon 2020 research and innovation programme and EFPIA (European Federation of Pharmaceutical Industries and Associations)
Website	www.prism-project.eu

Follow us on Facebook, Twitter or LinkedIn and get the most up to date news:

www.linkedin.com/groups/8520557

www.facebook.com/myECNP

www.twitter.com/ecnptweets