

NCCR SYNAPS

THE SYNAPTIC BASES OF MENTAL DISEASES

Brain Forum 26 May, 2016

What are the NCCRs ?

- ▶ In 2001 the Swiss National Science Foundation launched the National Centres of Competence in Research (NCCR).
- ▶ The main goal of the currently 26 NCCRs is the promotion of scientific excellence in areas of major strategic importance for the future of Swiss research, economy and society.
- ▶ NCCRs are managed by leading houses institutionally linked to universities or other distinguished research institutions (home institutions)
- ▶ In 2010 (3rd call), out of 60 proposals, 8 were selected one of which is SYNAPSY

Main Aims

- ▶ Establish a **strong collaboration between basic neuroscientists and clinicians** through well integrated research project based on clinical cohorts.
- ▶ **Introduce a neuroscience culture in the Departments of Psychiatry** with aim of training promising young clinicians to promote the emergence of a new generation of psychiatrists motivated by an academic career.

The NCCR Synapsy



Competitive call : 60 applications, 8 funded

Phase 1 : 1.1.2010 – 30.9.2014 17 MCHF

Renewed with full funding for Phase 2

162 members

31 project leaders

5 main research projects

PHASE 1

PHASE 2

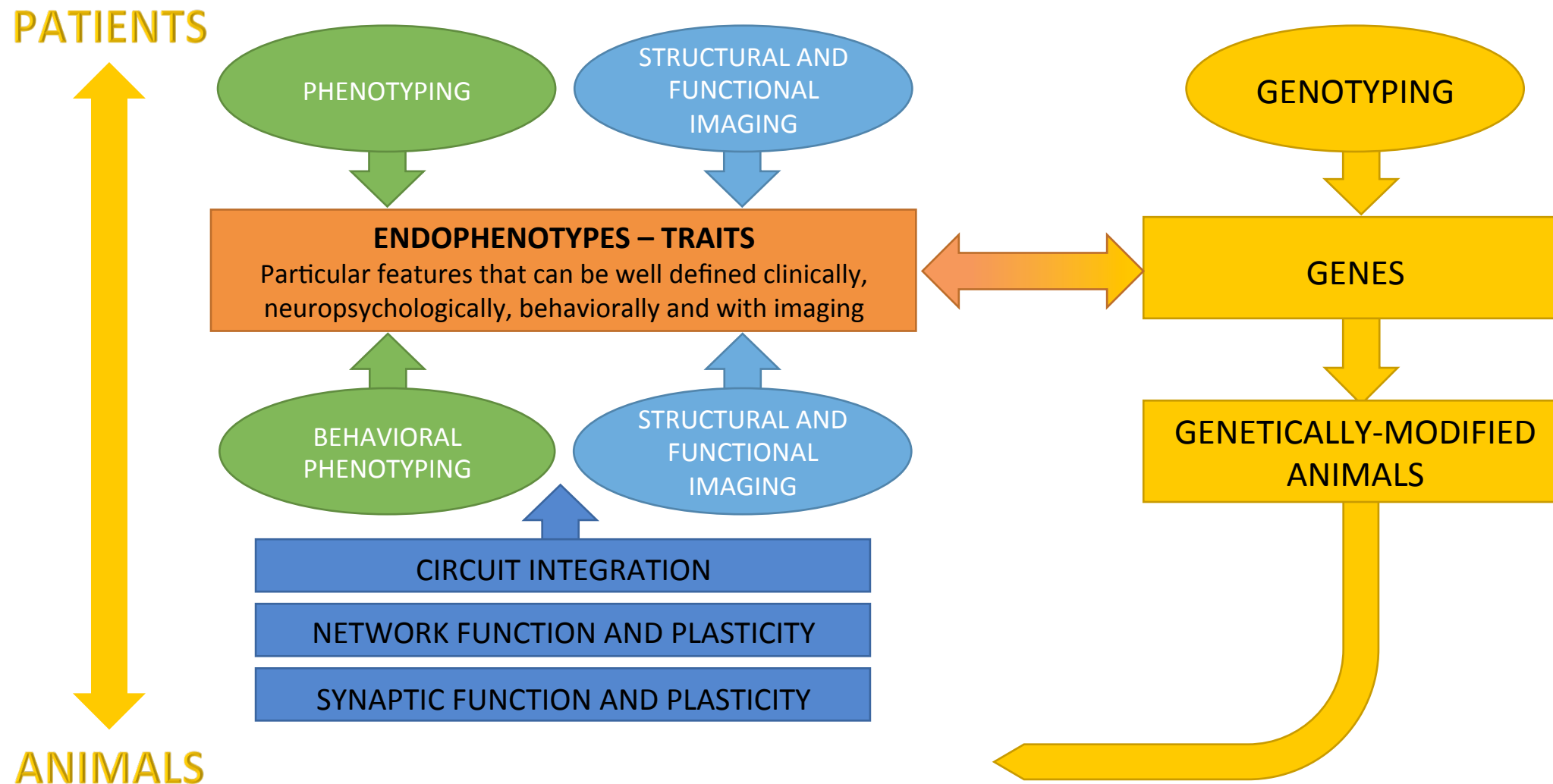
PHASE 3

Challenges To Tackle When NCCR Synapsy Started



- ▶ Limited extent of the neuroscience culture and activities in the Departments of Psychiatry in Geneva and Lausanne
- ▶ Neuroscientific community in Geneva and Lausanne marginally interested in psychiatry
- ▶ Existing clinical cohorts did not sufficiently benefit from technological infrastructures or neurobiological hypotheses

Strategic Guiding Principles



PHASE 1

PHASE 2

PHASE 3

5 Research Projects Based on Clinical Cohorts



AXIS I

Psychopathological consequences of
genetically-determined
neurodevelopmental abnormalities

Project 1
22Q11 deletion syndrome

Project 2
Biomarkers of early psychosis

Project 3
Autism spectrum disorders

AXIS II

Psychopathological consequences of
developmental stress
and traumatic life events

Project 4
Developmental stress

Project 5
Mood disorders - Glia

PHASE 1

PHASE 2

PHASE 3

Achievements update



- ▶ *Introduce a neuroscience culture in the Departments of Psychiatry with aim of training promising young clinicians to promote the emergence of a new generation of psychiatrists motivated by an academic career.*

Both Departments of Psychiatry (Lausanne and Geneva) have fully integrated the instruments that the NCCR-SYNAPSY has provided.

- Support of young psychiatrists interested in neuroscience
- Enter the MD-PhD programs
- Clinician-scientists program
- Clinicians in lab program

During Phase 1,
10 clinicians of
which
4 women have
benefited from the
various NCCR
programs.

PHASE 1

PHASE 2

PHASE 3

Structural Impact



- ▶ **Professorship** (Associate Professor level) in the Department of Psychiatry of the University of Geneva. **Psychiatric neuroscience** → **Alexandre Dayer**



- ▶ **Professorship** (Assistant Professor) in the Department of Psychiatry of the University of Geneva. **Psychiatric neuroscience** → **2017**



- ▶ **Professorship** (Assistant Professor) at the Brain Mind Institute at EPFL. **Epigenetics** → **Johannes Gräff**



- ▶ **Professorship** (Assistant Professor level) in the Department of Psychiatry of the University of Lausanne. **Psychiatric neuroscience** → **Ongoing search**



- ▶ **Professorship** (Full Professor level) at the Brain Mind Institute at EPFL. **Bioinformatics** → **Kathryn Hess-Bellwald**



- ▶ **Professorship** (Full Professor level) in the Autism Cantonal Center at the CHUV/University of Lausanne. **Director** → **Nadia Chabane**



- ▶ **Professorship** (Associate Professor level) in the Neuroscience Department of the University of Geneva. **Autism** → **Camilla Bellone**

Long Term Goals



- Improve **scientific knowledge** on mental and cognitive disorders
- Catalyze cutting-edge research to **provide new approaches** for the patient care
- Improve the **quality of life of the patients**
- Encourage **academic careers** for junior researchers/clinicians and women
- **Destigmatize** mental disorders and people suffering from such troubles