

Sixth Framework Programme

Life Sciences, Genomics and Biotechnology for Health
Specific Targeted Research Programme

Prader-Willi Syndrome: a model linking gene
expression, obesity and mental health

LSHM-CT-2005-512136

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Co-ordinators

The European Prader-Willi Syndrome Project

www.pwseu.eu

Outline of talk

Summary of current EU PWS project

- Brief introduction to the current EU PWS project
 - 1st Dec 2005 to 31st May 2009
- Summary of clinical research
 - Reasons for the database
 - Structure of the database
 - Database Manual
 - Future use
- Summary of basic science project
 - Francoise Muscatelli

Aims of project

An integrated multidisciplinary investigation of Prader-Willi syndrome (PWS)

- Molecular biological studies of human tissue and knockout mouse models of PWS
 - Establishment of genetic mouse models
 - Investigation of neurobiological mechanisms and signalling pathways
 - Study of human hypothalamic tissue
- Establish the basis for future EU wide clinical studies by developing a clinical research database
 - Internet-based PWS research database
 - Testing of database and development of user manual

Basic Science Project

Basic science partners

- Francoise Muscatelli, CNRS, Marseille, France
- Bernhard Horsthemke, Universitat Duisburg, Essen, Germany
- Dick Swaab, Netherlands Institute for Brain Research, the Netherlands
- Alexander Huttenhofer, University of Innsbruck, Austria
- Mike Fainzilber, Weizmann Institute, Israel
- Johan Auwerx CERBM-GIE, France

Other participants (basic science project)

- Jerome Cavaille CNRS, France

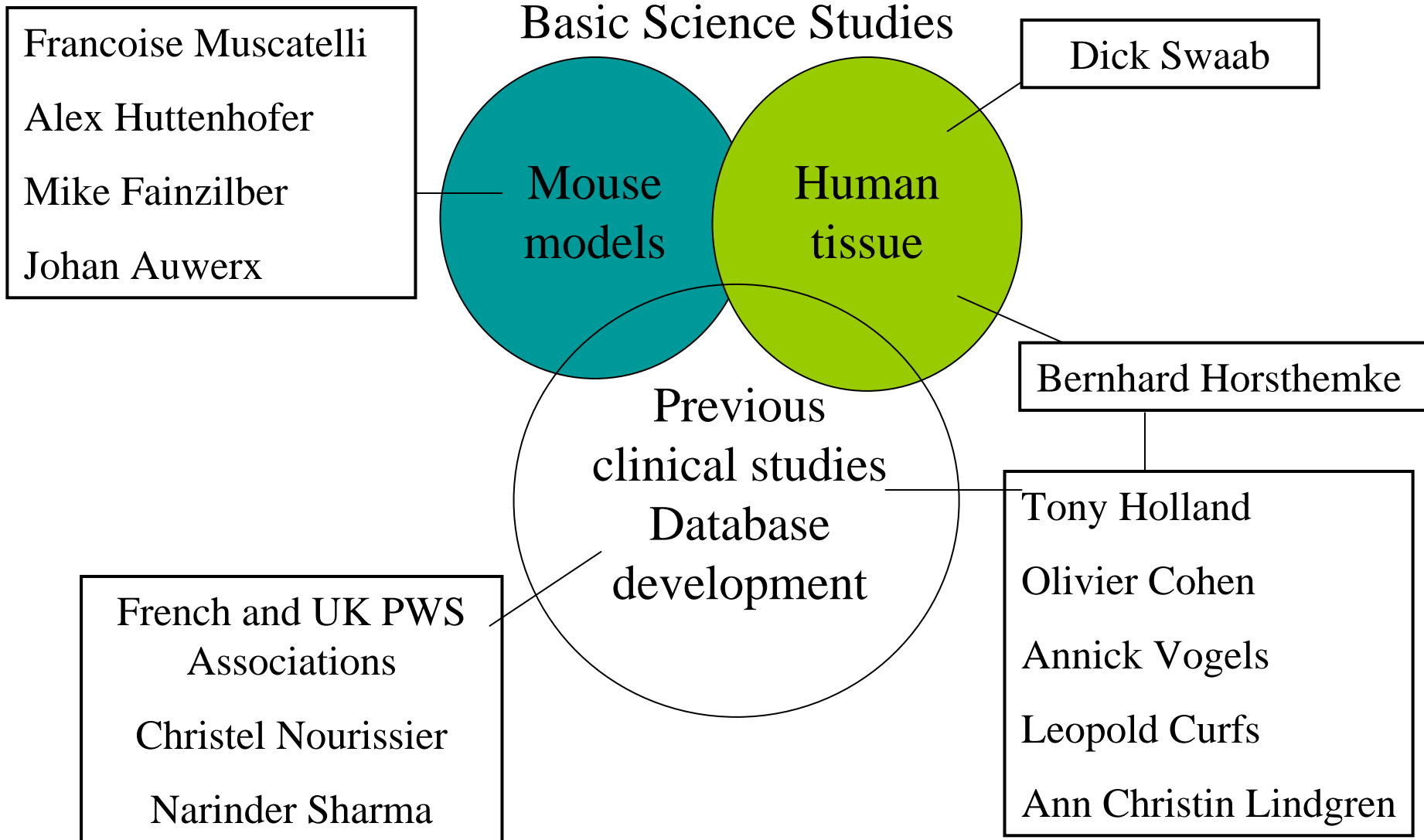
Clinical Project

The PWS European Database

Partners (clinical):

- Olivier Cohen, HC Forum, France
 - Leopold Curfs, psychologist, the Netherlands
 - Tony Holland, psychiatrist, UK
 - Bernhard Horsthemke, geneticist, Germany
 - Ann-Christin Lindgren, paediatric endocrinologist, Sweden
 - Annick Vogels, child psychiatrist, Belgium
- Other participants (clinical project)
 - Christel Nourissier, PWSA, France
 - Narinder Sharma, PWSA, UK
 - Michael Boassis, Franck Delahaye and Marion Gourin, France
 - Oenone Dudley, France
 - Joyce Whittington, UK

SCHEMATIC REPRESENTATION OF STUDY



The EU PWS Clinical Research Database

Why multi-centred, international studies?

- Influences on the physical, cognitive, and emotional development trajectories of people with PWS across their lifespan
- Population prevalence 1: 54,000
- Sub-divisions
 - Genetic sub-type
 - Other genetic factors
 - Gender
 - Weight control
 - Early intervention
 - Growth and/or sex hormone replacement etc

Why develop an EU database?

- To enable the reliable and lawful collection, management and analysis of data across many countries thereby having sufficient numbers of people with PWS to answer specific questions;
- Comparisons between countries allows the influence of different educational, health and social care policies on the lives of people with PWS to be investigated;
- Establishes a critical mass of inter-disciplinary clinical expertise to focus on a rare disorder and the development of best practice across the EU.

Structure & content of the database

Index Panels Sub-panels Fields

Index

- Demographic, Diagnostic, Developmental
- Context
- Physical health
- Mental health and behaviour
- Cognitive and functional abilities
- Investigations and treatments

Content of the database

- **INDEX**
 - Physical Health
- **PANELS**
 - Physical measurements (fields include Ht, Wt, BMI)
 - Physical illnesses (see sub-panels below)
 - Regulatory problems (fields include sleep apnoea etc)
- **SUB-PANELS**
 - Cardio-vascular
 - Central Nervous System
 - Endocrine/exocrine
 - Gastrointestinal
 - Genito-urinary
 - Musculo-skeletal/dermatological
 - Respiratory
 - Sensory/speech
 - General health screening
- **FIELDS**

National PWS Associations

- Partnership in recruiting to the database and in managing database;
- Formulating research questions and facilitating research;
- Funding

Use of the database

Database Manual

- Integrity and confidentiality of personal data
 - Consent procedures
 - Anonymous data
 - Long term use of data
- Quality of data stored on the database
 - Quality of data collection
 - Assessments used
- Combining of data
 - Collaborations
 - Anonymous data
 - Publications

Database Management Group

- ‘Development’ group to ‘Management’ group
 - Membership of the management group
 - Integrity of the database
 - Applications for use of the database
 - Oversee publications arising from the database
 - Strategy for long-term use
 - Removal of data
 - Resolve disputes

Rules of use

Database Manual

- Users of the database must have adequate consent procedures
 - Specific use
 - Combined use
 - Long-term use
- Database to enable a research group to store data exclusively for their use – identity of participants confidential to them
- Agreed protocols for the sharing of data in an anonymous manner
 - Collaborative hypothesis driven research
 - Exploratory novel investigations

Long-term support

- At national level
 - Research groups
 - National PWS Associations
- At EU level
 - Rare diseases infra-structure
- At international level
 - ?IPWSO

Possible UK Model

Seek grant funding for:

- Establish database support at UK PWSA
- National database management group chaired by representative from UK PWSA
- Presentation and demonstration of database at PWSA meetings
- Contact of past and present recruits with PWS
 - New consent procedures
 - Up-date of recent clinical information
- Recruit new participants
 - Core clinical information
- Establish long-term recruitment strategy

Unresolved questions?

- Who owns the database?
 - Software
 - Content
- Long term support and costs?
- Long term management?
- Commercial involvement?