Report from the Grassroots

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Something for everyone
Max Planck Institute of Psychiatry, Munich

Current FP7-funded projects

Gene x environment interactions in affective disorders: elucidating molecular mechanisms - Elisabeth Binder

Marie Curie Actions
Initial Training Network: **NINA**: Neuroendocrine immune networks in ageing - Osborne Almeida, Dietmar Spengler
Intra-European Fellowship: **ArcAbetaCognition**: The functional significance of soluble amyloid β oligomers for learning and memory deficits in Alzheimer’s disease - Osborne Almeida, Carola Romberg
Intra-European Fellowship: **StressAbetaCascade**: Stress cascades and Alzheimer's disease - Osborne Almeida, Raul Delgado

Small or medium-scale focused research projects
**DORIAN**: Developmental origins of healthy and unhealthy ageing: the role of maternal obesity (€3 m, 10 partners, 6 countries) - Mathias Schmidt
**SwitchBox**: Maintaining health in old age through homeostasis – Osborne Almeida, Mayumi Kimura and Joseph Zihl (LMU) (€6 m, 7 partners, 6 countries)
Stay alert – opportunities to grab!

Let your NCP/institutional EU Office help you!

Hooray! Something for us!

Is this really for me?

Innovative health research 2013 - working document, 19 April 2012, not legally binding

I CONTEXT
II PROPOSED CONTENT FOR CALLS 2013

0. HORIZONTAL TOPICS FOR COLLABORATION PROJECTS RELEVANT FOR THE WHOLE OF THEME HEALTH
   1.1 High-throughput research
   1.2 Detection, diagnosis and monitoring
   1.3 Safety, efficacy, opti I...
What does the **want**?

Specified needs

but

sometimes vague

What to do?

- other’s interpretations
- NCP/PO clarification

Check

- Expected impact

Observe

- Eligibility criteria

**Wow! €€€€€€**
Decision time, consider carefully…

Motivation
- Not just the €€€€€ !*
- Science – focused
  – interactive
  – more productive, access to unique knowledge and tools
  – networking, visibility (*scientists are social animals, have egos!*)

EC’s expectations?
- Keep to Call specifications
- Interactive, coherent, competitive
- Community benefits (citizens, economy)
- Accountability (Deliverables)

How far will 6 million € go?*
- Keep focus
- Select partners based on expertise and complementarity
- Salaries include employer contributions (5 year postdoc costs ~€ 300.000)
- Cost models and institutional overheads (up to 60%)
- Equipment (cost degression)
Understanding the basic machinery

Integrated Project

Science

Management

Monitor Assessors

Programme Officer

Auditors

Coordinator

EUROPEAN COMMISSION
On your marks,

• **Science**
  - take initiative
  - scout for potential partners (literature, other EU projects)
  - organize core group – *proactive, innovative, committed*
  - schematize ideas/identify gaps (desirable partners)
  - *early* “think tank” meeting (goals/partnership)
  - **Coordinator**
    • committed • communications skills • time • consensus builder • organizational skills • infrastructure support • decisive and effective • responsive • understands research ethics, intellectual property rights, translational issues • knows EU procedures (applicant, partner, reviewer)
  - WorkPackage (WP) definitions and Leaders
  - solicit additional partners (evaluate: **added value**, expectations, also €!)

• **Management**
  - institutional vs. private sector (count as SME; reference projects?)
    lucrative business (negotiate); no competing interests
  - rapport with Coordinator, understand “scientists”
  - familiarity with EU project rules, budgeting etc

• **Stakeholders, advisors** (can be done at later stages)
get set,

• **Pre-planning meeting** (core, potential partners)*
  - Coordinator’s vision for project
  - Brief presentations of potential contributions
  - Focused discussion
  - Develop strategy
  - Management issues and Timeplan (respect Coordinator’s commitments!)
    and assign/define individual responsibilities (WP Leaders, ethics, IPR,
    liaison with private sector, training, dissemination)

• **Post-Planning Meeting** (Coordination/Management Team)
  - adjust plans to ensure adherence to Call text, scrutinize/propose
    interactions, check for coherence (PERT chart!)
  - communicate with individual/all partners
  - circulate pre-submission Gannt Chart (WP plans, complete with
    proposed measurable deliverables and milestones, decisions regarding
  - inform yourself EARLY about submission formalities (format, page limits,
    inclusion of Associated States, pre-registration etc)

* Funding planning meetings; partner expenses?
Go (avoid last minute)!

Coordinator/ WP Leaders
- Written inputs (partners)
- Drafts 1, 2, ...

All Partners
- Critique
- Revision
- Standby

Management

Coordinator/ Management
- Semifinal draft

Stage 1a

All Partners
- Personnel needs (PhD/Students)
- Running costs
- Equipment (degressive!)

Institutional Grants Office
- Personnel needs (!) (PhD/Students)
- Running costs
- Equipment (degressive!)
- Cost model
- Overheads (!!!)

Stage 1b

Estimated Request Form A

Coordinator/Management
- Determine effort-based budget

Stage 2

All Partners
- Proofing
- Grants Office
- Standby

Stage 3

Coordinator/ Management

Black Box
Writing the proposal – keep simple and clear

The maximum page limits of each section must be respected. The Commission will instruct the independent external experts to disregard any pages in excess of these limits. A minimum font size of 11 is required.

• Summary (limited characters)

• Concept and Project Objectives (page limits)
  attention to call text, rationale, references also White Papers etc; illustrate

• Description of Work (S/T Methodology)
  - very important also if you are successful, revisions in Technical Annex
  - WorkPackages
    Specific Tasks and expected outcomes (Milestones, Deliverables)
  - INTEGRATION within/between Partners and WorkPackages (Pert diagram)
  - technical details, innovation
  - realistic Milestones, Measurable Deliverables (Gannt chart)
  - do Person Months add up? → budget
Equally essential (neglect → lose easy scores)
Coordinator: designate roles to individual partners with specific expertise

• **Implementation** *(page limits)*
  - Management structure
    - Consortium Agreement (CA)
    - decision-making (Steering Committee/Governing Board, SAB)
    - internal communication, internal reviews/meetings
    - risk assessment and contingency plans
    - conflict resolution (CA)
    - individual partner profiles – appropriate fit: expertise, infrastructure, patents, references
    - consortium as a Whole (*“sum of the parts…..”* )

• **Potential Impact** *(page limits)*
  - Knowledge
  - Products/economic potential
  - Government/Consumers
  - Knowledge dissemination (meetings, publications, training, public, stakeholders)
  - Management of Foreground (knowledge, tools) and Intellectual Property

• **Ethical issues** *(text/forms)*
  - International, European and National Codes/Laws (humans *and* animals)
  - Genetically-modified organisms, human embryos/stem cells
  - Safety provisions

• **Gender balance**
To promote health in old age by better understanding of body-brain-mind circuits.

Homeostasis in human development and its effects on lifespan

Longevity will be studied in terms of the capacity to ensure and maintain good homeostasis and networking between various body systems and functions, and of the entire organism. In addition ..., the project should consider external influences, e.g. lifestyle, environmental exposures.

Funding scheme: Collaborative project (Small/ medium-scale focused)
EC contribution: max. EUR 6 m; one project will be funded.

Expected impact: Maintaining a stable internal environment ... constant monitoring and adjustments as conditions change. Malfunctioning and failures of homeostatic balance → cellular malfunctions and disease ... well-being ... depends on well-being of all interacting body systems. Knowledge acquired in this area will pave the way to therapeutic interventions.
Abstract

**Reaching goal** Healthy aging requires maintenance of homeostatic control of the physiological systems and functions that are integrated by the hypothalamus. **Foreground** Driven by work in previous EU projects (Crescendo/Lifespan) highlighting insulin signalling and the hypothalamic/pituitary/adrenal and thyroid axes in the regulation of aging, **General approach** SWITCHBOX will examine the flexibility of these neuroendocrine systems in response to environmental challenges in three established human cohorts with variable aging potential. These human cohorts include offspring of exceptionally long-lived siblings and their partners (controls), people with good vs bad cognitive performance or with high vs low cognitive engagement. **Focus and justification** Maintaining brain function is emphasised as it reflects an individual’s overall well-being, a major goal in aging Research, and because age-related brain disorders represent a major socioeconomic burden. **Unique tools to understand processes/mechanisms** To determine the genetic and cellular underpinnings of the findings in humans, hypothesis-based studies in rodents sharing phenotypes with the human cohorts will be carried out. To clarify the role of the brain in the differential regulation of endocrine axes critical for healthy aging, SWITCHBOX will examine the neuroendocrine and metabolic effects of intranasal (humans) and intracerebroventricular (rodents) administration of peptides involved in controlling metabolic homeostasis (e.g. insulin, α-MSH). State-of-the-art technology will be used to measure circadian endocrine and metabolic profiles, brain structure and function (fMRI) and cognitive performance, as well as cellular and molecular features. **Data analysis and dissemination** All data will be entered into an already operational ‘open access’ database. **Translation and integration of diverse expertise** The work is designed to be translational in nature and will benefit from combining expertise of gerontologists, endocrinologists, molecular and cellular neuroscientists and neuropsychologists. **Community benefits** SWITCHBOX ultimately aims to develop conceptually new approaches for the prevention and treatment of age-related disorder.
Ease reviewers’ lives – keep things simple, use schemes
Example of a WorkPackage

**WP3: Setpoints and their programmability** (6/7 Partners, 6 Tasks, 11 Deliverables)

**Starting premise:** Maintenance of health depends on the continuous appropriate resetting of homeostatic setpoints in response to changing internal and external environments.

**Hypothesis-driven objectives:**
- Healthy ageing reflects greater homeostatic adaptability.
- Limits of homeostatic tolerance during ageing are determined by life events.

**Expected Results and Impact**
- **describe** capacity to adapt to challenges (obesity, stress) to maintain endocrine and behavioural health.
- **identify** vulnerable and resettable switches; focus on **when** (life stage), **where** (nodes, networks) and **how** (mechanisms).
- **explore** preventative and therapeutic lines.
### Objectives

- Healthy ageing = homeostatic adaptability
- Life events → limits of homeostatic flexibility

### Tasks

<table>
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<th>WP3: Setpoints and their programmability</th>
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<tr>
<td><strong>Objectives</strong></td>
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<tr>
<td>• Healthy ageing = homeostatic adaptability</td>
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<td>• Life events → limits of homeostatic flexibility</td>
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<td><strong>Tasks</strong></td>
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<tr>
<td>1. Metabolic challenge to test flexibility in ageing humans (LUMC)</td>
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<td>2. Adaptive endocrine switches in rodents on a high fat diet (MPIP, CNRS, UMINHO, IEM/HAS)</td>
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<td>3. Sleep patterns as a readout of integrity of timing mechanisms (MPIP)</td>
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<td>4. Restoring sleep homeostasis through endocrine/metabolic manipulations (MPIP)</td>
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<td>5. Lifetime programming of homeostatic flexibility (MPIP, CNRS, UMINHO, IEM/HAS)</td>
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<td>6. Epigenetics and molecular networks underlying lifetime programming of homeostatic flexibility (MPIP, CNRS, UMINHO, Sub-contractor)</td>
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### WP3: Setpoints and their programmability

**Strains:** *WSB* (CNRS, IEM/HAS); *C57Bl6* (MPG, UMINHO)

**Sex:** Male-female differences (MPG, UMINHO)

<table>
<thead>
<tr>
<th>Analysis/State</th>
<th>Normal</th>
<th>Obese</th>
<th>Stressed</th>
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Buy a ticket, but it’s not just luck …

be informed, take initiative, network, work hard, persevere