Funding strategies

How to develop competitive research funding strategies?

EARMA Conference Malta 2017

Patrick de Boer MSc – partner
Andree Schram, PhD – senior consultant
ttopstart academy team present at EARMA

Patrick de Boer, MSc
- Co-founder and partner ttopstart
- Realised EUR 85 million in funding (H2020, ERC, Marie Curie, IMI etc.)
- Developed many industry-research partnerships
- Founder ttopstart academy

Andree Schram, PhD
- Senior consultant at ttopstart
- Realised EUR 20 million in funding (H2020, SME instrument, etc)
- Trainer in the ttopstart academy
ttopstart is a science and business consulting company that serves researchers and companies mainly in the fields of life sciences, medical technology and health.

“We empower scientists and entrepreneurs to establish breakthroughs”
• ttopstart is active in 21 EU Countries and the US

• Client profile
  - 60% industry
  - 40% academic

• 27 professionals
ttopstart academy service portfolio

- Funding strategy PRO-ACTIV
  - Increase your competitiveness in the current funding landscape

- Personalised training
  - Tailor-made training to improve your skills

- Coaching Review service
  - One-on-one coaching to develop your proposal
A priori success rates

FP7: 20%
Horizon 2020: 12%

H2020 midterm evaluation 2016
18,000

‘Inefficient hours’
Investments are usually too late

Current practice
- Call published
- Consortium development
- Proposal writing
- Project management

Best practice
- Funding strategy
- Consortium development
- Call published
- Proposal writing
- Project Management
Increase your preparedness

- Increasing share of research is funded by Europe
- High complexity of European funding schemes
- Increasing competitive pressure on European funds

Increase preparedness (funding strategies)
Higher success rate
PRO-ACTIV FUNDING STRATEGY
Towards a framework to boost success

- Best practices from >250 national and international funding applications.
- Assessment of high performing research groups.
- Identification of key performance indicators for:
  - successfulness in raising subsidies;
  - developing new partnerships.

→ 9 success factors.
FUNDING MODEL CANVAS
### The funding model canvas

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<td>Internal grant writing and review policy</td>
<td>Patent flow</td>
<td>Prizes and grants</td>
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• Collaborations with new stakeholders open-up new funding opportunities
Current practice: research funding strategies are (too much) focused on internal capabilities.

Best practice: Competitive research funding strategies also rely on the perspectives of other partners in R&I process.
Example: a good mix of collaborative partners

- Horizon 2020 call: **Understanding disease: systems medicine (PHC-02)**

- Consortium: 9 partners (2 hospitals, 3 universities, EMBL and 3 companies)
  - Combination of clinical studies, animal models, omics, biomarkers, systems modelling
  - Strong group of various disciplines
  - Frontrunners in the field
  - Participation of SMEs and mid-sized companies for further development and commercialisation

“There is good balance and complementarity between industry and academics within the consortium. They have complementary clinical, microbiome, biomarkers, systems and modelling expertise and involvement of appropriate SMEs as these are FDA approved labs with GLP/CLIA for biomarker development and commercialisation.
### Scientific excellence

- KOLs in group
- Young talent
- Unique expertise

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- ERC grants, H-index, etc
- Presence of young talented researchers
- Excellence across organisation
Best practice: develop complementary teams

- Help researchers to shape their group;
- Hire different backgrounds (bioinformaticians, engineers, chemists, etc.);
- Align and complement their own expertise.

Diagram labels:
- = you
- = young talents (post-doc)
- = PhD student
- = Support staff
• Cohorts, access to patients, access to strong data sets, new equipment, etc.
Align strategy with international and national roadmaps

European Strategy Forum on Research Infrastructures

ESFRI

BBMRI-ERIC®

gateway for health
Join forces with key infrastructure hubs

• Create collaborations with added (competitive) value
• Alignment with international research agendas and societal challenges
• Balance of fundamental and applied research
The ‘research mix’
• Presentation of research lines
• Demonstration videos, social media
• Opportunities / calls
• Coherent presentation
Welcome! We are part of the Chair in Spinal Cord Repair (IRP) at the Swiss Federal Institute of Technology Lausanne (EPFL). The laboratory is headed by Professor Grégoire Courtine who holds the Swiss National Science Foundation (SNF) Chair in Spinal Cord Repair.

Mission

Our mission is to design innovative interventions to restore sensorimotor functions after CNS disorders, especially spinal cord injury, and to translate our findings into effective clinical applications capable of improving the quality of life of people with neuromotor impairments.

To achieve this goal

We are developing multifaceted neuroprosthetic systems, robotic interfaces and advanced neurorehabilitation procedures that we combine with neuroregenerative interventions. Using genetically modified mice, optogenetics, and novel viral tools, we also seek to uncover the neural mechanisms underlying the control of locomotion in intact animals, as well as the processes that reestablish motor functions after neuromotor disorders.

Key topics

Neurorehabilitation
Neuroregeneration
Neuropathologies
Locomotion
Spinal Cord injury

Latest publications

Mechanisms underlying the neuromodulation of spinal circuits for correcting gait balance and deficits after spinal cord injury (February 4th 2010, Neuron)

Posterior temporal neuromodulation therapies engaging muscle synergies improve motor control after spinal cord injury (January 19th 2016, Nature Medicine)

Pronounced species divergence in corticospinal tract reorganization and functional recovery after lateralized spinal cord injury (Proceedings of the National Academy of Sciences, 29th November 2015, Science Translational Medicine)

Defining network mechanisms in neuroprosthetics (April 8th 2016, Nature)

Electronic spine drops for long-term multimodal neural interfaces (January 8th 2015, Science)

Muscle spindle feedback directs recovery and circuit reorganization after spinal cord injury (December 18th 2014, Cell)

Wireless neuroprosthetic for full-spectrum electrical stimulation (December 11th 2014, Science)

Web documentary about our laboratory

Open positions

Master’s Projects

Contacts

For inquiries, please contact

Ms. Kim-Yen Nguyen, Executive Assistant

EPFL SU BMI UPCOURTINE
Office: A1 1240
Station 18
CH-1015 Lausanne

Visit the web documentary about our laboratory on www.project-rewalk.com
• Efforts to translate science into the benefit of society and industry
• Visibility with non-scientific efforts
Technology transfer mechanisms are important.

Source: World bank

“MIT 2017: industry-sponsored research is 20% of total research budget”
Impact

- Societal
- Economic
- Clinical
- Sustainability

- Impact of research
- Innovative elements
• Clear training programmes
• Internationalisation budget
• Mutual support and learning
• Funding strategies, not ad hoc
• Internal review policy
• Lobby for EU projects?

Subsidy culture

- Subsidy identification and selection
- Internal grant writing and review policy
• Above average (scientific) output is needed to be competitive in funding
PRO-ACTIV SERVICE: HOW DOES IT WORK?
Step 1: Questionnaire based analysis of your department

Insights provided in:

• How do your researchers describe themselves?
• How is the subsidy culture described?
• What types of subsidies are applied for and how often?
• What type of collaborations do your researcher have?
• 9 factors of the funding model canvas.
• Based on resumes, websites, discussions, older subsidy proposals, etc.
• Straightforward overview of strengths and weaknesses.

Step 2: analysis of individual researchers
Step 3: tailored modules to meet your needs

- Kick off workshop
- Individual coaching
- Individual coaching
- Individual coaching
- Research funding strategy

- Kick off workshop
- Workshop
- Partner landscape analysis
- Workshop
- Research funding strategy
Step 4: Towards a personalised research funding strategy

<table>
<thead>
<tr>
<th>Grant</th>
<th>Amount</th>
<th>Funding</th>
<th>Gap analysis/set-up needed</th>
<th>Research Line</th>
<th>Deadline</th>
<th>A priori success rate</th>
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<tr>
<td>NIH</td>
<td>Up to 1.5M</td>
<td>100%</td>
<td>Collaborations in the US would increase competitiveness (RO1/U01)</td>
<td>Research Line 1 and 2 (not leading)</td>
<td>Diversity of calls, published weekly</td>
<td>15-20%</td>
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<td>ERC CoG</td>
<td>EUR2M</td>
<td>100%</td>
<td>Academic funding (wait for Paper in Journal X)</td>
<td>Research Line 1 and 2 (leading)</td>
<td>Open for submission</td>
<td>15%</td>
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<tr>
<td>H2020 PM-02</td>
<td>EUR6M</td>
<td>100%</td>
<td>Consortium needed - strengthen with partner X (therapy) and partner Y (liquid biopsy platform)</td>
<td>Research Line 2 and 3 (leading)</td>
<td>April 2017</td>
<td>15-20% after Stage 1</td>
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<tr>
<td>INFRADEV</td>
<td>EUR2-5M</td>
<td>100%</td>
<td>Consortium needed - Development of research infrastructure for omics based tech</td>
<td>Research Line 1 (not leading)</td>
<td>April 2017</td>
<td>10%</td>
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<tr>
<td>IMI</td>
<td>EUR20M</td>
<td>100%</td>
<td>Consortium is being formed – partner with Prof. X</td>
<td>Research Line 2 (not leading)</td>
<td>Stage 2 is being written</td>
<td>50%</td>
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- Develop partnerships with company X and research organisation Y
- Introduce step-by-step internal reviewing process
HOW CAN YOU APPLY THE CANVAS?
Use the canvas to develop your own funding strategy

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Impact of PRO-ACTIV on your organisation

- Research topics are optimally aligned with funding roadmaps of large funding agencies.

- Researchers and organisations have better selection mechanisms and are more competitive.

→ This leads to higher success rates and reduces the number of inefficient hours.
ttopstart BV

www.ttopstart.com
info@ttopstart.com

P.C. Staalweg 30
3721 TJ Bilthoven
The Netherlands
+31 (0)30 73 70 779

Our services
• Subsidies
• Business development
• Project management

For life sciences and medical technology

patrick@ttopstart.com

andree@ttopstart.com

Thank you