



ERC Advanced grants – evaluation process from inside

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Lieve Moons, PhD

Previously

Vesalius Research Center – VIB/KU Leuven

Research program in vascular/neural development
and cardiovascular and neurodegenerative diseases

Since 2008

Neural Circuit Development & Regeneration RG

Eye as a window to the brain – neurodegeneration/regeneration

Member ERC evaluation panel LS7 - Diagnostic tools, therapies and public health
since 2010: StG – CoG – AdG
panel vice-chair : 2012 -2018

WARNING: The slides only reflect my personal, therefore biased, view
and do not reflect any official ERC position or policy

Panel assignments - expertise

- LS7 - Diagnostic tools, therapies and public health = very diverse panel
 - Expertise : public health & epidemiology - medical engineering – pharmacology , drug design, diagnostics - gene/cell therapy - basic and translational research - clinical application - medical ethics
- Expert profile description - estimation of expertise
 - Scores: 100 for very high expertise, 75 for high, 50 for medium, 25 for low




| | | | | | | | | | | | | |
|------------------------------------|--|---|-----------|------------|--|---------|-------------------|---------------------------------------|--------------------------------|--|-----------------------|----------------|
| Medical engineering and technology | Diagnostic tools (e.g. genetic, imaging) | Pharmacology, pharmacogenomics, drug discovery and design, drug therapy | Analgesia | Toxicology | Gene therapy, stem cell therapy, regenerative medicine | Surgery | Radiation therapy | Health services, health care research | Public health and epidemiology | Environment and health risks including radiation | Occupational medicine | Medical ethics |
| LS7_1 | LS7_2 | LS7_3 | LS7_4 | LS7_5 | LS7_6 | LS7_7 | LS7_8 | LS7_9 | LS7_10 | LS7_11 | LS7_12 | LS7_13 |

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-  • Free keywords
 - Cardiovascular research
 - Ophthalmology
 - Cellular signaling pathways
 - Gene therapy - gene editing
 - Medical imaging technology
 - Gene environment interaction
- The panels are very international, also outside Europe
- Know the expertise areas of your potential evaluators!

Panel assignments

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 - Goal: to review proposals
 - from a generalist perspective while keeping expertise (e.g. multidisciplinary approach - physiological and (bio)physical angle)
 - sometimes further away from comfort zone/expertise (e.g. device for on-line monitoring of physiological parameters in firemen in action)
 - high number and diverse proposals
 - 108 proposal in AdG round of 2017 in LS7 panel
-  ± 30 to evaluate
 ± 50 to meta-evaluate
= 4 reviewers per project

Panel assignments - COI

- Upon receipt of assigned projects : title – authors - abstracts
- By country
 - No proposal from own country
 - No proposal from anybody within KU Leuven
 - leave the room when discussed !
- By history
 - No previous collaborator
(e.g. no former PhD student or PD fellow, no co-author or common grants)
- For any other reason
 - Invited scientist to...
 - Visiting scholar to ...

Step 1 - Individual assessments

- Upon receipt of assigned projects – part B1
- Evaluation via on-line system
 - \pm 30 proposals to evaluate (with written report)
of which 8 as lead reviewer
- Questions to answer and score
5.0 (Outstanding) 4.0 (Excellent) 3.0 (Very Good) 2.0 (Good) 1.0 (Non-competitive) - -
 - **Criterion 1: Research Project**
Ground-breaking nature, ambition and feasibility
 - **Criterion 2: Principal Investigator**
Intellectual capacity, creativity and commitment
- Profiles and research proposal count together
 - Score should be minimum 6 to make it to step 2
 - Excellent profiles with weaker project
 - Very good profiles with tremendous project

Step 1 - Panel evaluation

- Before meeting:
 - Comments of all panel members are sent
 - All and average scores of all applications (except COI) are sent
- Panel discusses all applications, but only briefly for those that fall below a score of 3
- Most often discussions start with the highest ranked applications
- APPLICANT
 - showed ability to conduct ground-breaking research
(e.g. research output, invited lectures, international collaborative network, ...)
 - provided evidence of creative independent thinking
(e.g. patents, co-founder spin-offs, ...)
 - has gone beyond the state of the art
(e.g. prizes, consulting, reviewing, editing activities, contribution to EU grants, ...)
 - demonstrated sound leadership on training and advancement of young scientists
(e.g. student/junior investigator supervision, ...)

Step 1 - Panel evaluation

- RESEARCH PROJECT

Top 5 rejections reasons:

- The research is not well positioned
 - in general
 - in the applying team
- The application does not detail/emphasize enough original aspects
- The proposed plans do not support high risk/high gain: too high/low risk
- The outcome is speculative, not realistic enough (evolution – revolution)
 - ‘Nobody has done it ‘before’
 - ‘I will invent the fastest tool ever’
 - ‘The proposed research is revolutionary, the most advanced’
- The feasibility is hard to judge
 - Add milestones and a timing
 - Describe the team and their specific tasks
 - Mention collaborations with experts in the field


Step 1 - Panel evaluation

- RESEARCH PROJECT

Other rejections reasons:

- The experimental plan is not clear enough – what is clear for you is not clear for me – but other panel members can comment
- Preliminary results and/or available expertise are missing
- It is not clear that the proposed technology/approach is better than existing ones or will improve clinical practice – describe practical outcome !
- A true novel idea or concept is missing
- There is a lack of genericity or application potential

Step 2 - Individual assessments

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- Upon receipt of assigned projects – part B2
 - Evaluation via on line system
 - 32 proposals left – reassigned amongst panel members (COI)
 - \pm 8 proposals to evaluate of which 3 as lead reviewer
= 4 reviewers per project
 - External referees are invited (minimum 2 per project)
 - Questions to answer and score
5.0 (Outstanding) 4.0 (Excellent) 3.0 (Very Good) 2.0 (Good) 1.0 (Non-competitive)
 - **Criterion 1: Research Project**
Ground-breaking nature, ambition, **experimental approach and feasibility**
 - **Criterion 2: Principal Investigator**
Intellectual capacity, creativity and commitment
 - Profiles and research proposal count together
 - Score should be minimum 7

Step 2 - Panel evaluation

- Before meeting:
 - Comments of all panel members and external reviewers are sent
 - All and average scores of applications are sent
- Panel discusses all applications, but more briefly for those
 - that have a average score below 4
 - that have a average score above 7
 - unless there is high variability amongst reviewers !
- Most often discussions start with the lowest ranked applications
- Discussions are initiated by lead reviewer and result in a final score and a consensus on the overall panel comments
- Some projects are put on hold and re-discussed in perspective to others
 - additional panel (cross-panel) members read project
- Final work : make panel comments – by lead reviewer but read/corrected by all others

Step 2 Panel evaluation

- RESEARCH PROJECT

Some rejections reasons:

- The leap forward in the field is not well explained
- Preliminary results and/or available expertise are missing
- It is a fishing expedition
 - too many diverse technologies that do not combine into one final goal
 - lack of proper integration of various WPs
- The proposal is more of the same as related to ongoing research – overlap with ongoing grants
- The project is too ambitious - **feasibility**
- The experimental plan is not worked out in sufficient detail
- Challenges and alternative approaches are not sufficiently addressed
- The number of people involved and their specific tasks are not clear

✓ **Research first, management after (but is important)**

- Funding problems : seldom but be specific, explanatory and provide rationale
 - more than *'I will need 3 PhD students and 250k Euro for this research'*

The way to success

Innovative aspects



Describe the original ideas and innovative concepts



Describe the expected leap forward in the field

Strategic value



Adopt a problem solving approach



Explain why you - your team/environment

Feasibility



Provide Gantt chart & task decomposition with milestones



Describe tasks for team and collaborators

Application potential



Mention the generic character



Translate to other diseases /fields