SDU ERC-mentoring session 2 hours dedicated the ERC StG and CoG 2021 calls



Jan-Wilhelm Kornfeld, ERC StG receiver Professor at the Department of Biochemistry and Molecular Biology, SDU Jan will give a talk about his ERC StG experience





Don Canfield, ERC AdG receiver, ERC AdG Panel member Professor & Villum Investigator & D-IAS Chair, Nordcee, Department of Biology, SDU. Don will give a talk about his experience with the ERC calls

13:50 intermission



Bo Thamdrup, ERC AdG receiver, member ERC PE10 StG panel 2020 Professor, Nordcee, Department of Biology, SDU. Bo will give a talk about the ERC evaluation process



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Jan-Wilhelm Kornfeld

Dept for Biochemistry and Molecular Biology Functional Genomics and Metabolism Research Unit ERC Starting Grant holder 2016 ('TransGenRNA')



My ERC Starting Grant - A Story of Failure and Success

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SDU & Structure of my talk

- Brief introduction to myself and my research
- My ERC StG idea
- The ERC interview
- My 2 cents on what makes a successful pitch
- Your thoughts and questions

SDU **S** Structure of my talk

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SDU 🎓 Career path: Noncoding RNAs and Metablic Disease

PhD thesis (Wien, AT)



Postdoc (Koln, DE)



Cytokine signaling and liver metabolism

Kornfeld et al. J Clin Endocrinol Metab (2011) Müller*/Kornfeld* et al. Hepatology (2011), *=equal contribution Kornfeld et al. Br J Cancer (2011) Blaas*/Kornfeld et al. Hepatology (2010), *=equal contribution Engblom/Kornfeld* et al. Genes Dev (2007), *=equal contribution

MicroRNAs and hepatic glucose metabolism

Kornfeld et al. Nature (2013) EMBO Longterm Fellowship 2010-12 DFG: Emmy-Noether Junior Group leader grant

Principal Investigator (Koln)



Noncoding RNAs and brown adipose tissue

13 invited talks since 01/20142 international conferences organized since 01/20141st corresponding author paper submitted

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SDU (My 'big question': Transgenerational obesity

Lifestyle





Development in utero

Genetics







SDU (My question within the 'big question'



M. musculus (C57BL/6)

SDU 🍝 | My methodological approach (quite low-tech)



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SDU (The interview - It is never the right time



SDU (My ERC interview 1.0 - I could have done better

- Successful in my postdoc (Kornfeld et al Nature 2013)
- Renowned hosting institution (Max Planck)
- Emerging field of metabolism research
- Already received tokens of early scientific excellence in DE

- Project less matured (submission deadline close)
- No preliminary findings
- Overambitious proposal
- Very tense atmosphere at interview site / panel



SDU A My ERC interview 2.0 - I *did* better

- Successful in my postdoc (Kornfeld et al Nature 2013)
- Renowned hosting institution (Max Planck)
- Emerging field of metabolism research
- Already received tokens of early scientific excellence in DE

- Project scope more realistic / 2 key questions (synergistic but independent)
- Preliminary findings showing feasibility
- Prepared for the situation / procedure
- Affable ERC panel and interview
- Close mentorship and recurrent rehearsals



SDU & Structure of my talk

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SDU A My 2 cents: What makes a successful ERC pitch?

- Talk to successful grantees Q: Why did *they* get the grant?
- Ask yourself: Q: Why should *you* get the grant (CV, idea, host inst., techniques)?
- Try to understand the 'unwritten' ERC rules. Whom do they really support?
- Develop a scientifically bold idea, not a research grant proposal.
- Pitch your idea to junior / senior Pls: You want enthusiasm <u>and</u> hard criticism.
- Are you exited about your idea or is it geared to 'hot topics' in your field?
- Is the question behind your project relevant even if your hypothesis proves wrong?
- Tricky part: Is it still feasible to achieve in 5y time with 2-3 people?
- Ideally: Find somebody that chaperones you during your application (and has time!).
- Ideally: Prepare well but expect to apply twice.

SDU & Structure of my talk

• Introduction to myself and my research

- Brief thoughts on what to prepare before starting
- My ERC StG idea
- The ERC interview
- Your thoughts and questions

janwilhelmkornfeld@bmb.sdu.dk



www.kornfeldlab.com





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Donald E. Canfield

O X Y G E N









ERC Advanced grants

Don Canfield Institute of Biology and NordCEE University of Southern Denmark



First considerations



Nordic Center for Earth Evolution

- -the reason
- -the idea
- -the team (should follow organically from the idea)
- -which grant?
 - -regular grant (2,500,000 Euro max)-synergy grant (15,000,000 Euro max)



Should I apply?



-great idea (novel and risky encouraged)
-no age descrimination (last 5-10 years productivity)
-gender balance
-h-index, >15, to be successful, >25
-the chances?





Nordic Center for Earth Evolution

- -well organized
- -clear statement of goals
- -good graphics
- -sufficient statements of methods
- -justify budget
- -use only the space you need

ERC Advanced Grant 2010 Research proposal (Part B1)

How Oxygen Regulates the Structure and Function of Microbial Ecosystems OXYGEN

- Name: Donald Eugene Canfield
- Host institution: University of Southern Denmark
- Full title: How Oxygen Regulates the Structure and Function of Microbial Ecosystems
- Proposal short name: Oxygen
- Proposal duration in months: 60

Proposal summary: Our project is called OXYGEN. We are a multidisciplinary team of biogeochemists, microbial ecologists, molecular biologists, and chemists engaged in producing and applying cutting-edge oxygen sensor technology to fundamental issues of how oxygen regulates the growth and metabolism of aerobic and anaerobic organisms in laboratory settings and in nature. Our ultimate goal is to understand how oxygen controls the structure of microbial ecosystems and the biogeochemical cycling of elements in low-oxygen natural environments, which abound on Earth. Within this framework, we identify the following 3 major research objectives:

- 1) The development and application of cutting-edge oxygen sensor technology
- 2) Exploration of the oxygen regulation of aerobic and anaerobic organisms
- 3) Exploration of oxic-anoxic interface environments as they relate to the activities of micro and macroorganisms.

Our aim is also geobiological, as we will apply our understanding to the coupled evolution of ecosystem structure and Earth-surface chemistry through time.



Bo Thamdrup, ERC AdG receiver, member ERC PE10 StG panel 2020 Professor, Nordcee, Department of Biology, SDU. Bo will give a talk about the ERC evaluation process







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The ERC evaluation process

Bo Thamdrup professor, Department of Biology

PI for ERC AdG NOVAMOX co-I for ERC AdGs OXYGEN and HADES

Panel member for ERC StG panel PE10 2019-20

PE10: Earth system sciences (Geophysics, geo- and cosmochemistry, biogeochemistry)



16 panel members

Procedures for StG and CoG applications

Stage I

Remote evaluation of B1:

- Each proposal is assigned to specific panel based on request by applicant.
- Potential transfers may take place if both Panel Chairs agrees.
- Cross panel reviews by request by applicant, scientific officer, Panel Chair.
- Each proposal is reviewed is by 4 panel members (possibly cross-panel review) → prepanel ranking

First panel meeting:

- Ranking of proposals by the full panel lead by lead-reviewer
 - A Proposals that should go forward to the second step
 - **B** Proposals of high quality but not sufficient to pass to step 2
 - C Proposals of lower quality that are far from passing to step 2
- Panel selects proposals for stage II review (A and top B) ~2 x expected budget
- Panel writes compiled panel reviews to rejected proposals (B and C)

Procedures for StG and CoG applications

Stage II

Remote evaluation:

More focus on feasibility, methodology, risks and contingencies

- Same scoring system but more extensive review of full proposal (B1 and B2).
- Each proposal is reviewed by ~4 panel members (possibly cross-panel review) + 3-6 external reviewers.

Second panel meeting:

- Interviews 10+15+5 min
 - Panel Chair act as moderator
 - Lead reviewer opens the questioning
 - Other panel reviewers and panel members ask questions
 - Provisional ranking of applicant
- Final numbered ranking
 - A proposals which fully meet the ERC's excellence criterion and are therefore recommended for funding if sufficient funds are available
 - **B** those proposals which meet some but not all elements of the ERC's excellence criterion and therefore will not be funded
- Lead reviewers draft panel comments for rejected proposals





Ground-breaking nature and potential impact of the research project

To what extent does the proposed research address important challenges? To what extent are the objectives ambitious and beyond the state of the art e.g. novel concepts and approaches or development between or across disciplines)?

To what extent is the proposed research high risk/high gain i.e. if successful the payoffs will be very significant, but there is a high risk that the research project does not entirely fulfil its aims)?

Comments:

(max. 3000 words)

Scientific Approach

To what extent is the outlined	scientific approach feasible	earing in mind the extent	that the proposed	research is	high risk/high gain	based on the
Extended Synopsis)?						
Comments:						

(max. 3000 words)

- Criterion 2 - PRINCIPAL INVESTIGATOR

Current score: 3.0 / 5.0 ; Threshold 0

Please click here for more information

Your score:									
Score: 🔘 4.0 (Outstanding)	© 3.5	3.0 (Excellent)	◎ 2.5	2.0 (Very Good)	© 1.5	I.0 (Non-competitive)			
To what extent has the PI demonstrated the ability to conduct ground-breaking research?									
Score: 🔘 4.0 (Outstanding)	© 3.5	3.0 (Excellent)	◎ 2.5	2.0 (Very Good)	© 1.5	I.0 (Non-competitive)			
To what extent does the PI provide evidence of creative independent thinking?									
Score: 🔘 4.0 (Outstanding)	© 3.5	3.0 (Excellent)	◎ 2.5	2.0 (Very Good)	© 1.5	I.0 (Non-competitive)			
To what extent does the PI have the required scientific expertise and capacity to successfully execute the project?									
Score: © 4.0 (Outstanding)	© 3.5	3.0 (Excellent)	◎ 2.5	2.0 (Very Good)	© 1.5	$^{\odot}$ 1.0 (Non-competitive)			
Comments:									

For CoG:

The PI has demonstrated the ability to propose and conduct groundbreaking research and his/her achievements have typically gone beyond the state of the art.

The PI provides abundant evidence of creative independent thinking.

The ERC Grant would contribute significantly to the establishment and/or further consolidation of the PI's independence.

What makes a great proposal?

- The IDEA. The project should be exciting, ambitious, innovative (maybe a little bit crazy!) and address an important scientific question
 - aiming at a **step** rather than **incremental** change in its field
- The scientific approach should appear feasible for the applicant (highlight competitive advantage of applicant)
 new methods can be supported by preliminary data
- Risks and challenges should be well outlined and appropriate contingency plans included
- The applicant's independence, creativity, dedication and ability to lead a project should be evident
 - collaborations are welcome, but the PI shouldn't depend on them
- Applications should be easy to read. Idea, importance, and innovation should be clear from the opening paragraph – the reader should have an overview of all important aspects from the 1st page
- Avoid overstatements, unnecessary technicalities, and too many abbreviations
- Imagine yourself being the reviewer don't think too much about specific panel members

Important about interview:

- Explain overall idea
- Highlight novelty and importance of the insight gained
- Outline experimental strategy and highlight novel approaches
- Highlight competitive advantage of applicant but avoid spending a lot of time on CV

- B1 focuses on the idea, B2 more on background, execution, feasibility.
- Discuss with colleagues and get feedback!
- Contacting panel experts before or after evaluation can lead to exclusion!

GOOD LUCK!