

Grant strategy development from direct experience

- ▶ Are you seeking advice on how to successfully win competitive research grants?
- ▶ Do you have starter funding to increase your chance to develop a competitive application?
- ▶ Do you ask yourself how to actually use this money to elevate your application to the next level?

Available information and consulting agencies picture abstract concepts about groundbreaking ideas and repeat clichés on good practice for grant writing. As an applicant myself I had difficulties connecting to these information from people that appeared far away from my reality.

In contrast, what could be more motivating to your applicants than getting support and strategic consulting from a recently successful awardee?

All European universities compete over limited funding. Institutions with high funding rates have a huge advantage in their likelihood to win funding again: They provide support from the researchers that have previously been awarded.

This network based advantage is hard to compensate with money and the applicants often struggle to get the right mentoring and advice that leads them to successful applications.

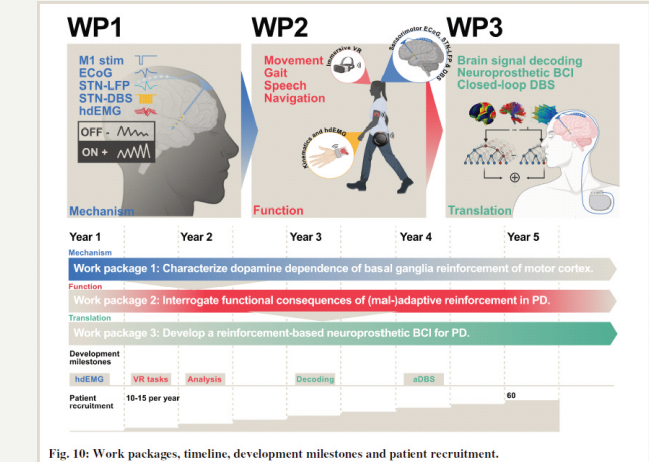
As a recent ERC awardee in one of the most competitive fields (StG 2022 Panel LS5: Neuroscience) I have first-hand experience in the entire process from a promising idea to a successful interview presentation.

I will be happy to share my experience and knowledge and support your applications in their journey through strategic and structured consulting from the first idea to the successful interview and beyond.

*ERC Starting Grant, Consolidator or national programs like SNF Starting Grant or DFG Emmy Noether applications or similar.

What I can offer for grant* applicants

- ▶ Strategic information through individual consulting or group sessions on:
- ▶ Project Design and Scope: Assistance in refining the goals, objectives, and scope of the project to align them with the focus and requirements of the program.
- ▶ Written and visual communication: Support in creating a compelling and well-structured grant proposal, including effectively communicating the significance, innovation, and potential outcomes of the project.



Example guidance: Developing a visual language that transfers key information in your proposal.

- ▶ Self-Presentation and Curriculum Vitae Development: Guidance in crafting a meaningful curriculum vitae that effectively presents the applicant's professional qualifications and experience.
- ▶ Timeline and Milestones: Help in developing a detailed project plan with clear milestones and deliverables to illustrate the feasibility and timeline of the planned endeavor.
- ▶ Data Management and Analysis: Guidance on communicating data management, ensuring compliance with ethical standards, and principles of Open Science.

About me Contact information

I am Professor for invasive neurotechnology at Charité - Universitätsmedizin Berlin and have won over 6 mio. € in grant funding within the first four years of my independent career.

I have served on numerous grant review panels and reviewed for national and international funding agencies, including ERC (EU) (Starting and Consolidator), NSF (USA), DFG (German), ANR (French), SNF (Swiss), RAEng (UK), ZonMW (Dutch) & more.

A significant challenge:
Dopamine is known to signal reinforcement learning, but the role of dopamine in movement is unknown. An integrative account of the fundamental role of cortical-motor circuits in motor control.

Looking at the bigger picture:
If the primary function of dopamine and the basal ganglia is neural reinforcement, we are able to use temporally precise control of subthalamic deep brain stimulation to stimulate indirect pathway activity and movement.

The right time for ReinforceBG is now:
While the basal ganglia are conserved since over 500 million years, bidirectional brain-machine interfaces have only become recently available in 2020. No invasive interfaces.

ReinforceBG is interdisciplinary:
1. It crosses borders between neurology, neurosurgery, neurotechnology and neurophysiology.
2. The results can inspire both clinical neurosciences and translational potential for and psychiatry research.

Intellectual merit - Paradoxes in basal ganglia research that could be explained with neural reinforcement mechanisms:
• The indirect pathway is more active during movement than at rest.
• Dopamine can improve response inhibition and action stopping.
• Lesions of the basal ganglia can alleviate both hypo- and hyperkinetic symptoms.
• Indirect pathway activation can elicit movement.
• Direct pathway activation can increase or decrease movement velocity.
• Movement deteriorates with repetition in Parkinson's disease patients.

An unconventional approach:
ReinforceBG deviates from the traditional path in Parkinson's disease research of a new unifying theory of basal ganglia function. It aims to move from basic research to clinical and personal gain.

Methods overview:
Participants: Human
Neurophysiology: Single-unit recordings, Electrophysiology
Neuroimaging: MRI, CT for localization and connectivity
Kinematics: Accelerometry, motion tracking, video analysis
Behaviour: VR for movement, speech, gait and navigation
Machine learning: LDA/XGBoost for BCI-based DBS

Example guidance: Support the reviewers in their positive assessment by preparing text boxes that explicitly address all review criteria of the funding program.

I offer expert consulting for research applications for ERC and other national and international funding programs. I will be happy to provide a quote* that fits your budget and individual needs.

Contact me to discuss your needs
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*I can provide a quote for your academic institution depending on individual needs and agreements.