ERC Advanced Grant 2020 – Annotated Template

Text highlighted in grey is part of the original template instructions

Text in orange boxes are our comments and advice based on experience

Text in green boxes are evaluation criteria taken from the Work Programme and relevant to the particular section

ERC Advanced Grant 2020
Research proposal [Part B1][1]
(Part B1 is evaluated both in Step 1 and Step 2, Part B2 is evaluated in Step 2 only)

Step 1is assessed ONLY by the panel so the B1 should be aimed a broad but expert audience. You will not know who the panel members are in advance but it is likely that more than half the members from the 2018 Advanced Grant panel will sit this year also.

Proposal Full Title

PROPOSAL ACRONYM

The acronym is used in panel discussions to identify your project. It should be easy to pronounce and ideally remind the reader of the essence of the project.

Cover Page:
- Name of the Principal Investigator (PI)
- Name of the PI's host institution for the project
- Proposal duration in months

Text highlighted in grey should be deleted.

Proposal summary (identical to the abstract from the online proposal submission forms, section 1).

The abstract (summary) should, at a glance, provide the reader with a clear understanding of the objectives of the research proposal and how they will be achieved. The abstract will be used as the short description of your research proposal in the evaluation process and in communications to contact in particular the potential remote referees and/or inform the Commission and/or the programme management committees and/or relevant national funding agencies (provided you give permission to do so where requested in the online proposal submission forms, section 1). It must therefore be short and precise and should not contain confidential information.

Please use plain typed text, avoiding formulae and other special characters. The abstract must be written in English. There is a limit of 2000 characters (spaces and line breaks included).

This summary is often used to identify the most appropriate panel members (and external reviewers) to review the proposal so try to aim the content towards the best audience for favourable review. Only 3-4 panel members will actually read and comment on the proposal.

Some people choose to add a picture or graphic on this page. It should not be a figure that is referred to in the proposal or something with too much text since this might be seen as not abiding to the strict 5 page limit.

Explain and justify the cross-panel or cross domain nature of your proposal, if a secondary panel is indicated in the online proposal submission forms. There is a limit of 1000 characters, spaces and line breaks included.

This second box MUST be included if you choose to select a secondary panel and can be deleted otherwise. Having a secondary panel is generally considered a disadvantage since it means your proposal will be reviewed by more people and usually the proposal is not written towards the secondary audience which can hinder their capability to better understand the project and the challenges it entails.

[1] Instructions for completing Part B1 can be found in the '*Information for Applicants to the Advanced Grant 2020 Call'*.

Section a: Extended Synopsis of the scientific proposal (max. 5 pages, references do not count towards the page limits)

[The Extended Synopsis should give a concise presentation of the scientific proposal, with particular attention to the ground-breaking nature of the research project, which will allow evaluation panels to assess, in Step 1 of the evaluation, the feasibility of the outlined scientific approach. Describe the proposed work in the context of the state of the art of the field. References to literature should also be included. Please use a reference style that is commonly used in your discipline such as American Chemical Society (ACS) style, American Medical Association (AMA) style, Modern Language Association (MLA) style, etc. and that allows the evaluators to easily retrieve each reference.]

Please respect the following formatting constraints: Times New Roman, Arial or similar, at least font size 11, margins (2.0 cm side and 1.5 cm top and bottom), single line spacing.

Research funded by the ERC is expected to lead to advances at the frontiers of knowledge and to set a clear and inspirational target for frontier research across Europe. (Work Programme, page 8)
ERC Advanced Grant Principal Investigators are expected to be active researchers and to have a track record of significant research achievements in their field during the last 10 years. A competitive Advanced Grant Principal Investigator must have already shown a record which identifies them as an exceptional leader in terms of originality and significance of their research contributions. (page 6, Information for Applicants)

Evaluation Criteria

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 higher-than-normal risk that the research project does not entirely fulfil its aims)?

Scientific Approach

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

Only 3-4 panel members read your proposal and the others will only have time to glance through the document during the panel discussions. Also, the 3-4 panel members reviewing your proposal are simultaneously reviewing tens of other proposals. In order to convey clear, concise and memorable messages you should:

- Make use of visual messages like a schematic overview of the project. Such a scheme might show how the aims come together to achieve the overall goal or highlight the challenge in the state of the art and the novelty of your proposal to overcome this etc.
- Use easily readable text with short sentences and avoiding jargon and acronyms.
- Highlight key messages either by literally highlighting them by bolding the text or boxing a section or by repeating them within the text. Repeated messages should not be overly repetitive and it can be effective to use different justifications or explanations in order to make the repetition interesting and potentially noticeable by different reviewers.

The reference list is not included in the 5 page limit.

The reference list is usually added to the end of the scientific proposal, before the CV.
If you have prepared the proposal early or are resubmitting a proposal make sure you have cited the most up to date results. We have seen proposals criticized for not including results published a few days before the deadline.

The B1 should include the following:

- A brief description of the current state of the art and the existing challenges. Make the description interesting and understandable for a broad audience of scientists. **Do not** provide an overview of the history of the field but focus on describing the current understanding in the field and using this to highlight what is not known. Where there is a knowledge gap try to explain why the gap exists (technological limitation, no mechanistic studies for a newly discovered phenomena…)
- A broad overall goal. This should frame the project and the description of the current state of the art, it should set the stage for highlighting the importance and innovation of the broad goal. All of the subsequent research aims should integrate together towards reaching this goal. Since ERC is a high risk/high gain grant this overall goal should be ambitious and may be so ambitious/risky as to be unachievable in the 5 years (although you will argue that the steps towards achieving this will themselves be ground breaking). Sometimes it makes sense to state the overall goal at the beginning of the proposal so the description of the state of the art can be written and read in the context of this goal. Where relevant, formulating an overall hypothesis is recommended, to show that the research is hypothesis-driven, rather than exploratory.
- A description of how the overall goal will be achieved. Although the specific details of the methodology are presented in the full proposal the B1 must provide a good description of how the overall goal will be achieved, including an explanation for the underlying concepts and a description of the work which will be carried out during the project (usually this includes a breakdown into specific aims). One of the most common reasons for Stage 1 rejection is "a lack of detail in the methodology of the proposed project making the feasibility and novelty difficult to determine"
- Justification for the feasibility of the project. Feasibility includes a clear and well thought out research plan, preliminary findings (including published findings) which support the underlying concept of the project and your experience as a PI. Be careful of the very fine line between feasibility and continuation. ERC want to fund high risk/high gain projects and as such want to see that the major challenges and breakthroughs lie ahead. They do not want to fund projects which will continue or follow on from a major breakthrough.
- Non-incrementality. ERC want to fund non-incremental projects that propose (i) a general paradigm shift/novel approach compared to the state of the art in the field in general, and (ii) research that does not constitute a direct continuation (i.e., the next logical step) of the PI's current work. Stressing non-incrementality is particularly important and challenging in AdG (*and accordingly we see incrementality as the most common criticism of projects not funded*), where the PI's background, experience, and past achievements are essential to the success of the project, while it is essential to show a deliberate major change in direction. In this context, it is also recommended to show how grand the challenge ahead is, where preliminary results are only the first step, and accordingly, that the conceptual risk is high, but so is the potential for a breakthrough. If no other funding program will fund the project due to the high risk, it implies non-incrementality.
- Risk analysis. Identify risks in the project including a description of the level of risk and mitigation plans. There may be technical risks that need detailing, but you need to focus on conceptual risks. A risk which you are sure you can overcome with enough time and money is NOT an ERC conceptual risk. A good risk analysis describes specific risks in detail (i.e. avoiding generic sentences) and also describes the project as a whole (e.g. achieving the overall goal may be risky but you can describe the importance of the steps towards that ultimate goal and the high gain that will come out of those steps alone). Risk analysis for the B1 section is focused on the risk of the project as a whole. You can describe how the structure of the project together with your experience and the novel methodology/approach/etc. will allow you to get as close to achieving the goal as possible.

Section b: Curriculum vitae (max. 2 pages)

[Please follow the template below as closely as possible; it may be adapted as necessary]

PERSONAL INFORMATION

Family name, First name:

Researcher unique identifier(s) (such as ORCID, Research ID, etc. ...):

Date of birth:

Nationality:

URL for web site:

Since the ERC review process takes several months and many ERC reviewers visit the PI's website, this can be an excellent place to add extra strength to your proposal or provide "updates" about recently published data or even progress in preliminary results. Make sure the website is up to date and that the ERC relevant material is "visible" during the evaluation period.

- **EDUCATION**

199? PhD
Name of Faculty/ Department, Name of University/ Institution, Country
199? Master
Name of Faculty/ Department, Name of University/ Institution, Country

- **CURRENT POSITION(S)**

201? – Current Position
Name of Faculty/ Department, Name of University/ Institution/ Country
200? – Current Position
Name of Faculty/ Department, Name of University/ Institution/ Country

- **PREVIOUS POSITIONS**

200? – 200? Position held
Name of Faculty/ Department, Name of University/ Institution/ Country
200? – 200? Position held
Name of Faculty/ Department, Name of University/ Institution/ Country

- **FELLOWSHIPS AND AWARDS**

When mentioning local (national/university) prizes, it is relevant to have a short description (how prestigious they are or how many people receive this prize) to give a bit more depth, since the reviewer might not be familiar with them. You can also highlight the importance of international prizes.

200? – 200? Name of Faculty/ Department/Centre, Name of Uni
200? Award received from Name of Institution/Country
199? – 199? Scholarship, Name of Faculty/ Department/Centre,
Country

- **SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS**

Mentoring the next generation of research leaders is important for the ERC, particularly in the Advanced Grant. Beyond graduate students include other lab members; engineers, lab managers, summer students, visiting scientists etc. Include a short description of where past students are: prestigious postdoc position, industry, faculty etc.

200? – 200? Number of Postdocs/ PhD/ Master Students
Name of Faculty/ Department/ Centre, Name of University/ Institution/ Country

- **TEACHING ACTIVITIES (if applicable)**

200? – Teaching position – Topic, Name of University/ Institution/ Country
200? – 200? Teaching position – Topic, Name of University/ Institution/ Country

- **ORGANISATION OF SCIENTIFIC MEETINGS (if applicable)**

201? Please specify your role and the name of event / Country
200? Please specify type of event / number of participants / Country

- **INSTITUTIONAL RESPONSIBILITIES (if applicable)**

201? – Faculty member, Name of University/ Institution/ Country
201? – 201? Graduate Student Advisor, Name of University/ Institution/ Country
200? – 200? Member of the Faculty Committee, Name of University/ Institution/ Country
200? – 200? Organizer of the Internal Seminar, Name of University/ Institution/ Country
200? – 200? Member of a Committee; role, Name of University/ Institution/ Country

- **REVIEWING ACTIVITIES (if applicable)**

201? – Scientific Advisory Board, Name of University/ Institution/ Country
201? – Review Board, Name of University/ Institution/ Country
201? – Review panel member, Name of University/ Institution/ Country
201? – Editorial Board, Name of University/ Institution/ Country
200? – Scientific Advisory Board, Name of University/ Institution/ Country
200? – Reviewer, Name of University/ Institution/ Country
200? – Scientific Evaluation, Name of University/ Institution/ Country
200? – Evaluator, Name of University/ Institution/ Country

- **MEMBERSHIPS OF SCIENTIFIC SOCIETIES (if applicable)**

201? – Member, Research Network "*Name of Research Network*"
200? – Associated Member, Name of Faculty/ Department/Centre, Name of University/ Institution/ Country
200? – Founding Member, Name of Faculty/ Department/Centre, Name of University/ Institution/ Country

- **MAJOR COLLABORATIONS (if applicable)**

Name of collaborators, Topic, Name of Faculty/ Department/Centre, Name of University/ Institution/ Country

Add a short description about the subject of collaboration if relevant. Do not add the names of collaborators who might make good potential reviewers and would not be otherwise disqualified from reviewing your proposal (e.g. because of shared publications).

- **CAREER BREAKS (if applicable)**

Exact dates Please indicate the reason and the duration in months.

Appendix: All on-going grants and submitted grants applications of the PI (Funding ID)

Mandatory information (not counted towards page limits)

The role of the PI refers to your responsibility for the project: e.g. sole PI, coordinating partner, partner (1 of 4) etc.

On-going Grants (Please indicate "No funding" when applicable):

Project Title	*Funding source*	*Amount (Euros)*	*Period*	*Role of the PI*	*Relation to current ERC proposal*[2]

Grant applications (Please indicate "No funding" when applicable):

Project Title	*Funding source*	*Amount (Euros)*	*Period*	*Role of the PI*	*Relation to current ERC proposal*[2]

This list is used by the reviewers to:

- Determine your previous success in acquiring research funds; if you have no current funding you might mention your startup funds or previous funding acquired during postdoc.
- Estimate your time commitment to other projects; think about this list when stating your percentage commitment to the ERC project – is it realistic?
- Understand the novelty of the ERC project in relation to other running projects; check that you are not using exactly the same title. It is OK that there is limited overlap with the ERC project, and it is best to first put the degree of overlap into context (e.g. overlap with some of the first aim, similar concept but approach and goals, limited overlap) and then provide a short description focusing on highlighting how the ERC submission is different or alternatively how the running project supports an aspect of the ERC submission.

[2] Describe clearly any scientific overlap between your ERC application and the current research grant or any grant application.

Section c: Ten years track-record (max. 2 pages)[3]

(see 'Information for Applicants to the Advanced Grant 2020 Call'– instructions for completing 'Part B' of the proposal)

In the Track Record the applicant should list (if applicable):
1. Up to ten representative publications, from the last ten years, as main author (or in those fields where alphabetic order of authorship is the norm, joint author) in major international peer-reviewed multi-disciplinary scientific journals and/or in the leading international peer-reviewed journals and peer-reviewed conference proceedings of their respective research fields (properly referenced, field relevant bibliometric indicators may also be included); preprints may be included, if freely available from a preprint server (preprints should be properly referenced and either a link to the preprint or a DOI should be provided).
2. Research monographs and any translations thereof;
3. Granted patents;
4. Invited presentations to internationally established conferences and/or international advanced schools;
5. Research expeditions that the applicant Principal Investigator has led;
6. Organisation of international conferences in the field of the applicant (membership in the steering and/or organising committee);
7. Prizes, awards, academy memberships;
8. Major contributions to the early careers of excellent researchers;
9. Examples of leadership in industrial innovation or design.

Evaluation Criteria for the Principal Investigator - Intellectual capacity and creativity

- To what extent has the PI demonstrated the ability to conduct ground-breaking research?
- To what extent does the PI have the required scientific expertise and capacity to successfully execute the project?
- To what extend has the PI demonstrated sound leadership in the training and advancement of young scientists?

This section should convince the reviewer of your excellence as a PI and your suitability to lead the proposed project.

This section should not be redundant with the CV. If you have listed something in the CV (e.g. prizes) then you can refer the reader to the CV.

You can include a few paragraphs on yourself describing your scientific career, major contributions to science, envisioned research path, your suitability to lead the proposed research, etc. Try to make this text interesting and engaging for the reader. If you have not found enough space in the B1 to justify your suitability to lead the ERC project you can use this space to do that (or simply reinforce the message in B1).

Before listing the requested 10 publications, give an overview of your bibliometrics (e.g. h index, total citations, total number of publications and naming typical or high impact journals you published in).

Beyond listing publications, awards, conference presentations, highlight their importance. This might include relevance to the proposed project (preliminary results), demonstrates innovation, interdisciplinary, high impact etc. Consider which 5/10 publications to list, especially in terms of conveying a message of scientific independence. For awards and conference talks you might need to highlight the prestige (e.g. the most prestigious award for neurobiology in Israel).

[3] Please list the order of authors as indicated in the original publication

ERC Advanced Grant 2020
Part B2[1]
(not evaluated in Step 1)

Reviewers receive the B2 together with the B1 and CV/track record but may only read the B2 so treat it as a "stand alone" document

Sections (a) and (b) of Part B2 together with section (c) Resources present in the online submission form should not exceed 15 pages. Budget table and References do not count towards the page limits.

Text highlighted in grey should be deleted.
Please respect the following formatting constraints: Times New Roman, Arial or similar, at least font size 11, margins (2.0 cm side and 1.5 cm top and bottom), single line spacing.

Evaluation Criteria – all the evaluation criteria are relevant. What was not evaluated in the B1 is bolded

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 higher-than-normal risk that the research project does not entirely fulfil its aims)?

Scientific Approach

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

To what extent are the proposed research methodology and working arrangements appropriate to achieve the goals of the project (based on the full Scientific Proposal)?

To what extent does the proposal involve the development of novel methodology (based on the full Scientific Proposal)?

To what extent are the proposed timescales, resources and PI commitment adequate and properly justified (based on the full Scientific Proposal)?

Section a. State-of-the-art and objectives

Section b. Methodology

Do NOT include any description of resources or budget table here (Part B2). The Resources section and the detailed budget table are now part of the online submission form (Part A, Section 3 - Budget). This section 3 will be extracted and provided to the peer reviewers.

You are not obliged to use the two subheadings of B2. In previous years the description of the resources, requested budget and justification were part of this document but this section has moved to the online forms. NOTE that the online resource description and justification COUNTS towards the 15 page limit. This section is limited to 8000 characters, which is roughly 2 pages. You don't have to fill all 8000 characters and you should shorten this B2 document by the number of pages used online (i.e. if the online resource section is 4000 words you can use 14 pages here).
References are not included in the page count.

[1] Instructions for completing Part B2 can be found in the '*Information for Applicants to the Advanced Grant 2020 Call'*.

The B2 should read as an independent document and must include all the elements listed above for the B1: A brief description of the current state of the art and the existing challenges, presentation of a broad overall goal and justification of its ambition, non-incrementality and novelty/innovation, a description of how the overall goal will be achieved, justification for the feasibility of the project and risk analysis. The B2 is expected to go into greater detail, particularly for the methodology. It is likely that the description of the state of the art and risk management will also be more detailed in accordance, since the more detailed methodology may require some extra background information. Remember that in B1 only 3-4 panel members, who most likely are not from your specific field, read the proposal whereas B2 is sent to external reviewers specifically from your field – convincing these experts as to the novelty, ambition and high risk/high gain dimension of the project will require specific, in depth details on how you will achieve the aims and ultimate goal.

Also take into account the additional evaluation criteria specific for B2 (listed above). These criteria should be addressed in the more detailed description of the methodology which should not only explain what you will do and how you will do it but also highlight the novelty of each aim and how you will integrate the outcomes of specific aims together in order to move towards the overall goal.

This section should include risk management at both project level and methodology level. For the methodology level, it should focus particularly on those methodologies that are novel, with a high margin of error or are, in some other way, high risk. A good mitigation plan defines alternative ways in which you can attempt to achieve the objective, or changes you might apply to the current approach that would increase its likeliness of success (e.g. reducing the selectivity and increasing repetitions). Expertise in the lab is acceptable but on its own it does not count as a mitigation plan.

It is advisable to indicate timescales for the project. Note the use of the word "timescales" and not "timeline". Being a 5-year high gain/high risk project, you are not expected to have a finely timed schedule and a Gantt for example is less appropriate for ERC. What you do need to show is a good plan of how the aims interconnect or rely on each other, how you can flexibly overcome challenges and how you will assign students and staff to different tasks.

Notes on the ONLINE resource description and justification: It is useful to outline what current resources you have both in terms of equipment and human resources. You might want to highlight resources beyond your own lab which might include specialist centers or faculty equipment available at the Technion or the colocation of experts in specific fields. On this background you can justify what further resources you need for the project.

A clear way of justifying the requested funding is using the subheadings within the budget table:

Personnel: Talk about the background the personnel need, which aims they will work on (assign project to students so that the more experienced students (like postdocs) will be recruited for the more high risk or more technically difficult tasks) and the percentage salary each will have.
Travel: Give a basic overview of how many conferences you/your students will attend per year. Don't commit to specific attendance but you might want to give an example of the kind of relevant conferences.
Equipment: Basic details of the equipment to be purchased and for what purpose
Consumables: XXXX
Publications: Take into account the cost of open access publication and state you will publish open access. Again, you might want to suggest which journal you expect to publish in, without committing.
Other: XXXX , CFS (audit cost).

If you are requesting extra funding for major equipment/ access to large facilities it needs to be justified in this resources section and should be argued for within the scientific proposal. Without very convincing justification this funding will not be granted.