K-Panel: A Reviewer's Perspective

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Examples of Mentored Early Career “K” Awards

K01	• **Mentored Research Scientist Career Development Award**
K08	• **Mentored Clinical Scientist Research Career Development Award**
K23	• **Mentored Patient-Oriented Career Development Award**
K99/R00	• **Mentored Pathway to Independence Award**

How to help reviewers to advocate for your proposal

CASE STUDY

Reviewer 1 Overall score = 2	Reviewer 2 Overall score = 4
Reviewer 3/Discussant Overall score = 1	Panel-36 voting members

Study Section- Diverse research expertise

Competency Roster
Arthritis and Musculoskeletal and Skin Diseases Special Grants Study Section
2023/05 Council AMS, 03/02/2023, Helen Lin, SRO

Member	Area of Competency
CHAIRPERSON GANESAN, ANAND K., PHD, MD PROFESSOR AND VICE CHAIR DEPARTMENT OF DERMATOLOGY UNIVERSITY OF CALIFORNIA, IRVINE IRVINE, CA 92697	Melanoma, Vitiligo, and Pigmentary Disorders

17 PhD reviewers
14 MD reviewers
5 MD, PhD reviewers
1 DVM, PhD reviewer
2 MPH, MD reviewer
39 total reviewers

11 Assistant Professors
9 Associate Professors
19 Professors
3 Dept Chair/Vice-Chair
1 Assistant Dean

22 Ad Hoc
17 Standing

Expertise: Dermatology, rare skin diseases, alopecia areata, osteogenesis imperfecta, fatigue in Lupus, orthopedic oncology, quantitative MRI, machine learning, gait analysis for ACL injury, knee pain, early arthritis prevention, biofilms, tissue engineering, biomaterials, Juvenile idiopathic arthritis, myeloma, bone formation and resorption, atopic dermatitis, itch biology, vitiligo, bone-muscle cross-talk (1), skeletal muscle biology (3)

Timeline of proposal review after assignment to a study section

Reviewers review grant titles, team, applicant → declare conflicts & score expertise (t-2 mos)

Reviewers receive grants; 5-7 grants per reviewer (t-1 mos)

Reviewers submit critiques (t-1 wk)

Reviewers read others scores & critiques: modify scores and critiques

STUDY SECTION REVIEW (t=0)

Revise critiques (t + 3 days)

Mechanics of the review process during study section: 15-20 mins per grant

Chair reads title of proposal, applicant name, calls for scores

Reviewers give preliminary scores

Presentation of critiques by each reviewer

Open to panel for discussion

Chair reads back summary of discussion (reviewers correct)

Chair calls for final scores from three reviewers

Chair asks if anyone is voting outside the range

Voting by all members

Chair asks for vertebrate animals, training in responsible conduct, budget

K Award Review Criteria

Each section is scored 1 to 9 scale; overall score

Candidate
- Previous training, productivity, letters of recommendation, potential for independence

Research Plan
- Important problem, keeping up/advancing the field, well designed, provide a platform/pilot data for RPG, feasible

Career Development Plan “Training Plan”
- Expand current skill set, well-integrated with research project, too generic? too much? right elements?

Mentors, Consultants, & Collaborators
- Scientific expertise, mentoring track record, level of commitment

Institutional Commitment

ALL ELEMENTS MUST BE INTEGRATED INTO ONE STORY

Mechanics of the review process during study section: 15-20 mins per grant

CASE STUDY

Reviewer 1 (5 mins) Strengths & weaknesses Overall score = 2	Reviewer 2 Non-redundant comments Overall score = 4
Reviewer 3/Discussant Non-redundant comments Overall score = 1	Panel-36 voting members

What are the common drivers that determine score during discussion?

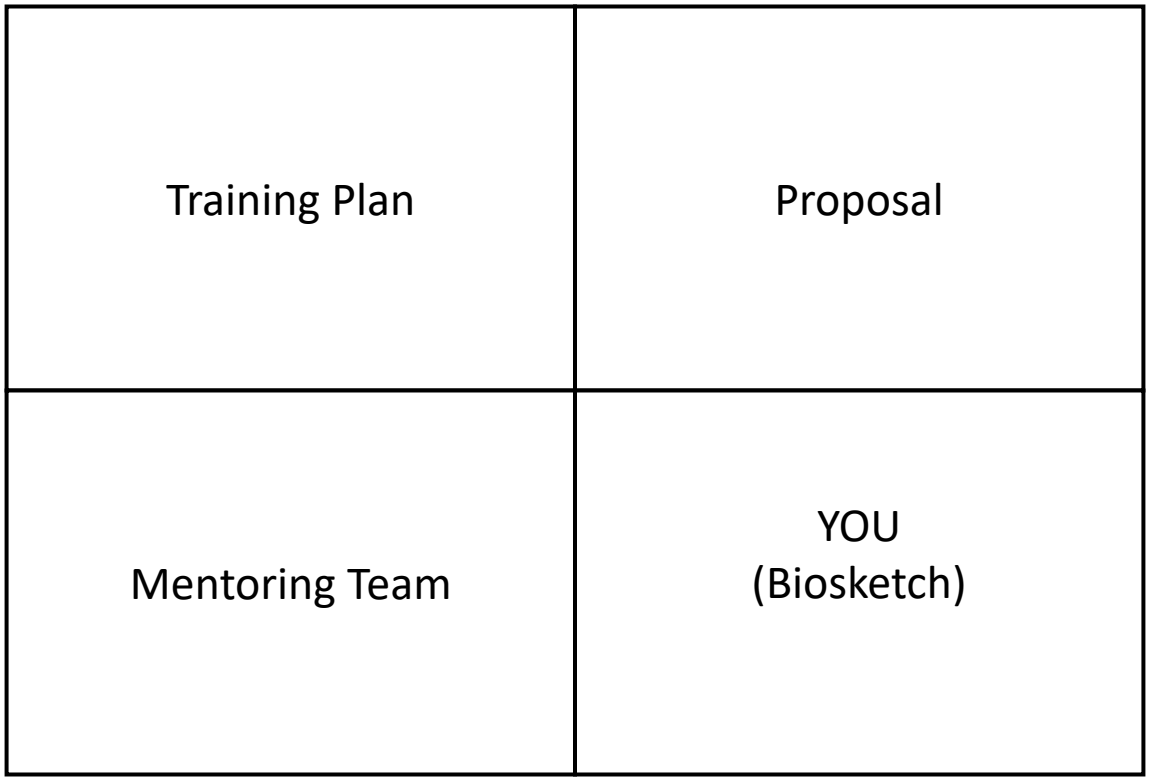
Some common critiques are:

- Issues related to rigor/reproducibility
  - Omission of controls or the rationale for controls
  - Power calculations omitted
  - N-values omitted in methods or in preliminary data
- Legends are sparse, don't mention n-values, not visible, poor quality data
- Sex as a biological variable not addressed sufficiently
- Alternative approaches underdeveloped
- What if aim doesn't work?

Some common critiques are **generic** training plan

- Training plan
  - NOT integrated into aims
  - underdeveloped
  - doesn't say how much time/effort will be devoted to each activity
  - doesn't give details of conferences, seminars, time spent with mentors
  - includes virtual meetings with no details
- Mentor letters
  - sound like they were possibly written by the same person (generic)
  - don't outline the training plan (cross-referencing within the grant is needed)
  - mentor training history mentions number of trainees, but not much else
- Biosketch
  - thin (this is a lost opportunity!)
  - underdeveloped
  - Needs context and storytelling
- Chair letter
  - doesn't provide concrete details

Integration of all components



YOUR Biosketch-Storytelling-Don’t miss this opportunity!

Example
Publications: impact on the field, impact on your training, outline the number of papers, the number of first and second author, co-author, mention the impact factor, mention the effort for this kind of study, put these into context

Who are you as a scientist? What skillset do you need to achieve your big goals? What are you passionate about? Have you mentored others?

What was your path/scientific journey? Choice of labs, chose projects, stayed at the same institute or moved? What is your narrative?

Gaps in productivity? Covid, breeding mice, disaster in the colony, other challenges

Mentor/collaborator biosketch

The mentors' expertise and commitment to the candidate should be evident.
YOU must read and review mentor biosketch!!
It should be tailored to the K proposal

If Assistant Professor, consider asking a more senior faculty member to be on the team

The mentoring team should have complementary skills well matched to candidate career development plans

Mentors should have strong research and strong mentoring track records.

Mentors should give metrics and data on prior trainees

→ RECOMMENDATION: Establish team 6-mos before due date. Ask for 30-min committee meeting to review specific aims page, mention the process in your training plan, include a statistician.
Revise specific aims page and met again.

Team

Table of Mentors/collaborators/advisors
List of all members
Role
Affiliation
Expertise-few words, phrases
Contribution to the training plan, career development (few points per member)
Format of interactions

Ideas: leadership, project management, people management, budgets, how to mentor, mentor-mentee compacts, interviewing, networking, marketing, preparing for chalk talks

Training Plan-one example (there are many ways to represent this)

Table

	Year 1	Year 2	Year 3
Experiments/Objectives X Y Z	effort%		
Training/Career Development			
Conferences Mentoring meetings Coursework/workshops Extramural training Publication prep Develop aims R01	effort %		

Training Plan-another example!

Table Timeline of Research and Career Development

	% effort/activity	Quarters 1-4
<u>K99</u> Year 1 Year 2 <u>R00</u> Year 3 Year 4 Year 5	Research (X%), course (5%)	

<u>→ Consider a schematic illustration of your training plan with objectives</u>