Beckman Foundation Blinded Application Review

Arnold and Mabel Beckman Foundation
Dr. Anne Hultgren
Executive Director
Our Process

Messages from our Founder, Arnold O. Beckman:
“I want to support young scientists, those who do not yet have the clout to receive major research grants.”
“There is no satisfactory substitute for excellence.”

• 2018: Internal discussions with Board and Science Advisory Council
  • Our awardees mostly from the same set of institutions each year
  • Requested analysis of institutional diversity

Strategic Questions:
How do our awardee demographics compare to our applicants? (we can control)
Are we receiving applications from a diversity of institutions? (we can influence)

• 2019: Developed methodology, conducted analysis on institutional diversity

• 2020: Distributed analysis results to our Board, SAC, and review committees; began planning for blind reviews in our Beckman Young Investigator program

• 2021 applicants: Began blinded review at “Letter of Intent” step
Analysis Method

• Which Institutions have “clout” to receive major research grants?

• Used 5 categories:
  • “AMBF Top Ten” – Institutions with most historical funding from Beckman Foundation
  • NSF 1-25, 26-50, 51-100*
  • Other – Institutions not on 2018 NSF Top 100 list


• Counted applications in each category for 4 steps of review process

Step 1
Letter of Intent
200-250 LOIs
4-page research proposal

Step 2
Invite
90-100 Full Apps
6-page research & Letters of Rec

Step 3
16 Interviews
& research presentation

Step 4
10-11 Awards

“AMBF Top Ten” Institutions
Caltech, Columbia, Cornell, Harvard, Johns Hopkins, MIT, Princeton, Stanford, UC Berkeley, Yale

NSF 1-25 (examples)
UCLA, Northwestern, USC, U of Pennsylvania, U of Michigan, U of Washington, WUSTL, UC Boulder

NSF 26-50 (examples)
Ohio State, UT Austin, Carnegie Mellon, U of Arizona, New York University, UC Davis

NSF 51-100 (examples)
U of Miami, NC State, Florida State, UC Santa Barbara, Temple University, U of Cincinnati

Other (examples from our applicants)
Auburn, UC Santa Cruz, Colorado School of Mines, Florida A&M, Marquette, U of Nevada Reno
Results, 2018

Fraction of applicant pool at each stage
Fraction of "Top Institutions" at each stage

Category group:
- AMBF Top 10
- NSF Top 25
- NSF 26-50
- NSF 51-100
- Other
Results, 2018-2022

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Fraction of “Top Institutions” at each stage

Fraction of applicant pool at each stage
Some “Blinding” Logistics

• Just the LOI stage, applicant information available in Full Applications
• We have a separate form in our application portal (hidden from reviewers) to collect applicant info
  • Name, institution, gender, race, ethnicity, disability, existing and pending external funding
• Instructions for applicants:
  • Do not include your name, gender, or any institutional information in the technical pre-proposal.
  • You are encouraged to write in third person (example: the applicant). Using "I" or "We" is allowed.
  • Do not name collaborators, mentors, postdoc advisors, lab members, etc.
  • If you include references to your own publications in the technical proposal, do not use any formatting markings (asterisk, bolding, italics, etc.) to identify yourself within the list of authors.
  • If you have unpublished work, use this format: ¹(Applicant name withheld). Unpublished work, 2022.
  • Failure to follow guidelines could result in disqualification.
• Compliance considerations:
  • Application portal – triple-check that applicant names not visible or included in file name downloads!
  • Internal staff review LOIs for obvious violations
  • Reviewers can flag LOIs for intentional violations
    • Discussed at the start of review meetings
    • At least two reviewers must agree to disqualify an application
    • Must be intentional violation, not just that the reviewer “thinks they know” the applicant
Conclusions on Institutional Diversity

• Do our awardee demographics compare to our applicants?
  • As a fraction of applicants, we made progress in our awardees reflecting the applicant pool, but there is still a gap

• Do we have applications from a diversity of institutions?
  • Need more analysis on which institutions in the NSF 51-100 and Other categories are applying

• Some unintended benefits:
  • Blinded applications are much easier to review – short and just the science
  • No comments such as “this applicant trained with [premier scientist XYZ], so I will give them the benefit of the doubt…” or “well, Stanford must have seen their potential…”
  • Review meeting discussions focus only on the science topics – no publication counting or debates over relative journal impact factors
Future Directions

- Continue to increase outreach for applications from diversity of institutions
  - What can we do to help new applicants be competitive?
  - Posted guidance and example documents
  - Posted video instructions and hold “Office Hours” with our Program Officers
  - Considering a “Mentor network” of our awardees

- Examine our Full Application review and Interview processes to reduce biases
  - More diverse reviewers and better reviewer training?
  - Is our scoring system biased?
  - Can we do real-time data analysis during the review discussions?

- Continue analysis and tracking for metrics of our applicants, reviewers, and awardees