

The Art of Grantsmanship and Becoming Grant Funded

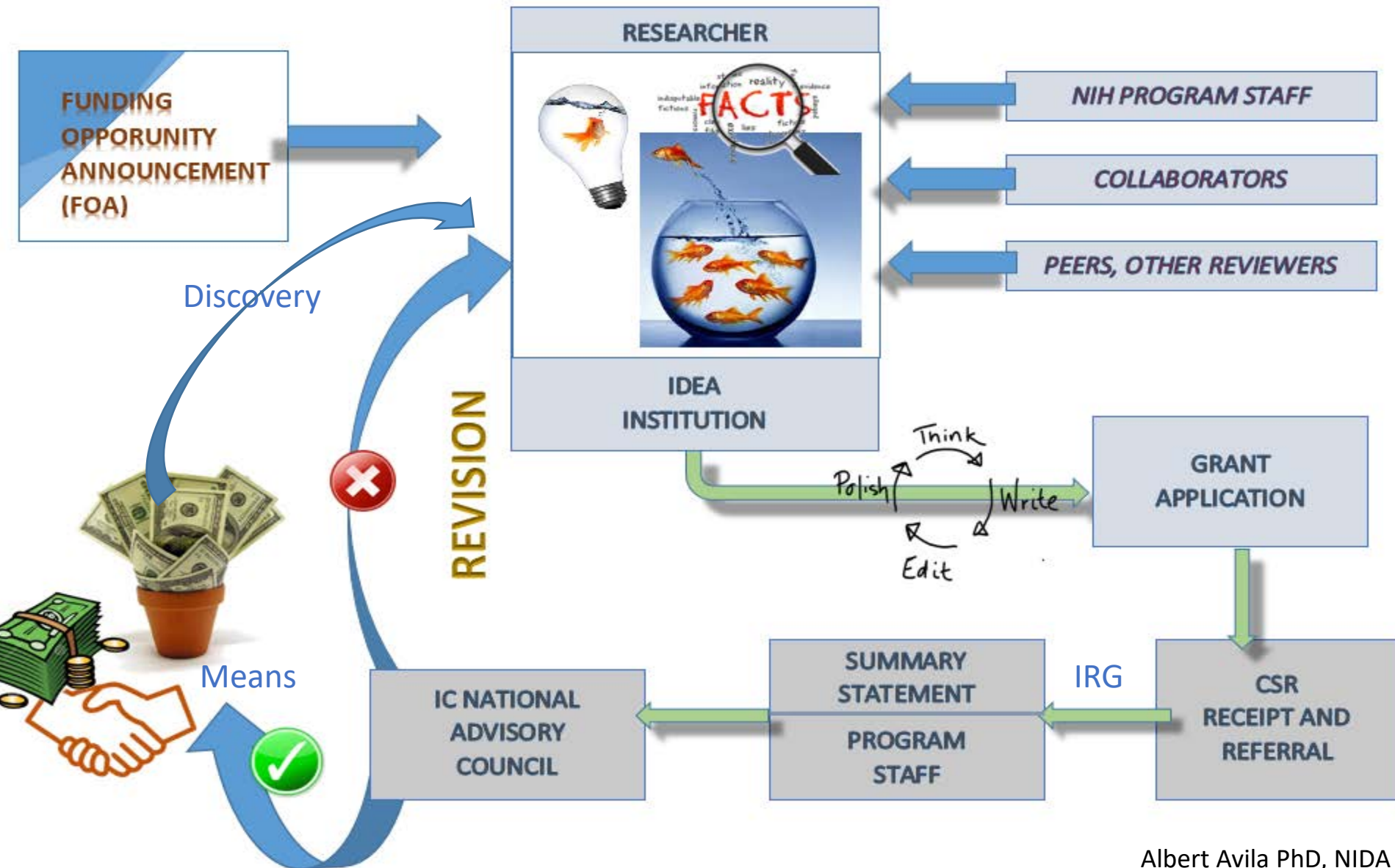
TRI Research Fundamentals Seminar Series

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"Anatomy" of the Grant Process



Fact:

Dependence on NIH/extramural grant funding is bad for your emotional health

But....

If successful one is assured of a self-generated, satisfying and independent career

Fact:

Grant funding success represents a favorable outcome for factors both within and beyond your control

Fact:

You can not control the grant proposal
review outcomes...

...but you can control the probabilities

The Ten Secrets to Being an NIH- funded Investigator

Jay Weiss PhD

The Ten Secrets to Being an NIH-funded Investigator

1. perseverance
2. perseverance
3. perseverance
4. perseverance
5. perseverance
6. perseverance
7. perseverance
8. perseverance
9. perseverance
10. perseverance... Oh, and ability

Things you need to know to be successful as an NIH grantee

Do you truly believe that you will be successful?

Things you need to know to be successful as an NIH grantee

Are you fluent with the organization, priorities and practices of the NIH Institutes, IRGs and Study Sections?

NIH Extramural Nexus?

NIH RePorter?

NIH Guide for Grants and Contracts?

Things you need to know to be successful as an NIH grantee

Do you seek to or actively contribute to
extramural grant review?

Learn to write proposals from the
perspective of a reviewer

The NIH Peer Review Process: Lessons for Proposal Development

This lesson is best learned in practice...

NIH Early Career Reviewer (ECR) Program

<https://public.csr.nih.gov/ForReviewers/BecomeAReviewer/ECR>

Benefits of ECR

- Work side-by-side with some of the most accomplished researchers in your field to help NIH identify the most promising grant applications
- Learn how reviewers determine overall impact scores
- Improve your own grant writing skills by getting an insider's view of how grant applications are evaluated
- Serve the scientific community by participating in NIH peer review
- Develop research-evaluation and critique-writing skills

Qualifications for ECR

- Assistant Professor (> 2 years)
- Active independent research program
- > one senior-authored publication in prior two years plus one since degree
- Not served on NIH study section or been awarded an RO1 or equivalent
- Submitted an NIH RO1 proposal as PI/PD

Things you need to know to be successful as an NIH grantee

Do you recognize the true funding potential of a scored proposal?
... of an unscored proposal?

Key elements of a successful NIH grant proposal

- an “A” effort
- prior approval of an NIH program officer (something they want)
- grant mechanism matches the research goal
- tells an engaging story anchored by well-developed conceptual and theoretical models
- readily identified as brand-congruent and incremental
- appropriate IRG assignment
- be clear from outset as to why and how the project would proceed
- be aware of NIH trends (e.g., power estimation, RDoC, irreproducibility) and take advantage of them

Things you need to know to be successful as an NIH grantee

Do you truly understand the strategic importance of the development and maintenance of your “brand”?

Scientific Brand Development

Gaining Competitive Advantage in a
Competitive Market

Or, rethinking your approach to professional
success

Brand motivation: The NIH “Market”

- Variable foraging model
- Low funding rates
 - 2018: 11,071 awards for 54,834 RO1-equivalent applications
- New investigators
 - 2016: Average age at first RO1 award: 43
 - % of NIH grant budget for awardees <40 years: 4-5
- Typically a 17-18 month lag time between initial A0 submission and an NOA, if successful – plan accordingly

Fact:

You can control the probabilities but not the outcomes

Fact:

The NIH funding model has proven to be resistant to change

So you need to change in how you are addressing the model

Fact:

Peer-review is the gatekeeper of scientific
discovery and practice

Fact:

The presumably deliberative processes of peer-review reflect both conscious and unconscious biased processes and focus on both tangible and intangible features of applicants

Fact:

Careful attention to the development, growth, extension and maintenance of your scientific brand is an effective means of enhancing your probabilities of career success

Components of Brand Identity as a conjured mental image

Product of objective and subjective factors

- Self-representation
- Affective
- Moral
- Personal
- Social
- Cultural

Research Brand Value: Borrowing from business models

- As in business, scientific branding drives consumer behavior, though the “consumer” is largely specific to our profession
- As in business, marketing practice represents attempts to mold and instantiate your scientific brand identity
- As in business, scientific brand is sensitive to brand misdeeds and time
- As in business, the goal of scientific branding is to create **connectivity** of consumers to brands (buffer)

Scientific Brand “consumers”

- The general public
- The scientific community at large and the sub-community related to your brand field
- Scientific peer-review groups
 - Journal manuscript reviewers
 - Grant proposal review groups
 - Promotion and tenure committees
- Your affiliated academic units
- Your own research group members
 - Brand as connecting mechanism

Benefits and Costs of Scientific Brand Value

Positive value

- ↑ Institutional investment
- ↑ Group work ethic
- More and higher impact publications
- ↑ Extramural research funding
- ↑ Brand loyalty (*i.e.*, sustained success)
- Hiring advantage

Negative value

- ↓ Institutional investment
- ↓ Group work ethic
- Fewer and lower impact publications
- ↓ Extramural research funding
- ↓ Brand loyalty (*i.e.*, non-sustained success)
- Hiring disadvantage

So, what is your scientific brand identity?

Developing Positive Research Brand Value

- Develop and adhere to a focused program of research that is associated with positive brand associations and expectations (e.g., “impactful”, “thought leader”, “innovative”, “rising star”)
- Market your brand
 - Publication strategy: quality, quantity, placement
 - Presentation strategy: “inspiring”, “cutting edge”
 - Service
 - Ethical
- Thoughtfully plot brand extensions (“fit”)
- Avoid brand misdeeds (brand prediction errors)

Brand Misdeeds

Non-scientific Examples

- Commercial (e.g., Coca cola, Volkswagen)
- Non-profits (e.g., Susan G Komen)
- Sports (e.g., US Gymnastics)
- Academic institutions (e.g., Penn State, Michigan State)
- Individuals (e.g., Lance Armstrong)

Scientific examples

- Genetic cloning
- Cold fusion

Brand Misdeeds

The impact of negative brand actions are dependent on...

- Self-relevance to a consumer
- Ethical nature of misdeed

Even highly connected (buffered) consumers are not immune to certain negative brand actions

Brand Protection

Question:

Would you contribute as readily to peer-review if the largely anonymous process now demanded self-identification?

Example of Scientific Brand Value Opportunity: Modified NIH Biosketch format

Central themes

- Five most significant contributions
 - Narrative: Background, findings, influence, role
 - Up to four related publications or other research products
- URL of full list of published work (e.g. SciENcv)

Retains areas of

- Personal Statement (up to 4 qualifying publications)
- Positions and Honors
- Research Support

You should use the same level of attention to scientific brand investment planning as you would use for financial investment planning

Scientific Branding: Pattern development and recognition

Your scientific brand is

- Multifaceted
- Temporally extended
- Subject to brand extensions and misdeeds
- Demands refreshment
- A critical element of scientific review
- Critical to your research career success