MENTORING TO ACHIEVE RESEARCH INDEPENDENCE (MATRIX)
UNIVERSITY OF WISCONSIN
SCHOOL OF MEDICINE AND PUBLIC HEALTH

AGENDA

UNIVERSITY OF WISCONSIN SCHOOL OF MEDICINE AND PUBLIC HEALTH
MATRIX 2023 OPENING CEREMONY

Wednesday, January 25, 2023
12-1:30 PM
Room 3110A HSCL

12:00 pm: Welcoming remarks/Dean introduction
12:05 pm: Dean Robert Golden remarks
12:15 pm: Mike Koenigs - Coaching experiences/responsibilities
12:25 pm: Melissa Rosenkranz - Mentee experiences/responsibilities
12:35 pm: Debbie Meltzer - MATRIX overview and rules of engagement
12:50 pm: Lori Uttech-Hanson – General program housekeeping
12:55 pm: Q & A
1:00 pm: Small Group - Meet with Pod/Team

*Catered lunch to be provided
## MATRIX 2023 COACH-MENTEE MATCHES

<table>
<thead>
<tr>
<th>Coach-Mentee Matches</th>
<th>Department</th>
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<tbody>
<tr>
<td><strong>TEAM 1</strong></td>
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<tr>
<td>POD 1 COACH: Brad Astor</td>
<td>Medicine</td>
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<tr>
<td>Mentee: Anand Narayan, Assoc Prof</td>
<td>Radiology</td>
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<tr>
<td>Mentee: Vinaya Bhatia, Assoc Prof</td>
<td>Urology</td>
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<tr>
<td>POD 2 COACH: Bruce Klein</td>
<td>Pediatrics</td>
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<tr>
<td>Mentee: Valentina Lo Sardo, Asst Prof</td>
<td>Cell &amp; Regen Biology</td>
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<tr>
<td>Mentee: Matthew Harer, Assoc Prof</td>
<td>Pediatrics</td>
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<tr>
<td><strong>TEAM 2</strong></td>
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<tr>
<td>POD 3 COACH: Corinne Engelman</td>
<td>Pop Health Sc</td>
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<tr>
<td>Mentee: Farrah Madison, Asst Prof</td>
<td>Integrative Biology (L&amp;S)</td>
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<tr>
<td>Mentee: Larissa Albantakis, Asst Prof</td>
<td>Psychiatry</td>
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<tr>
<td>POD 4 COACH: Mike Koenigs</td>
<td>Psychiatry</td>
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<tr>
<td>Mentee: Ali Pirasteh, Asst Prof</td>
<td>Radiology</td>
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<td>Mentee: Edmond Ramly, Asst Prof</td>
<td>DFMCH</td>
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<tr>
<td><strong>TEAM 3</strong></td>
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<tr>
<td>POD 5 COACH: David Evans</td>
<td>Path Lab</td>
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<tr>
<td>Mentee: Tu-Anh Huynh, Asst Prof</td>
<td>Food Science (CALS)</td>
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<tr>
<td>Mentee: Vanessa Leone, Asst Prof</td>
<td>Animal &amp; Dairy Science, CALS</td>
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<td>POD 6 COACH: Donna Neumann</td>
<td>DOVS</td>
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<tr>
<td>Mentee: Elebeoba May, Assoc Prof</td>
<td>Medical Microbiology</td>
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<td>Mentee: Roomasa Channa, Asst Prof</td>
<td>DOVS</td>
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<td><strong>TEAM 4</strong></td>
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<td>POD 7 COACH: Sarah Gong</td>
<td>DOVS, BME</td>
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<tr>
<td>Mentee: Jeremy Kratz, Asst Prof</td>
<td>Medicine</td>
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<td>Mentee: Narendra Thapa, Scientist III</td>
<td>Admin</td>
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<td>POD 8 COACH: Susan Thibeault</td>
<td>Surgery</td>
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<tr>
<td>Mentee: Joshua Roth, Asst Prof</td>
<td>Orthopedics &amp; Rehab</td>
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<td><strong>TEAM 5</strong></td>
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<tr>
<td>POD 9 COACH: Alan McMillan</td>
<td>Radiology</td>
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<tr>
<td>Mentee: Courtney Balentine, Assoc Prof</td>
<td>Surgery</td>
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<td>POD 10 COACH: Vivek Prabhakaran</td>
<td>Radiology</td>
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<tr>
<td>Mentee: Andrew Wentland, Asst Prof</td>
<td>Radiology</td>
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<tr>
<td>Mentee: Anoop Mayampurath, Asst Prof</td>
<td>Biostats</td>
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<td><strong>TEAM 6</strong></td>
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<td>POD 11 COACH: Deneen Wellik</td>
<td>Cell &amp; Regen</td>
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<td>Mentee: Alex Birbrair, Asst Prof</td>
<td>Dermatology</td>
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<td>Mentee: Huy Dinh, Asst Prof</td>
<td>Oncology</td>
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<tr>
<td>Mentee: Adam Kuchnia, Asst Prof</td>
<td>Nutritional Sciences (CALS)</td>
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<td>POD 12 COACH B: Wei Xu</td>
<td>Oncology</td>
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<td>Mentee: Daniel Matson, Asst Prof</td>
<td>Path &amp; Lab Med</td>
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<tr>
<td>Mentee: David Al-Adra, Asst Prof</td>
<td>Surgery</td>
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<tr>
<td>Mentee: Andrea Galmozzi, Asst Prof</td>
<td>Medicine</td>
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MENTEE TIPS & REMINDERS

☐ Attend, engage, and participate in small group monthly meetings with coach/pod; frequency will be determined by your pod/team.

☐ Set up individual meetings with coach as needed.

☐ Attend MATRIX large group events; these are designed to support the learning and engagement process.

☐ Engage in review of peers’ proposals.

☐ Schedule/hold a Chalk Talk.

☐ Work with department chair, coach and “Scholar Insight / Research at UW-Madison” website to identify an internal subject matter expert (ISME) within two months of starting the program (March). Once an ISME is identified, the mentee should send their name and contact information to the MATRIX program email (matrixmentoring@med.wisc.edu) to provide the necessary ISME Agreement form.

☐ Work with coach and ISME to identify and recruit an external subject matter expert (ESME) to provide feedback on your grant proposal at least 6 weeks before it is ready to submit. Once an EMSE is identified, the mentee should send their name and contact information to the MATRIX program email (matrixmentoring@med.wisc.edu) to provide the necessary agreement and NIH-style review forms and facilitate the process.

☐ Respond to mid-year and post-program MATRIX evaluation surveys, which are designed to gain feedback for continuous program improvement.

☐ Notify MATRIX via email (matrixmentoring@med.wisc.edu) for the following:
  • when you have submitted the grant proposal worked on as part of your participation in the program; this can be during or post-program; and
  • when you have been notified of funding status.

☐ Reach out to MATRIX staff if you have any questions or concerns; we are here to help!
MATRIX RESOURCE LIST

- **medRAMP: SMPH Research Administration & Proposal Development Office**: Provides pre-award project management and grant development services. Website includes a Grants Library Repository (example grants), Funding Opportunities, Templates/Examples, Grant Writing Resources, and more.
  - [https://grantslibrary.med.wisc.edu/](https://grantslibrary.med.wisc.edu/)

- **MATRIX BOX Folders**: Each Pod and Team will have access to a Box folder to share documents.

- **Virtual NIH Grants Conference & PreCon Events**: NIH Grant Grants Conference is Feb. 1-2, 2023; this event is offered annually. If you register, you will be able to access recorded sessions and slides.

- **Faculty Scholarly Activity**: This website will be very useful to help MATRIX mentees identify an Internal Subject Matter Expert (ISME) and provides links listed below that showcase scholarly activity of UW-Madison faculty ([https://apir.wisc.edu/faculty-staff/faculty-scholarly-activity](https://apir.wisc.edu/faculty-staff/faculty-scholarly-activity)).
  - **Research Insight**: Internal tool to that identify potential partners for collaboration, explore additional funding opportunities, and find experts at UW-Madison.
  - **Research at UW-Madison**: This website showcases the extraordinary achievements of UW-Madison faculty and scholars.

- **PIVOT**: Pivot is a database containing funding opportunities for all disciplines and project types. It includes information on federal, private, and international funding options in one search tool. With your personal Pivot account, you can sign up to receive customized funding alerts, save and return to previous funding searches, share funding opportunities directly from Pivot, and track individual funding opportunities.
  - medRAMP provides trainings on PIVOT
  - [https://pivot.proquest.com/](https://pivot.proquest.com/)

- **SMPH Intranet Research**: This an internal site provides links and resources for all phases and/or aspects of research administration.

- **SMPH Collaborate**: This event, offered several times per year, fosters connections among investigators, researchers, and learners through the sharing of research discoveries and building of community. All individuals from across campus involved in research are welcome.
  - [https://intranet.med.wisc.edu/smph-collaborate/](https://intranet.med.wisc.edu/smph-collaborate/)

- **Mentoring Resources**: ICTR provides extensive resources and training on mentorship.
  - [https://ictr.wisc.edu/mentoring/](https://ictr.wisc.edu/mentoring/)

- **Team Science**: ICTR uses a Team Science framework to support the association of investigators from different departments and schools in the formation of effective, innovative teams composed of individuals with complementary expertise. Team science experts can help investigators write specific sections of grants that apply to newly formed leadership teams or interdisciplinary collaborations, as well as provide custom training for your new or existing research group. Team Science Collaboration Planning sessions provide skill-building for research staff and early-stage investigators in team leadership and collaboration.
  - [https://ictr.wisc.edu/team-science/](https://ictr.wisc.edu/team-science/)
# MATRIX Timeline

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<thead>
<tr>
<th>Jan</th>
<th>Feb</th>
<th>March</th>
<th>April</th>
<th>May</th>
<th>June</th>
<th>July</th>
<th>Aug</th>
<th>Sept</th>
<th>Oct</th>
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<tr>
<td>Opening Event</td>
<td>Seminar: Biostatistics &amp; Budget</td>
<td>Grant Writing Seminar</td>
<td>Mid-year Event, Mock review, ISMEs included</td>
<td>Closing Event</td>
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<tr>
<td>Meet coaches</td>
<td>Chalk Talks planned</td>
<td>Chalk Talks presented</td>
<td>Present Specific Aims</td>
<td>Present Significance and Innovation sections</td>
<td>Present Approach section</td>
<td>Submit full draft for review to ESMES/ISMEs</td>
<td>Revise proposal based on critiques from ESMES/ISMEs</td>
<td>Submit proposal (Early Oct.)</td>
<td></td>
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<tr>
<td>Meet mentees; get to know their major areas of research and topic of R01</td>
<td>Discuss R01/NIH basics in terms of submission, review, funding, etc.</td>
<td>Attend Chalk Talks and discuss with mentee(s) Monthly meetings</td>
<td>Read and discuss Specific Aims</td>
<td>Read and Discuss Significance and Innovation sections Monthly meetings</td>
<td>Meet one-on-one as needed</td>
<td>Read and discuss remaining proposal sections Monthly meetings</td>
<td>Meet one-on-one as needed</td>
<td>Attend and Participate in Closing Event</td>
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<tr>
<td>Coaches</td>
<td>Plan Chalk Talks</td>
<td>Hold monthly meetings</td>
<td>Read and discuss Specific Aims Monthly meetings</td>
<td>Meet one-on-one as needed</td>
<td>Read and discuss Approach section Monthly meetings</td>
<td>Meet one-on-one as needed</td>
<td>Read critiques from ESMES/ISMEs Monthly meetings</td>
<td>Meet one-on-one as needed</td>
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MATRIX PROGRAM CONTACTS

MATRIX Website: https://intranet.med.wisc.edu/research/matrix/

MATRIX Program Email: matrixmentoring@med.wisc.edu

Program Administrators:

Hector Valdivia, MD, PhD, Director, Cardiovascular Research Center
MATRIX Faculty Director
Email: hvaldivia@wisc.edu
Phone: 608-265-5392

Debbie Melzter, MS
MATRIX Program Director
Email: dmeltzer@wisc.edu

Christy Schulz, MS, Director, Research Administration
MATRIX Administrative Staff
Email: crschulz@wisc.edu
How to get and keep your lab funded

Jonathan Chernoff*
Fox Chase Cancer Center, Philadelphia, PA 19111

ABSTRACT Much has been written about the seemingly capricious manner by which grant proposals are ranked and awarded by the National Institutes of Health and similar agencies, yet some scientists are able to maintain stable funding over long periods of time. While raw luck may certainly play a role in this process, particularly when paylines are tight, it is also possible that skill—in the art of grant writing at least—could represent a decisive factor. Here, I submit that, even as we attempt to reform and one day perfect the grant review process, there are actions that applicants can take today to get better results from the system we have.

While one might think that an applicant’s stellar reputation, brilliant ideas, and tantalizing preliminary data would guarantee abundant funding, sadly, such is not always the case. Many traditional granting agencies tend to lean conservative, meaning that, like trial lawyers, they don’t like to see a question posed if one doesn’t already have a pretty good idea of the answer (Lee, 2007; Maxmen, 2009; McNeil, 2014; Voosen, 2015). This tendency dictates certain techniques in grant preparation that, for many scientists, go strongly against the grain. In particular, risk-taking, even by highly qualified, accomplished applicants, is often unrewarded, and perhaps even actively punished, in grant reviews (German, 2015; Gallo et al., 2018). Conversely, if the context is interesting enough and detailed mechanisms can be discovered or at least confirmed, incremental experiments that take one from point A to B can be easier to fund.

Over the course of 26 years of continuous funding from the National Institutes of Health (NIH), I’ve learned a few things about the roles of luck and skill in obtaining grants, and I have distilled them into 10 principles and a few corollaries. While following these principles will not guarantee success, they have worked well for me and many others whom I have mentored.

1. Don’t apply for something you won’t get. Ted Williams was one of the best and most disciplined hitters in baseball history. By relentless study of his own at-bats (and this, before the era of modern, portable video), he was able to determine his success in hitting pitches located in each of 77 different, baseball-sized cells in the strike zone (Williams and Underwood, 1986). Over time, he learned to ignore pitches that were difficult for him to hit. Similarly, there are many tempting grant proposals that are dangled in front of scientists in the form of Requests for Applications (RFAs), but that doesn’t mean you should apply for them, as the amount of time and effort wasted on an unsuccessful application can be considerable. Instead, you should focus on opportunities in the fat part of your strike zone, aiming for a similar batting average as Ted Williams; that is, about a third of your at-bats should result in hits. For junior investigators who lack the experience to define their strike zone, let interest be your main guide regarding whether to apply for RFAs and don’t worry too much if you initially strike out more often than the veterans at your institution.

2. Don’t get married to any one protein or gene, unless it’s a trophy spouse. Some genes are so important to cell biology that you can spend an entire career fruitfully examining their regulation and function. However, such molecules are few in number, and anyway, your ability to keep coming up with fresh angles will decline with time. If you are a gene- or protein-centric scientist, it is best to consider a divorce from your current research partner every decade or so.

3. You can make a dead frog twitch, but you can’t shock it back to life. However much you love your grant proposal, and however flushed with outrage you become when reviewers do not share your ardor, there are many cases where it’s best to just let it go. A score of greater than 4 on certain aspects of an NIH-scored proposal, particularly in the category of “investigator” or “environment,” is, in general, fatal. While it can be exceedingly difficult to rein in emotions, you shouldn’t take such comments too personally. For example, the unkindest cut—being rated badly in the investigator column—may simply mean that the reviewers felt

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*Address correspondence to: Jonathan Chernoff (Jonathan.Chernoff@fcchc.edu). Abbreviations used: NIH, National Institutes of Health; RFAs, requests for applications.

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your skills did not match what the project requires, not that you, personally, are an unskilled person. That said, let’s be clear: in this system or any other, reviewers can be unkind, unfair, unwise, and worse. Instead—maybe after a drink or two, and definitely after at least one night’s sleep—you should consider whether it’s time to surrender the battle (as some proposals simply cannot be resurrected) while regrouping to prosecute the war on another day on another front.

4. In grant writing, “significance” is overrated and storytelling is underrated. This point has been stressed by others, but can hardly be overemphasized (Padian, 2018). For reasons perhaps best understood by cognitive scientists, humans respond better to stories than to facts and figures, however artfully arranged (Haven, 2007; Zak, 2014). You should use that trait to your advantage by crafting your proposal as a tale of wonder. Think about your proposal as a novel: who are its protagonists and what’s so interesting about them (background section); what’s their recent back story (preliminary data); what problems might they encounter and how might they be resolved (experimental section); and finally, when the journey’s over in 5 years, why will it all have mattered (summary)? If your reviewer becomes engrossed in your tale, minor quibbles about the particulars of the experiments you’ve proposed (aka “death by a thousand cuts”) might be overlooked or forgiven. How best to refine such skills? Some academic centers offer formal training in grant writing or employ professional writers to help the faculty, and such resources should be used where available. Whether or not this is the case at your institution, you can improve your writing by intentional practice, using a more critical ear and eye than usual. This exercise need not entail extra work, as many scientists by necessity spend long hours at their keyboards dealing with copious amounts of correspondence. While emails often deal with the mundane, even these brief missives can be done with elegance and panache if you consciously pay attention to basic compositional principles. When in doubt, you could do worse than heed the advice given to the poet W. S. Merwin by Ezra Pound: “Write 75 lines a day” (Lake, 2010). Doing so can help hone your skills at storytelling and, in turn, help you become a better grant writer.

On the other hand, most grant writers easily ace the “significance” section, as, given how little we understand about basic mechanisms in cell biology, let alone how these relate to important human ailments, it is not at all difficult to link your proposed work to some weighty matter of obvious importance. Because this section is akin, in baseball terms, to a slow pitch down the middle of the plate, you are unlikely to strike out no matter what you write, and you shouldn’t need to spend more than 15 minutes writing it.

I am not arguing that this is how things should be or that this is the best of all possible systems, and I totally agree that well-designed experiments, logically ordered, should be attractive, even if one lacks the art of blarney, but good storytelling skills will take you a long way with the system we have.

5. Unbiased screens are the wellspring of discovery: never propose one. Given the value of screens, this idea can be difficult to accept, but the fact is that our current system favors experimental schemes that flesh out existing models rather than those that could create new ones. If you want to explore, you’ll need to figure out a way to do it without asking anyone to pay for it. This is a place where institutional pilot grants or philanthropy can be most helpful. Alternatively, if a screen is vital to your project and must be part of your aims, you will need to unambiguously show that the proposed schema works and, ideally, tease your reviewers with a few preliminary hits that make them hunger for more.

6. Build cell and animal models on your own time and dime. Similarly, if you use newly created cell or animal models to test your ideas, these are apt be seen favorably by reviewers, as they demonstrate your long-term planning and devotion to the project as well as your unique position to carry out the work. That said, reviewers generally look harshly on plans to create such models. To find the funds to carry out this vital work, see point 5.

7. If you need collaborators, go straight to the top. Oftentimes you might be tempted to turn to your nearest colleagues who have the skills to assist in the design and/or execution of experiments. You should resist this impulse, unless you have a preexisting, productive relationship with said colleagues, documented by joint publications and/or grants. Otherwise, it’s often better to get a letter of support from someone recognized as the best in the business at whatever tasks need assistance. If you don’t know such people, you should get to know them, as their names and commitments can add helpful gravitas to your proposal.

8. Specific aims should be sketched with chalk, not etched in stone. While one needs to stay within proper ethical limits, you should recognize the wisdom in the old saying about battle plans: they rarely survive first contact with the enemy. Scientific research being as unpredictable as it is, your initial plans are likely to change, and there is no shame in that. Indeed, adaptability is a cardinal virtue in research, and if you need to change plans, even radically, you should go where the experiments take you, irrespective of your stated specific aims. A corollary to this idea is that, by the time your grant is submitted, aim 1 should be largely complete, as the line between what represents definitive preliminary data and what represents experiments in aim 1 can be exceedingly fuzzy.

9. Parsing study section rosters is about as useful as reading tea leaves. Too much time and energy is devoted to predicting the optimal study section for your proposal. With some exceptions, it is just as well to let the NIH staff decide. Just because you know someone on the study section, that doesn’t mean that person will be the one to evaluate your proposal or that you will get a favorable review.

10. Call your program officer if you must, but don’t expect too much. In my experience, if you need to call your program officer, you are already in a bad place. Program officers are generally as helpful as they can be, which is to say, not all that helpful. This is not because they are bad or ineffective people; it’s because they have limited ability to do what you want—namely, bump your grant to funded status. If you do contact your program officer, it is not consolation you should seek, but advice as to his or her “read” of the review and suggestions for how to improve the proposal.

In summary: while the system we have is deeply flawed and often unfair, it is not totally random. As the great baseball executive Branch Rickey is quoted as saying: “Luck is the residue of design.” When applied to the world of NIH grant funding, I submit that there are many things you can do to make yourself more likely to be lucky.

ACKNOWLEDGMENTS

I thank my many colleagues at Fox Chase Cancer Center, who challenge me daily and who have offered many thoughtful suggestions regarding this essay.

REFERENCES


German RN (2015). Healing the NIH-funded biomedical research enterprise. Science Direct 161, 1485-1491.


Mentoring is...

A collaborative learning relationship that proceeds through purposeful stages over time and has the primary goal of helping mentees acquire the essential competencies needed for success in their chosen career.

It includes using one’s own experience to guide another person through an experience that requires personal and intellectual growth and development.
Mentoring is...

A complex, bi-directional relationship that...

• Occurs within a cultural context
• Has an impact on trainees’ academic and career pursuits
• Is greatly shaped by the critical role of primary research mentors

ICTR
UW Institute for Clinical and Translational Research

Research says mentoring matters.

Strong mentorship has been linked to:

• **Enhanced science identity, sense of belonging, and self-efficacy**
  (Palepu *et al*., 1998; Garman *et al*., 2001; Paglis *et al*., 2006; Lopatto, 2007; Bland *et al*., 2009; Feldman *et al*., 2010; Cho *et al*., 2011; Chemers *et al*., 2011; Thiry and Laursen, 2011)

• **Persistence**
  (Gloria *et al*., 2001; Solorzano, 1993; McGee and Keller, 2007; Sambunjak *et al*., 2010; Williams *et al*., 2015; Bordes-Edgar *et al*., 2011; Campbell and Campbell, 1997)

• **Research productivity**
  (Steiner and Lanphear, 2002, 2007; Wingard *et al*., 2004)

• **Higher career satisfaction**
  (Schapira *et al*., 1992; Beech *et al*., 2013)

• **Enhanced recruitment of URMs**
  (Hathaway *et al*., 2002; Nagda *et al*., 1998)

ICTR
UW Institute for Clinical and Translational Research
Research says trainees from underrepresented groups are less likely to be in effective mentoring relationships.

- URMs typically receive less mentoring than their non-minority peers (Thomas et al, 2001; Helm et al, 2000; Morzinski et al, 2002)

- Minority investigators indicate that inadequate mentoring posed obstacles to obtaining funding (Ginther et al, 2011)

**Mentoring Roles**

- ADVISOR
- CONSULTANT
- TEACHER
- MANAGER
- ROLE MODEL
- COUNSELOR

ICTR
UW Institute for Clinical and Translational Research
Responsibilities of MATRIX “Grantsmanship Coaches”

- Share in-depth scientific knowledge, best practices, and success in acquiring research awards
- Demonstrate skills directed to inclusive excellence
- Apply well-practices expertise in effective proposal writing
- Complement, not replace, the mentoring and guidance from departments/divisions
- Provide constructive, timely/real-time, intense, and iterative feedback
- Facilitate camaraderie and learning in group sessions
How do we learn to mentor effectively?

- I learned from making mistakes
- From watching my own mentor make mistakes
- Trial and error

Mentoring can be taught using a structured, process-based research mentor training curriculum.

Elements of Effective Mentoring Relationships (Pfund C et al, 2016)

- **Inter/Disciplinary Research Skills**
  Knowledge, techniques, collaboration, responsible conduct of research

- **Interpersonal Skills**
  Listening actively, aligning expectations, building trust

- **Culturally-Focused Skills**
  Promoting inclusion, reducing bias and stereotype threat

- **Psychosocial Skills**
  Providing motivation, developing a sense of belonging

- **Sponsorship Skills**
  Fostering independence, promoting professional development
The Journey toward Culturally Responsive Mentoring

Our Curriculum

3 evidence-based, self-paced online mentorship training modules:
1. Optimizing the Practice of Mentoring (OPM)
2. Introduction to Culturally Aware Mentorship (iCAM)
3. Enhancing Motivation Using the CARES Mentoring Model (CARES)

3 “in class” debriefings and conversations:
1. January 23, 2019: Program launch
2. April 3, 2019: Modules 1 and 2
3. May 14, 2019: Module 3 and next steps
Introduction to Culturally Aware Mentoring (iCAM)

- Developed by Dr. Byars-Winston and the NRMN team
- 60 minutes to review
- Completion of brief readings and reflections in preparation for April 3, 2019 activities


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Optimizing the Practice of Mentoring (OPM)

- Developed by Dr. Weber-Main and University of Minnesota CTSI team
- 90-120 minutes to complete
- Core topics include:
  - Introduction to different mentoring models
  - Overview of a mentor’s roles and responsibilities
  - Navigating the phases of a mentoring relationship
  - Strategies for cultivating effective relationships with mentees
  - Addressing challenges to the mentoring process
- Text, audio, mini-presentations, self-assessments, reflection exercises, and other brief interactive activities
- Completion of a Mentoring Action Plan
- Resource toolkit
Enhancing Motivation Using the CARES Mentoring Model (CARES)

- University of Minnesota adaptation of an in-person mentoring workshop, with foundation in self-determination theory
- 75 minutes to complete
- Mentoring approach focused on fulfilling core psychological needs that enhance a mentee’s motivation
- Motivation drives student and employee engagement, persistence, satisfaction, and performance
- “In class” debrief on May 14, 2019