Special Thanks

K-Club Sponsors
• Emory+Children’s Pediatric Research Center
• Emory Department of Medicine
• ACTSI

New Biosketch Test Kitchen
• Rollins School of Public Health including Gary Miller, PhD and Adrienne Schwartz
• Janet Gross, PhD
• Sarah Schultz, PhD & J. Lucas McKay, Ph.D.
Disclaimer

• All NIH instructions are presented accurately
• All interpretations and opinions are based on past experience and educated guesses
• This is truly unchartered territory; Reviewer opinion is subject to change as this new biosketch is actually put into practice
• Stay tuned for perhaps more refined suggestions and input, but for now...Thank you to our panelists for providing their best, educated guesses on how this New Biosketch can best be utilized!
Panelists

• **Saul Karpen, MD, PhD** Professor of Pediatrics, (GI)
• **Nael McCarty PhD**, Associate Professor of Pediatrics (PACS)
• **Gary Miller, PhD** Professor of Environmental Health
• **Russ Price, PhD**, Professor of Medicine, (Nephrology)
• **Paul Spearman, MD**, Professor of Pediatrics (ID)
What is an NIH Biosketch?

Highly formatted component of a grant proposal that enables reviewers to evaluate the qualifications of the PI and scientific team that will be executing the research project.
Sections of the NIH Biosketch – Only until May 25, 2015

Heading:

Name, eRA commons, Position, Education & Training

A. Personal Statement
B. Positions and Honors
C. Selected Peer-reviewed Publications
D. Research Support

After 5/25/15: The new revised instructions allow for inclusion of citations in this section

After 5/25/15: Section C replaced with Contributions to Science Section
Sections of the NEW NIH Biosketch
Required Starting May 25, 2015

Heading:
Name, eRA commons, Position, Education & Training

A. Personal Statement – including new allowance for citations
B. Positions and Honors
C. Contributions to Science
D. Research Support
New Biosketch: Why?

According to Sally Rockey, NIH Deputy Director for Extramural Research (Posted on May 22, 2014) “Rock Talk: Helping Connect you with the NIH Perspective”
The new NIH biosketch emphasizes your accomplishments instead of just a list of publications, which we questioned as the best way to showcase your scientific contributions.

Hopefully, this change will redirect the focus of reviewers and the scientific community more generally from widely questioned metrics, like the number of published papers…

We strongly believe that allowing a researcher to generate an account of his or her own work will provide a clearer picture of each individual’s contributions and capabilities. But one might question whether this new biosketch will have a negative impact on younger investigators whose body of work may not be as robust as more established investigators. I believe the contrary is true; this new format will give early career investigators a platform for describing and framing the significance of their contributions, which should help reviewers better understand their accomplishments.
But what does the scientific community think?
Rock Talk: Scientific Community Reaction

As a current study section chairperson I am completely against this change. **It only adds to the subjectivity of the review process and to the workload of the investigators (and the reviewers).**
I don’t see it as equalizing. I see it as further stacking the deck for senior investigators with years to thread together such a narrative. I see it as an additional level of review as statements will need to be compared with publication records and impact. I see a tremendous waste of time for PIs trying to craft these things to achieve a delicate balance between hyperbole and modesty.
Objections Galore

Drop the new biosketch idea…

Objectivity replaced by subjectivity. Facts replaced by boasts. A step in the wrong direction.

The new guidelines for the biosketch are a huge waste of time both for the applicant and the reviewer.

The new biosketch is a waste of everyone’s time.

A monumental waste of time. And a replacement of objective information with subjective fluff. A terrible idea.

The new Biosketch is just another waste of time and should be cancelled.

See many more comment at:

http://nexus.od.nih.gov/all/2014/05/22/changes-to-the-biosketch/
http://nexus.od.nih.gov/all/2015/02/20/supporting-the-call-to-peer-review-service/
Rock Talk: Scientific Community Reaction

As a science fiction and grant writer, this new NIH biosketch format should generate lots of new business for me. I specialize in the sections that nobody wants to write and fewer folks want to review.
The New NIH Biosketch – still a reality… although now postponed

Update: New Biographical Sketch Format Required for NIH and AHRQ Grant Applications Submitted for Due Dates on or After May 25, 2015

Notice Number:
NOT-OD-15-032

Key Dates
Release Date: December 5, 2014

In Dec 2014, Sally Rockey thanked everyone for their “lively comments,” and indicated that the new format would still be used, but with delayed implementation.
“Complete and utter rubbish. No one asked for a delay, everyone clearly asked for this disastrous plan to be aborted, full stop. I have no more words.”
Advice

Once spoken by a wise man:

“Vent appropriately, then get over it!”

— It is appropriate and reasonable to dislike the changes. Informing program officers, posting on websites, etc. are all reasonable actions.

— For applications submitted May 25, 2015, and after, the New NIH Biosketch is the new reality.

— Refocus energies into how this can best work to your advantage and help inform those reviewers who will read it (may be entire study section).
What do Reviewers look for in the Biosketch?

An important evaluation tool

A few important points you should aim to convey:

1. You are qualified to do the job
   - Show a good match between your track record (Training + current activities + publications) and the proposed research aims
   - Show you are you a good match for the type of grant you are submitting (e.g., F32 vs. K99/R00 vs. R01)

2. You have peer-reviewed publications and accomplishments relevant to the proposal or those that suggest that you are likely to accomplish & publish good science in the future
Sections of the NIH Biosketch

Heading:
Name, eRA commons, Position, Education & Training

A. Personal Statement
B. Positions and Honors
C. Contributions to Science
D. Research Support
What’s New for the Biosketch?

New Format Changes in a Nutshell:

1. Extends page limit from four to five pages
2. Allowance for listing publications both in the personal statement and contributions to science section
3. Allows researchers to describe up to five of their most significant contributions to science
4. You may now include a link to full list of published work
5. Access to a tool to help build the New Biosketch
NCBI - National Center for Biotechnology Information

- Part of the NIH and the National Library of Medicine, and the institution that manages PubMed
- For all individuals who apply for, receive or are associated with research investments from federal agencies.
- Supports and distributes a variety of databases for the medical and scientific communities
- Through My NCBI, includes access to other features including My Bibliography collection & SciENcv professional profile service
My Bibliography

• Found within My NCBI
  – Use of My Bibliography helps to report compliance to eRA Commons and using SciENcv to create BioSketches
  – A reference tool that helps you save your citations directly from PubMed or, if not found there, to manually enter citations using My Bibliography templates
  – My Bibliography provides a centralized place where citations are easily accessed, exported as a file, and made public to share with others
SciENcv: Science Experts Network Curriculum Vitae

Science Experts Network Curriculum Vitae (SciENcv),

• A system that allows you to enter your biographical data once and convert it into biosketches that can be used with both NIH or NSF grant applications and annual progress reports.

• Need My NCBI account to use

• Use of SciENcv helps with creating Biosketches

• Panelist experiences?

Instructional Video: https://www.youtube.com/watch?v=PRWy-3GXhtU&feature=youtu.be
Tools to build your new Biosketch
NIH Notice: NOT-OD-15-032

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Sections of the NIH Biosketch

Heading:
Name, eRA commons, Position, Education & Training

A. Personal Statement
B. Positions and Honors
C. Contributions to Science
D. Research Support
A. Personal Statement

Briefly describe why you are well-suited to receive the award for which you are applying. The relevant aspects of your training; your previous experimental work; specific topic or related topics; your technical expertise; your collaborators or scientific environment; or your past performance in this or related fields (you may mention specific contributions to science that are not included in Section C). Also, you may identify up to four peer-reviewed publications that specifically highlight your experience and qualifications for this project.

If you wish to explain impediments to your past productivity, you may include a description of factors such as family care responsibilities, illness, disability, and active duty military service.
Personal Statement
Content and Stylistic suggestions

• As before, CUSTOMIZE this for each new grant application so that it speaks *directly* to this particular grant proposal
• Sell your role in the proposed research & speak to the type of funding mechanism connecting it to your goals
• Be accessible – you may use 1st person writing
• Be aspirational. Show excitement/passion for your research
• If referencing impediments, be brief and non dramatic
More Suggestions for Writing Personal Statements

• Length – Should aim for ½ page and not exceed 1 page
• As PI, you are responsible for not just customizing your own personal statement but also for ensuring the other key personnel biosketches have personal statements that speak to their specific role on your project
• Depending on the type of grant, emphasize your role for:
  – Leadership (PI of a R grant)
  – Training potential for you to advance in your field (F32 or K)
  – Are you a mentor?
  – Track record and experience to support the proposed aims
  – Tone should be confident but not arrogant
  – Don’t just walk us through your accomplishments but speak to the science in this proposal
Personal Statement Example – Use of 1st person and aspirational

Excerpt from Sarah Shultz, PhD Biosketch

A. Personal Statement

The goal of my research is to investigate the neural and behavioral origins of disrupted social engagement in individuals with Autism Spectrum Disorders (ASD). My long-term goal is to understand the pathogenesis of ASD, to improve early detection of ASD, and to inform treatment and intervention.… [and] to lead an independently funded research program in developmental social neuroscience, with a focus on improving the long-term outcomes of individuals with ASD.
Excerpt from Sarah Shultz, PhD Biosketch

A. Personal Statement

Identify up to four peer-reviewed publications that specifically highlight your experience and qualifications for this project.

My previous eye-tracking work resulted in the discovery of a novel method of quantifying viewers’ moment-by-moment implicit assessment of perceived stimulus salience during free-viewing of naturalistic social scenes (e.g. children at play) in toddlers with and without ASD. Of particular relevance to the proposed K01, I conducted behavioral and fMRI studies of infants between 1- and 4-months of age to investigate an experience-expectant process whereby cortical circuitry and behavioral listening preferences for biological sounds that are initially broadly tuned become increasingly refined with exposure to human speech. The resulting publication represents one of the first fMRI studies in infancy to examine cortical specialization for social processing during a developmental period characterized by a rapid behavioral transition. In addition, my mentors and I co-authored a review that advances a novel model of autism pathogenesis, providing the framework for the hypotheses to be tested in the proposed K01.


Personal Statement Example
Inclusion of peer reviewed citations & other highlights

Excerpt from Gary Miller, PhD Biosketch
A. Personal Statement – Identify up to four peer-reviewed publications that specifically highlight your experience and qualifications for this project.

I have also been helping lead an initiative on the concept of the exposome, the environmental equivalent of the human genome. The exposome has been prominently featured in the strategic plan of NIEHS and I lead the first NIH-funded center on the topic. Our center has been providing key scientific leadership to this emerging concept through a variety of mechanisms.

c. An Introduction to the Exposome. Continuing Education Workshop presented at the 2015 Society of Toxicology Annual Meeting. Miller GW, Chair
d. I develop and maintain the website for the Human Exposome Project

Creative liberty listing highlights that aren’t publications
Inclusion of Citations in Personal Statement

Panelist thoughts?

• Instructions say: “You may identify up to four peer-reviewed publications that specifically highlight your experience and qualifications for this project.”

• How to pick?

• Should people do their Contributions of Science first and come back to this?

• Can there be repetition between the personal statement and contributions of science sections?

Should we revisit these questions after we review the Contributions to Science section?
Sections of the NIH Biosketch

Heading:
Name, eRA commons, Position, Education & Training

A. Personal Statement
B. Positions and Honors
C. Contributions to Science
D. Research Support
Section C. Contributions to Science

Describe up to 5 of your most significant contributions to science, and for each of these:

• indicate the historical background that frames the scientific problem;
• the central finding(s);
• the influence of the finding(s) on the progress of science or the application of those finding(s) to health or technology; and
• your specific role in the described work
Within Each of the Contributions

• Each of the 5 ‘contributions’ can be no more than ½ page each including figures and citations

• List up to 4 four peer-reviewed publications or other non-publication research products

• Provide a URL to a full list of your published work as found in a publicly available digital database such as SciENcv or My Bibliography, which are maintained by the US National Library of Medicine

Complete List of Published Work in My Bibliography:
Thinking about my “Contributions to Science”

• What goes here?
• How do I organize this?
• What do I report?
Contributions to Science

• Most of us get into this field so that we can make a contribution to science.

• Make a list. Reflect upon what you have actually accomplished.

• Some ideas
  ✓ In your previous research experiences, what did the team do and what exactly did you do?
  ✓ What did you learn from what you did?
  ✓ Reflect on what you found and how it may have led to the current proposal.
Contribution to Science Example

Excerpt from Gary Miller, Ph.D. Biosketch

2) Role of plasma membrane monoamine transporters response to psychostimulants
During postdoctoral training in the Caron laboratory I was able to contribute (as co-author) to several important papers on monoamine transporters, which were based on novel mouse gene knockout models including, dopamine transporter, the norepinephrine transporter, and the vesicular monoamine transporter. These papers have been very influential in our understanding of the function of these transporters.

3. A third theme of my research, conducted with the mentors of this K01 application, is focused on quantifying and understanding atypical development of brain and behavior in ASD. Although reduced interest in and engagement with social stimuli is both a defining feature of ASD and a likely contributor to atypical brain development, little is know about what individuals with ASD perceive as being important or salient as they navigate the social world. To address this important need in autism research, I developed a novel method for quantifying viewers’ moment-by-moment implicit assessments of perceived stimulus salience. This method capitalizes on the fact that people spontaneously inhibit eye-blinks when processing salient visual information in order to minimize the loss of visual information that occurs during a blink. Thus, by measuring the precise timing of when individuals inhibit their blinking we were able to gain insight into a critical aspect of atypical social experience in ASD: not only what a child is looking at but also how engaged he or she is with what he or she is looking at. Our findings showed that toddlers with ASD are more engaged by physical, rather than social, events in the environment. This methodological discovery not only provides new inroads into quantifying the unique perspectives and experiences of individuals with ASD, but also has far-reaching applications for any field of research where an individual’s subjective assessment of perceived stimulus salience is an important area of investigation.


C3. Research tools: I have applied engineering tools and approaches to all aspects of my work. Recently, I developed a new method of time series data analysis that addresses the common problem of how to compare “curves” of neurophysiological or other data. The paper and accompanying dataset and software allows scientific audiences to address this problem in a general way, identifying differences between curves without introducing bias or reducing power by assuming time windows (Figure 3). Based on interest from researchers in the United Kingdom, Belgium, and France who have already successfully applied the software to their own data, I believe it has the potential to be incorporated into statistical packages or other software.


Figure 3. Statistically-significant differences between EMG waveforms from different experimental conditions identified automatically with wavelet-based functional ANOVA. Nonzero regions of the red “contrast curves” represent statistically-significant differences between average EMG data recorded in different conditions (top to bottom). Note in top left, nonzero difference during “IB” period in the mean difference curve representing differences between averages of each condition does not reach statistical significance with wfANOVA - consistent with an earlier analysis using traditional statistics. Adapted from McKay et al., 2010.
Contribution to Science Example
Excerpt from Gary Miller, Ph.D. Biosketch

6) Editor-in-Chief, Toxicological Sciences
In 2013, after a national search I was selected as Editor of Toxicological Sciences. ToxSci is the official journal of the Society of Toxicology, an organization of over 7000 members. As Editor I oversee all decisions at the journal including editorial policy, assignment of associate editors and editorial board members, and meeting with society leadership. During my tenure I have overhauled the journal adding new features, such as Look Inside ToxSci, Contemporary Reviews in Toxicology, and a newly designed cover that allows inclusion of artwork from multiple papers. In my role as editor I also helped organize an educational workshop at the 2015 Society of Toxicology annual meeting on crafting high impact manuscripts. I was able to recruit influential speakers, including Dr. Marcia McNutt, Editor-in-Chief of Science. I have also published several editorials, which are designed to address key issues in the field. These editorials are some of most heavily downloaded articles in the journal.

Contributions to Science

List up to 4 four peer-reviewed publications or other non-publication research products. Can include audio or video products; patents; data and research materials; databases; educational aids or curricula; instruments or equipment; models; protocols; and software or netware that are relevant to the described contribution.

• Should applicants be careful about the non-publication liberties they might take in this section?
• What non-publication types of accomplishments are appropriate to cite?
• What will reviewers care about?
Contributions to Science

• The directions say I can describe up to 5 of my most significant contributions to science, but how many should I really have?
• Is it better to wow them with substance or volume & style?
• What kind of creative liberties and persuasive language should I be using?
**A Note about Humility vs. Arrogance**

- Extraordinary claims require extraordinary evidence
- The magnitude of your supposed accomplishment must align with your tangible contributions
- Do not misrepresent any facts
  - List all publications as they would appear in any searchable database
- Self-aggrandizing will certainly backfire. Probably better to lean towards humility to increase likability factor
Rock Talk: Scientist Reaction

• Let’s not ignore the egocentricity that often accompanies ability and talent... such behavior could be counter-productive; if I were reviewing the application of someone whose career I knew something about and considered that he/she was not being objective (or, worse, dishonest) about his/her accomplishments, I would be poorly disposed to that person...

• If I were a reviewer and detected someone who seriously triggered my BS-meter, I would feel annoyed, which is not a good attitude when reviewing grants...
Contributions to Science – list how many?

Guidance for Assistant Professors

• If you have 5 significant accomplishments, congratulations, you should be awarded tenure any minute.

• However, it is more likely that you have had time to make 2 or 3 significant contributions. Better to have fewer well-documented examples that 4-5 less-documented.

• Focus on research related accomplishments.

Suggestions from Gary Miller, PhD
Contributions to Science – list how many?

Guidance for Associate Professors

• 3-4 Significant accomplishments should be used. If you have 5 you should probably be a Full Professor.

Suggestions from Gary Miller, PhD
Contributions to Science – list how many?

**Guidance for Professors**

- One would hope that Full Professors have 4-5 significant contribution backed by 4 strong papers.
- Full professors have had more time to lead initiatives. They might include one contribution that involves programmatic development or national/international leadership if relevant to the application.

(Again, probably better for more junior investigators to focus on research-oriented accomplishments.)

*Suggestions from Gary Miller, PhD*
Final Thoughts for New Biosketch

- Read and understand the new guidelines
- Sketch out your accomplishments (dedicate time for reflection)
- Discuss in mid-size groups within your discipline
- Work with peers and mentors to share, review, and exchange ideas
- Revise, revise, revise
Questions & Discussion
Appendix Materials

Helpful links and resources when creating your New Biosketch
NIH Links

• NIH form pages and instructions:
• NIH FAQ Page:
Important Links

SPH Compilation of New NIH Biosketch Resources
http://www.sph.emory.edu/research/grant-writing-tools/index.html

Pedsresearch.org Compilation of New NIH Biosketch Relevant Notices/Links
http://www.pedsresearch.org/NIHBIOSKETCH/
Instructions

• There are 3 sets of Instructions and Samples
  – General
  – Predoctoral Fellowship
  – Postdoctoral Fellowship

• There are 2 new Blank Format Pages
  – General biosketch
  – Fellowship biosketch
    • (predoctoral and postdoctoral use same page)

• All can be found here:
### Biosketch FAQs

The following biosketch formats must be used for due dates on/after May 25, 2015 and are encouraged for applications due on/after January 25, 2015 **NOT-OD-15-32**.

<table>
<thead>
<tr>
<th>Biosketches</th>
<th>Date Posted</th>
<th>Blank Format Page</th>
<th>Instructions and Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General</strong> Biographical Sketch Format Page – Forms Version C (use also for Fellowship Sponsor/Co-Sponsors)</td>
<td>11/25/2014</td>
<td>MS Word (29 KB)</td>
<td>MS Word (40 KB)</td>
</tr>
</tbody>
</table>
| **Fellowship** Applicant Biographical Sketch Format Page – Forms Version C (use only for individual predoctoral and postdoctoral fellowships, dissertation research grants [R36], and Research Supplements to Promote Diversity in Health-Related Research [Admin Suppl]) | 11/25/2014 | MS Word (33 KB) | Predoctoral: MS Word (43 KB)  
Postdoctoral: MS Word (47 KB) |

**Biosketch Web page**
My NCBI – New NIH Biographical Sketch Available in SciENcv

2015 January 14 [posted]
2015 January 20 [Editor's note added]