B³: Build a Better Biosketch

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December 13, 2018

Components of NIH Biosketch

- Non-Fellowship
- Fellowship

SciENcv Demonstration

Biosketch Noncompliance

Curious to learn about formatting and content that make biosketches really stand out and the most important aspects to include.
The NIH biographical sketch (biosketch) is a 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. How much should a CV and Biosketch overlap?

WHAT DO REVIEWERS LOOK FOR IN THE BIOSKETCH?

- Are you qualified to do the job? (Personal Statement)
- Do you have peer-reviewed publications relevant to the proposal? (Contributions to Science)
- Do you have appropriate time/effort devoted to the project? (Research Support/Positions)
COMPLIANCE – TRANSITION TO NEW BIOSKETCH FORMAT PAGE

- No new changes to the NIH biosketch since May 2015
- NIH Biosketches have been updated to reflect the new expiration date of 03/31/2020

BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors. Follow this format for each person. DO NOT EXCEED FIVE PAGES.

NAME:

eRA COMMONS USER NAME (credential, e.g., agency login):

POSITION TITLE:

EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)

<table>
<thead>
<tr>
<th>INSTITUTION AND LOCATION</th>
<th>DEGREE (if applicable)</th>
<th>Completion Date MM/YYYY</th>
<th>FIELD OF STUDY</th>
</tr>
</thead>
</table>

A. Personal Statement

B. Positions and Honors

C. Contributions to Science
BIOSKETCH FORMATTING GUIDELINES AND SUGGESTIONS

- Limited to five pages
- Font size 11 points or larger
- Arial, Helvetica, Palatino Linotype, or Georgia typeface in black color
- Figures, tables, and graphics are NOT allowed

BIOSKETCH CITATIONS

Allowed to cite up to 24 research products collectively within the personal statement and contributions to science sections. These include:

- Published papers
- Audio or video products
- Conference proceedings (including abstracts, posters, presentations)
- Patents
- Data and research materials
- Databases
- Educational aids or curricula
- Instruments or equipment
- Protocols
- Software or netware
- Interventions

What do you add when you’re very early on in your career with limited funding and/or manuscripts are still under review?

Tell me a bit more about PMCID....

Can you add citations from other sources?
A. PERSONAL STATEMENT

- Briefly describe why you are well-suited for your role(s) in this project
  - Collaborations and skills
  - Training and experience

- Indicate whether you have published or created research products under a different name

- Can include life issues affecting your performance
  - E.g., family care responsibilities, illness, disability, active duty military service, etc.

- Postdocs/predocs should state their long-term goals

- You may cite up to four peer-reviewed publications or research products that highlight your experience and qualifications for the project

A. PERSONAL STATEMENT SUGGESTIONS

- Use the first paragraph to describe your research interests/expertise

- Use second paragraph to describe your specific role in the particular project, with emphasis on special experience or qualifications
  - This paragraph can and should be customized/interchangeable depending on the specific proposal

- Use third paragraph to highlight your mentoring experience and/or segue into/up to four relevant publications
  - Include PMCID numbers
  - Publications should be updated as needed

- Do not use this section to circumvent the proposal page limits
A. PERSONAL STATEMENT

EXAMPLE 1A - RESEARCH

A. Personal Statement

I am well published and widely recognized as an expert in applying biomechanical and neurophysiological principles to understand the coordination of movement in persons with post-stroke hemiparesis (paralysis of one side of the body) from the pathophysiological level to functional impairment. My research combines theoretical and experimental studies of the control of locomotion, functional biomechanics, bilateral coordination and clinical neurorehabilitation with the goal of improving walking in persons with neurological disorders. I have 20 years of experience, with research funding primarily from the NIH and VA, and have published more than 70 peer-reviewed articles. I have been PI or Co-PI of 16 different awards in stroke rehabilitation totaling more than $7 million, including continuous NIH R01 funding 2000-2013 and an R01 renewal pending. I also have been PI on Co-PI for another $1.5 million dollars in rehabilitation research not directly related to stroke.

I will serve as the Principal Investigator/Program Director for this COBRE application to establish the South Carolina Center for Recovery from Stroke. As Chair of the Department of Health Sciences and Research in the College of Health Professions, I have substantial administrative experience. I also have served on the Executive Committees for several large-scale centers including the University of Florida Claude Pepper Center on Aging, the VA Brain Rehabilitation Research Center in Gainesville, FL, and currently the South Carolina Clinical and Translational Research Institute (SCTR) MUSC.

I have substantial experience in mentoring junior faculty. I have served as primary mentor for five Assistant Professors who were awarded VA Career Development Awards. In total, I have served as mentor on 17 mentored grants for early-stage investigators, either NIH K awards or VA Career Development Awards, with most of the mentees (12) pursuing stroke rehabilitation research. In addition, I have served as primary advisor for 4 PhD students and as a committee member for 23 additional PhD students.

A. PERSONAL STATEMENT

EXAMPLE 1B - TRAINING

A. Personal Statement

I am widely recognized as an expert in applying biomechanical and neurophysiological principles to understand the coordination of movement in persons with post-stroke hemiparesis. My research combines theoretical and experimental studies of the control of movement, functional biomechanics and clinical neurorehabilitation with the goal of improving movement in persons with neurological disorders, predominantly post-stroke. I have >25 years of experience measuring motor performance related to neuromuscular control and have published >100 peer-reviewed papers. As PI or Co-PI, I have been awarded >$2 million in rehabilitation research funding.

I serve as the Program Director and PI (PD/PI) of the Center of Biomedical Research Excellence (COBRE) in Stroke Recovery. I also am PD/PI of the closely affiliated National Center of Neuromodulation for Rehabilitation (NC NNR), 1 of 6 funded Centers in the NIH Medical Rehabilitation Research Resource Network. This grant established a research and training center to advance the science of neuromodulation as applied to rehabilitation through training workshops, educational activities, pilot grants and a technical development program. We use resources developed by the COBRE in Stroke Recovery to provide advanced training in TMS neurophysiology and techniques to modulate plasticity such as TMS and tDCS. With its focus on neuromodulation and neurorehabilitation, the NC NNR is an integral part of the research and training program of the COBRE Phase II.

I also serve as PI of the COBRE Administrative & Mentoring Core (ADMN). I am ideally suited for this based on my experience directing 2 NIH-funded centers and serving as a mentor to numerous junior faculty investigators who have gone on to achieve independent R01 (or equivalent) funding. I also have extensive experience as a mentor to post-docs and PhD students. I currently am mentoring 1 VA CDA-2 awardee, 1 COBRE Jr, and am on the mentor team for 1 NIH K23 awardee, 1 institutional K12 awardee and 1 awardee in the NIH/NINDS R25-funded TRANSCEDES (Training in Research for Academic Neurologists to Sustain Careers and Enhance the Numbers of Diverse Scholars) program (this scholar at the University of Cincinnati is a neurologist seeking to establish a research program in neuromodulation for stroke rehabilitation). I have mentored (or been on the mentoring team of) 23 career development awardees, mostly in stroke rehabilitation research. The 5 VA career development awardees who worked with me as their primary mentor each have been awarded VA Merit Awards in stroke rehabilitation upon completion of their CDA-2 award. In total, I have served as a mentor for >5 million dollars of awards to junior faculty (exclusive of COBRE and NC NNR awards, both of which have very extensive mentoring and training roles). Given my extensive experience mentoring trainees and junior faculty, I am well positioned to be a faculty mentor for SCTR's K22 program. I look forward to contributing to this successful program as a mentor.
A. PERSONAL STATEMENT

A. Personal Statement

I am a clinician scientist who was uniquely trained as a molecular microbiologist and cellular biologist. Consequently, I have spent over a decade combining my skills to characterize complex epithelial cell and pathogen interaction in the oral mucosa using in-vitro human primary gingival epithelial (GEC) model and systems biology approaches. As a pioneer in this field, I have a demonstrated record of prolific collaborative research projects bringing critically novel insights on the multifaceted colonization mechanisms utilized by opportunistic bacteria in the oral cavity. I have been conducting research as a PI supported by NIH since 2001. My grant support has included several PI roles (one K08, two R01, and one ARRA supplement), two co-PI roles (subaward R01, R21), and several co-I roles. My lab has advanced and utilizes a variety of novel cellular microbiology tools and imaging approaches to examine cellular infection. I have successfully mentored and trained many post-doctoral fellows, graduate students, residents, dental students as well as research-clinical assistant-professors. I am very familiar with the important goals of the advanced education process and recruitment of students into biomedical research. I believe, this new training proposal will provide critically important emerging research areas and opportunities for the students such as studying bacterial pathogenesis and epithelial cell responses in the oral cavity, and I am pleased to serve as a mentor for the trainees in this timely novel research training program.

B. POSITIONS AND HONORS

- List in chronological order the positions you have held that are relevant to the application, ending with your current position

- List any relevant academic and professional achievements and honors
  - Students, postdoctorates, and junior faculty
    - Scholarships
    - Traineeships
    - Fellowships
    - Development awards
  - Clinicians
    - Clinical licensures
    - Specialty board certifications

- Include memberships on any federal panels
## B. POSITIONS AND HONORS

**EXAMPLE**

**Positions and Employment**

<table>
<thead>
<tr>
<th>Year</th>
<th>Position</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1989-1993</td>
<td>Assistant Professor, Dept. of Biochemistry &amp; Molecular Genetics, University of Virginia, Charlottesville, Virginia (UVA)</td>
<td></td>
</tr>
<tr>
<td>1993-1998</td>
<td>Associate Professor, Dept. of Biochemistry &amp; Molecular Genetics, UVA</td>
<td></td>
</tr>
<tr>
<td>1998-Present</td>
<td>Professor, Dept. of Biochemistry &amp; Molecular Genetics, UVA</td>
<td></td>
</tr>
</tbody>
</table>

**Other Experience and Professional Memberships**

<table>
<thead>
<tr>
<th>Year</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002-2010</td>
<td>Member, NCI Early Detection Research Network</td>
</tr>
<tr>
<td>2007-2009</td>
<td>Member, Susan G. Komen Breast Cancer Research Program</td>
</tr>
<tr>
<td>1998-2002</td>
<td>Scientific Advisory Council, National Cancer Institute</td>
</tr>
</tbody>
</table>

**Journal Reviewer**

- Cancer Research; Clinical Cancer Research; Nature Cancer Reviews; Cancer Epidemiology, Biomarkers and Prevention; International Journal of Cancer; Journal of Proteome Research; Proteomics; Proteomics Clinical Applications; Molecular and Cellular Proteomics; Biochemical Pharmacology; Cancer Gene Therapy; Gene Therapy; Expert Review in Proteomics; Expert Review in Molecular Diagnostics; Pharmacogenomics; Journal of Biological Chemistry; British Journal of Cancer; Urology; Hepatology

**Honors**

- 1991: Outstanding Young Faculty Award, UVA
- 1992: Excellence in Teaching, UVA

## C. CONTRIBUTIONS TO SCIENCE

- The proposed contributions do not have to be related to the project proposed in the applications.

- **BRIEFLY describe up to five of your most significant contributions to science**
  - Historical background that frames that scientific problem
  - Central finding
  - Influence and findings on the progress of science or the application of those findings to health or technology
  - Specific role in the described work

- Descriptions of contributions may include a mention of research products under development

- The description of each contribution should be no longer than one-half page, including citations
C. CONTRIBUTIONS TO SCIENCE
CONTINUED

- You may cite up to FOUR publications for each contribution
  - Peer-reviewed
  - Non peer-reviewed
  - Accepted for publication

- Investigators are allowed to provide a URL to a full list of their published work
  - Providing a URL to a list of published work is not required

- The URL MUST be to a federal government website (.gov suffix)
  - NIH recommends using My Bibliography

- The URL cannot be hyperlinked text

C. CONTRIBUTIONS TO SCIENCE
NIH FAQ

Scientific contributions for new scientists
- For individuals with one publication
  - Summarize the key findings of the paper and its importance

- For individuals with no publications
  - Provide a contribution describing your efforts on other scientists’ papers and projects

Contributions to science publications
- The investigator does not need to be an author on a publication used to reference a contribution to science
  - The investigator can briefly mention and list a key publication that builds on their work
C. CONTRIBUTIONS TO SCIENCE
SUGGESTIONS

- Keep the narrative(s) short
  - Three-four sentences followed by up to four publications and/or other products

- Give some thought to the organization/categorization within each contribution
  - E.g., by chronological events, by disease area, by methodologic approach, by type of research product (abstracts, peer-reviewed pubs, patents, etc.).

- Once written, this entire section will only need minor updates
  - E.g., addition of new research products

I would like to hear about strategies to have a compelling CTS section and personal statement, especially for junior investigators.

How do you choose publications for the CTS and write an intro for them?

Can alternative metrics be useful in showing the impact of an author’s work?
C. CONTRIBUTIONS TO SCIENCE

EXAMPLE 1

1. Neurobiology of addiction. Using neuroimaging techniques and pharmacologic probes, my research group has focused on investigating the underlying neurobiology of SUDs in an effort to identify new targets for therapeutic development. These studies have included use of real-time fMRI feedback to decrease nicotine craving and investigation of the relationship of neural correlates of impulsivity and relapse.

2. Research processes. As PD/PI of the MUSC Clinical and Translational Science Award (CTSA), I am interested in developing and sharing processes and innovations to facilitate the conduct of research. This includes development of tools to improve the informed consent process, use of the electronic health record to enhance clinical trial recruitment and feasibility testing, and systematic consideration of conflict of interest concerns.

EXAMPLE 2

1. Bacterial Invasion and Signaling in Human Gingival Epithelial Cells. My initial studies conducted in the early 2000s were the first to identify the gingival epithelial cell β1 integrin receptor for P. gingivalis’ surface protein “major fimbriae”, which primarily facilitates the organism’s attachment and subsequent internalization into the host cells. This research was also first to characterize the associated cellular downstream signaling and structural events that are key for P. gingivalis entry into “primary gingival epithelial cells” which is the model system we have been using in our lab for two decades with great success to produce physiologically consistent data. This line of research resulted in several high-impact journal publications which significantly increased our initial understanding of P. gingivalis molecular mechanisms of colonization in the oral mucosal tissues. The novel molecular approach we employed in the identification of the epithelial cell receptor for the bacterial fimbrial binding/invasion into host cells (β1) below was further applied by Fusobacterium nucleatum researchers to identify the FadA adhesion into the host cells.

2. Other Scientific Contributions of Importance to the Oral Bacteria Host Interaction Field. My laboratory has been a pioneer in genetic labeling of “anaerobic bacteria” for Green Fluorescent Protein expression for studying host-bacteria interaction, as well as designing novel fluorescence-based flow-cytometry and microscopy imaging approaches to examine live intracellular bacterial trafficking and subsistence. Related publications were featured in Nature Reviews Microbiology, JADA (Journal of American Dental Research) and multiple times in the NIDCR main webpage science news. Similarly, we have participated in development of novel methods to study in-situ growth activities of fastidious organisms in the patient samples. In addition, my laboratory research has critically contributed to the recent conceptual development of molecular mechanisms linking oral bacterial infections with oral cancer. We also showed the epithelium-mesenchymal transition during the long-term infection with P. gingivalis. Collectively, these studies resulted in novel findings for the Teld of oral pathogen-epithelial cell interaction and largely increased understanding of the mechanisms of co-existence and evolution of virulence between opportunistic bacterial invaders and human epithelial tissues. Below are selected example publications for those advances.
C. CONTRIBUTIONS TO SCIENCE

C. Contributions to Science
My Contributions to Science are organized into three time periods: 1. Early Career; 2. Graduate Career; and 3. Postdoctoral Career.

1. Early Career: My early career contributions were focused…. My particular role in the project was to identify…
   a. Research papers
   b. Abstracts

2. Graduate Career: My graduate research contributions focused…. Results from my research were highly relevant …
   a. Research papers
   b. Abstracts

3. Postdoctoral Career: As a postdoctoral fellow, my research…
   a. Research papers
   b. Abstracts

D. RESEARCH SUPPORT

Can you describe the projects that you've worked on over the past few years? Please include a detailed breakdown of your responsibilities and contributions. Whether you've been a part of a small team or a large one, please feel free to detail your involvement in research projects.

Should institutional training grants be listed as funding sources? How much detail is needed for a listed grant/project? Do we need to list mentored trainees?

Start with support most relevant to the proposal
Include all sources of funding, not just NIH funding
List goals of the funding and your role in the project
Do not include pending grants
Do not list person months or direct costs
D. RESEARCH SUPPORT

**Ongoing Research Support**

UL1 TR001450  
Brady (PI)  
NIH/NCATS  
South Carolina Clinical & Translational Research (SCTR) Institute  
SCTR is the catalyst for changing the culture of biomedical research, facilitating the sharing of resources and expertise, and streamlining research-related processes to bring about large-scale transformation in South Carolina clinical and translational research. MUSC’s initial CTSA award, UL1 TR000062, was effective 07/14/09-09/30/15.  
Role: PI

**Completed Research Support**

I01 CX001288  
Back (PI)  
VAMC  
CAP-Doxazosin in the Treatment of Co-Occurring PTSD and Alcohol Use Disorders  
The proposed study will seek to enhance and accelerate research in the treatment of early, chronic and latent onset PTSD and common comorbidities such as alcohol use disorders.  
Role: Co-Investigator

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D. SCHOLASTIC PERFORMANCE

**Predoctoral applicants (including undergraduates and postbaccalaureates)**

- List by institution and year ALL undergraduate and graduate courses, with grades
- Indicate the levels required for a passing grade

**Postdoctoral Applicants**

- List by institution and year ALL graduate scientific and/or professional courses with grades
- Indicate the levels required for a passing grade
How to make an NIH biosketch using SciENcv?

SciENcv demonstration time!

To access SciENcv:

SciENcv Tutorial
SciENcv TUTORIAL CONTINUED

Create a New Biosketch

1. Enter a name for the new biosketch
2. Select a biosketch format
3. Select data source
4. Choose to make your profile public or private

SciENcv TUTORIAL CONTINUED

My NCBI + SciENcv + My NCBI Test 1

Profile name: MY NCBI Test 1  [ Edit ]
Profile type: NIH biosketch  NIH Biographical Sketch Instructions (PDF)
Last Updated: 19 April 2018
Sharing: Private  [ Change ]

NAME  [ Edit ]
Cannady, Kimberly
Click here to link with NIH Commons account

EDUCATION/TRAINING
(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable.)
You have not listed any degree or training.  Please add one.

A. Personal Statement  [ Edit statement ]
You have not yet provided a personal statement.
Optional: You may identify up to four peer-reviewed publications that specifically highlight your experience and qualifications for this project.
[ Select citations ]
You have not listed any citations.
SciENcv provides “Markdown” syntax which allows you to add simple formatting to your personal statement.
BIOSKETCH NONCOMPLIANCE

Dr. John Doe
Medical University of South Carolina
[Redacted Address]
Charleston, SC 29425

Dear Dr. Doe,

THIS NOTE SERVES AS A WARNING AND NO ACTION IS REQUIRED AT THIS TIME.

During the review of your application entitled "Title Here [Redacted]", NIH staff and/or reviewers noted that one or more of the biosketches included in the application do not comply with the new biosketch format requirements (NOT-OD-15-032).


Your current application will not be withdrawn. There is no need to correct your biosketch(es) at this time. Indeed, as stated in NOT-OD-13-030, https://grants.nih.gov/grants/guide/notice-files/NOT-OD-13-030.html), you cannot submit updated biosketches after the submission of the grant application. If you have any questions regarding this correspondence, please contact the Scientific Review Officer who managed review of your application; that information can be found in eRA Commons or at the end of the meeting roster on your summary statement. Also, please feel free to contact anyone in this office, at the e-mail address provided below, if you need more clarification about implementation of this policy.

The Division of Receipt and Referral
corrn@mail.nih.gov
BIOSKETCH NONCOMPLIANCE

- More than 4 citations listed in the personal statement and/or contribution to science sections
- Contribution to science section (including references) spanned more than ½ page

BEST PRACTICES

- **Personal Statement**
  - Tailor the statement
  - Explain your role on the grant
  - Include publications that are most important to the grant even if repetitive with the Contributions to Science section

- **Contributions to Science**
  - Highlight the impact of your work
  - Double-check the publications link
  - Include PMCID numbers

- **Overall**
  - Make sure that you are using the most current NIH form
  - Comply with the biosketch format
  - Be CONSISTENT
  - Review your biosketch for spelling and grammar errors

How to revise an existing biosketch for a new grant?
ADDITIONAL RESOURCES

- NIH Biosketch Format Pages
  - [https://grants.nih.gov/grants/forms/biosketch.htm](https://grants.nih.gov/grants/forms/biosketch.htm)
- NCBI Login
- NIH Research Products: Definitions, Examples, and Distinctions
- MUSC Center for Academic Excellence and Writing Center
  - [https://education.musc.edu/students/cae-and-writing](https://education.musc.edu/students/cae-and-writing)

To access presentation

- MUSC Office of Research Development
  - [https://research.musc.edu/resources/ord/seminars](https://research.musc.edu/resources/ord/seminars)
- MUSC Library Help Guides
  - [https://musc.libguides.com/bioresearchers](https://musc.libguides.com/bioresearchers)

ADDITIONAL HELP

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B³: Build a Better Biosketch

Questions?