



### Today's Agenda

- 1. The purpose of the biosketch: a use case perspective
- 2. The biosketch deconstructed and maximizing your scientific story
- 3. Your biosketch from the reviewer's point of view
- 4. Tools and resources

# What is the NIH biosketch used for?

Allows applicants to describe their accomplishments and provide detailed information about their experience in the context of a proposed project.

Documents the connections between key personnel and the skills needed to execute a project.

Provides information that reviewers use to determine if investigators are well suited to carry out the work of a project and that the research team brings integrated expertise.

# A biosketch for every role...

### **Seed Grant**

Condensed and highlights potential

### Fellowship

All about every aspect of you

#### PΙ

Subject matter and technique expertise, lab management

### Co-Investigator

Contributions to the grant

### Co-PI

Success of past collaboration s and leadership experience

#### Mentor

Experience helping others learn & former trainees



### Basic features of the biosketch

5 Pages

A biosketch cannot exceed five pages, including the table at the top of the first page

**Personal Statement** 

Highlights your experience, qualifications, research interests, and career trajectory, making a case for your role on the project

Up to 5 Contributions to Science

Describes up to five of your most significant and project related contributions

Up to 4 Research Objects per Contribution

Research products can include peer reviewed publications and posters, data, educational materials, protocols, etc.



# Start with your contributions

For each, address four core questions in a half page or less:

What is the historical background that frames the scientific problem?

What were your central findings?

How did the findings progress science or human health?

What was your role?

### The Story Arc



# Look at an example: Dr. Kiran Khush

1. Improved cardiac donor evaluation and management. My early work in the field of heart transplantation focused on the evaluation of suitable donor hearts for transplantation. Currently, there are no standardized national guidelines for donor heart suitability for transplant, which has caused great variability in donor heart acceptance across the United States. The lack of guidelines on donor heart acceptance directly results from a paucity of high-quality evidence-based data on donor heart selection. This unmet need motivated me to collaborate with local organ procurement organizations to establish an organ donor research database that I used to systematically study the tools currently used for cardiac donor evaluation (electrocardiograms, echocardiograms, serum troponin levels), and to define the relationship between donor beta-receptor polymorphisms and cardiac function. The data and recommendations resulting from this work, funded by an NIH/NHLBI K23 Career Development Award, are now being used by organ procurement organizations across the United States to improve cardiac donor evaluation and management.

What is the topic?
What motivated the research?

What did she do?

Why was it significant?

How has the research transformed your field?

Slide attribution: https://grantwriting.stanford.edu/wp-content/uploads/2019/11/Biosketch-Workshop.pdf



### What is citable?

Allows for flexibility and a focus on accomplishments, not just published manuscripts

Each contribution may include up to 4 peer-reviewed publications and other products, such as:

- patents
- data and research materials
- preprints
- educational aids or curricula
- instruments or equipment
- protocols
- software
- conference presentations

# Do you know you can cite research objects on which you are not an

Examples include studies on which you were a technician and the inclusion of high impact publications by your trainees.

### NIH advice to new scientists

Consult with mentors and senior scientists who serve as reviewers in your field. In general, reviewers base their expectations on the seniority of the person filling out the biosketch.

A scientist with one publication may want to summarize the key finding of the paper and its importance in a brief contribution.

Scientists with no publications can provide a contribution describing their efforts on other peoples papers and projects.

If a new scientist has no actual research or thesis experience, they might just want to list one contribution about their training to date.

# Your personal statement

Write this last and make it a proposal specific overview of why you are suited for your role on the project. Relevant factors include:

Long-term research goals

Prior training, gained expertise, and awards

3 Current research

Potential impact of the funding opportunity on your career trajectory

### **Full range of outputs**

"This work resulted in 3 national presentations, 1 published manuscripts, and 1 manuscript under revision."

"My contribution to the 20 papers produced during the time I worked in this lab consisted of immunohistochemical and histological assays, data measurement, photomicrography and publication preparation."

### Impact of one or more outputs

"Collectively, the 4 papers listed below have been cited more than 50 times (Scopus)."

"During the years I worked for the Cognitive Neurology and Alzheimer's Disease Center, almost 200 papers were published, 40 of which I supplied technical expertise. These 40 manuscripts have been cited over 4,200 times in Scopus."

#### A successful dissemination method

"The 20 papers resulting from this project have been cited by 750 subsequent works by investigators in 47 countries, and in 7 languages around the world (Scopus).

"This experience triggered interest in novel therapies for complex populations; accordingly, I was invited as faculty to discuss our work at the American College of Cardiology's "Best of ACC" sessions in Chicago and Miami. "

### **Consumption by stakeholders**

"There was considerable media coverage of this project, with 10 articles in national newspapers and 6 other media appearances."

"The 4 papers describing this work were referred to by news media outlets 5 times; tweeted 13 times worldwide, including tweets from the National Cancer Institute, and commented on 2 times in PubMed Commons."

### You are the reviewer:

What biosketch evidence would convince you they can do this?

**Senior/Key Personnel** (from http://osp.utk.edu/wp-content/uploads/sites/49/2016/12/NIH-R01-Detailed-Budget-Justification-Sample-11-22-16.docx)

Dr. Jane Doe, Principal Investigator (1.5 summer months per year). Dr. Doe will be responsible for the overall coordination and supervision of all aspects of the study. This includes hiring, training, and supervising staff and students, recruiting study participants, coordinating treatment and assessment components, scheduling and staff assignments, and data management. In addition, she will conduct the orientation sessions, perform the statistical analyses, and be responsible for reporting the study's findings.

Dr. John Smith, Co-Investigator (1.0 summer months per year). Dr. Smith has experience in membrane studies, numerous biophysical methodologies, and working with peptides, so he will oversee those aspects of the project.

# Let's Assess Together

Dr. Doe will be responsible for the overall coordination and supervision of all aspects of the study. This includes hiring, training, and supervising staff and students, recruiting study participants, coordinating treatment and assessment components, scheduling and staff assignments, and data management. In addition, she will conduct the orientation sessions, perform the statistical analyses, and be responsible for reporting the study's findings.

### You Assess

Dr. Smith has experience in membrane studies, numerous biophysical methodologies, and working with peptides, so he will oversee those aspects of the project.

# What evidence did you identify?

Dr. Smith has experience in <u>membrane studies</u>, <u>numerous</u> <u>biophysical methodologies</u>, and working with <u>peptides</u>, so he will oversee those aspects of the project.

Academic training in biophysics

Contributions to Science with publications for all three areas

Terminology matching

Customizing your biosketch helps reviewers recognize your potential to succeed.

### You are Dr. Smith: How would you customize your biosketch for these proposals?

You are the co-investigator on the previous example, and your PhD is in Biomedical Sciences. How would you make the case for your biophysics expertise?

You are a co-PIs on a multicenter proposal. You and the other PI have not worked together previously, but you have collaborated successfully on other multicenter projects

Your trainee's fellowship application requires a biosketch from you, her primary mentor. You just won your institution's outstanding teaching award for new faculty for your mentorship.

### You are Dr. Doe:

How would you customize your biosketch?

You are an MD who has extensive experience working with ESRD patients undergoing dialysis since completing your residency long ago.

You recently joined an academic health center and are applying as the PI on a project to apply a technology developed by your co-investigator on a mouse model related to your clinical area of expertise.

You have previously presented and published clinical research papers, but no animal model or basic science research.

# Your biosketch as read by the reviewer

#### Yours is the primary biosketch associated with a proposal

- Reviewers will probably read most of it.
- Your training, previous experiences, publications and scholarly outputs should tell a story of why you can do what is proposed.
- Previous grants and first-authored papers will boost their confidence.

### Your biosketch is one of many co-investigators associated with a proposal

- Reviewers probably won't read it.
- They will scan key words to see that there is continuity between your expertise and the aims, methods, and personnel budget justification.



# **Tools & Resources**



# You're going to want these:



From your NCBI Account, you can create a biosketch via SciENcv, which automates many tasks



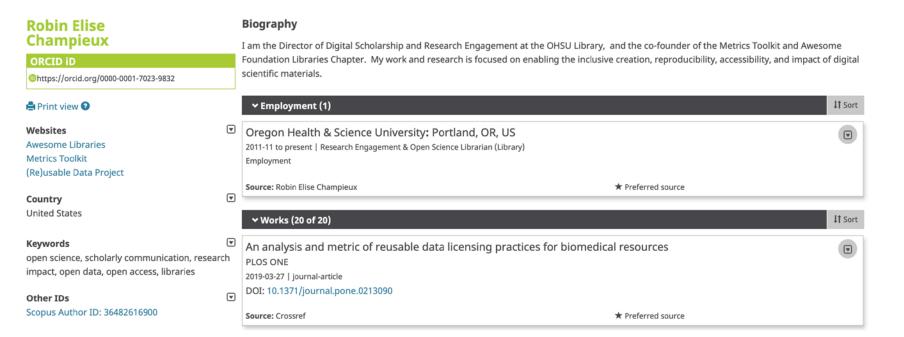
SciENcv accepts ORCID as a data source, making it easier to import information about you and your research objects

# Do you have an ORCID?

https://orcid.org/



# My ORCID profile:



# Creating your biosketch with SciENcv

You can pre-populate your biosketch with information from your ORCID profile or an existing biosketch, and add research outputs from PubMed or ORCID. To get started, follow these steps:

1 Log into your NCBI account

Go to the SciENcv section of your My NCBI home page

Click manage SciENcv

Select the option to create a new biosketch



# Finding Metrics

Measure impact at the article and investigator level using traditional and emerging data sources

#### Data and analysis tools

### Scopus

Citation and abstract database of peer-reviewed literature that can be used by researchers to determine the impact of specific authors, articles and journals. OHSU community members can also access Scival through Scopus.

iCite

An NIH dashboard tool of bibliometrics for papers indexed in PubMed. iCite has three modules: Influence, Translation, and Open Citations.

imensions

A Digital Science database that provides bibliometrics and altmetrics for articles, book chapters, and preprints.

# Parting Guidance

### Be Clear

Reviewers may not be familiar with your area of

research Be Concise

Each contribution is limited to a half page with citations

### **Use Your Voice**

Consider using first person voice

### Communicate Your Impact

Use statements and data that demonstrate your impact

### Ask for Advice

Ask mentors to review your biosketch and major updates to your personal statement.



### **OHSU Library Support**

- Biosketch workshops and consultations
- Consult on scholarly communication strategies and journal selection
- Research impact and bibliometric educational events and reporting





Robin Champieux, MLIS
Director of Digital
Scholarship and Research
Engagement



Pam Pierce, MS, MLS
Digital Scholarship and
Repository Librarian



Basia Delawska-Elliott, MLIS

Health Sciences Education & Research Librarian



Andrew Hamilton, MS, MLS
Health Sciences Education &
Research Librarian



Marijane White, MSLIS

Data and Research

Engagement Librarian



Laura Ziegen, MS, MLIS, MPH

Health Sciences Education & Research Librarian



Tova Johnson, MA, MPH, MLIS

Health Sciences Librarian

OHSU Library's Education, Research & Clinical Outreach Team

### **Credits:**

NIH Biosketch Guide, Pamela Shaw and Karen Gutzman, Galter Health Sciences Library and Learning Center

Writing Stellar NIH Bioscketches, Crystal Botham, Grant Writing Academy, Stanfo

NIH Biosketch Presentation, NIH



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