

“Best Practices for an Effective NIH Biosketch”

**Best Practices
for an
Effective NIH Biosketch**

NCI Center to Reduce Cancer Health Disparities
(CRCHD)
Professional Advancement Virtual Engagement Series
(PAVES)
March 30, 2022

Jaime S. Rubin, Ph.D.
Dept. of Medicine
College of Physicians and Surgeons
Columbia University

Course: “Funding and Grantsmanship for Research and Career Development Activities”
<http://grantscourse.columbia.edu/>

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Topics to be Discussed

- Why is an NIH Biosketch Important?
- What is the Purpose?
- NIH Application FORMS – G
- Where in the Grant Application does the NIH Biosketch Go?
- For Whom is an NIH Biosketch included?
- Components of an NIH Biosketch
- NIH Fellowship-Specific Biosketches

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Why is the NIH Biosketch Important?

- Used by reviewers to assess the qualifications of the Principal Investigator(s), collaborators, co-investigators, Advisors, etc. in terms of their proposed role in the applicant’s training, in addition to the overall competence of the entire “team”
- “Stand alone” document that conveys to the reviewers everything you want them to know about you and the other members of the research group

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- Keep Yours Current!
- Include all information that is relevant – even if mentioned/discussed elsewhere in the application
- Make sure that the NIH Biosketches others give you for your application are current (information and format) and programmatically appropriate
- Sometimes used by other funding agencies and internal programs

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New NIH "FORMS-G" Grant Application Forms and Instructions Coming for Due Dates on or after January 25, 2022

Notice Number:
NOT-OD-21-169

<https://grants.nih.gov/grants/guide/notice-files/NOT-OD-21-169.html>

High-level Grant Application Form Change Summary: FORMS-G

<https://grants.nih.gov/grants/electronicreceipt/files/high-level-form-change-summary-FORMS-G.pdf>

NIH will require the use of the updated Biographical Sketch and Other Support format pages for submissions on or after January 25, 2022. See NOT-OD-21-073, NOT-OD-21-110, and NOT-OD-21-122 for more information.

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FORMS VERSION G SERIES
Released: October 25, 2021



RESEARCH INSTRUCTIONS FOR NIH AND OTHER PHS AGENCIES

SF424 (R&R) APPLICATION PACKAGES

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“Best Practices for an Effective NIH Biosketch”

GENERAL APPLICATION GUIDE FOR NIH AND OTHER PHS AGENCIES
SF424 (R&R) - Forms Version G
 Released: October 25, 2021
 Last Revised: February 14, 2022

G.240 - R&R Senior/Key Person Profile (Expanded) Form

The R&R Senior/Key Person Profile (Expanded) Form is used for all grant applications, and allows the collection of data for all senior/key persons associated with the project. Some information for the PD/PI may be pre-populated from the SF424 (R&R) form. See instructions in [G.200 - SF 424 \(R&R\) Form](#); if these fields are empty.

Quick Links
[Profile - Project Director/Principal Investigator](#)
[Instructions for a Biographical Sketch](#)
[Profile - Senior/Key Person](#)
[Additional Senior/Key Person Profiles](#)

[View larger image](#)

https://grants.nih.gov/grants/how-to-apply-application-guide/format-and-write/page-limits.htm#cat_5 Jaime S. Rubin, Ph.D., <http://grantscourse.columbia.edu>

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Section of Application	Activity Codes	Page Limits * (if different from FOA, FOA supersedes)
Biographical Sketch	For all Activity Codes (including DP1 and DP2 which previously had special page limits)	5

https://grants.nih.gov/grants/how-to-apply-application-guide/format-and-write/page-limits.htm#cat_5 Jaime S. Rubin, Ph.D., <http://grantscourse.columbia.edu>

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ADMINISTRATIVE NOTE:
 During the review of this application, reviewers and/or NIH staff noted that **one or more biosketches did not comply with the required format (NOT-OD-15-032)**. An electronic notification has been sent to the contact Program Director/Principal Investigator and Signing Official for this application, to ensure that future applications use the correct biosketch format. **NIH has the authority to withdraw such applications** from review or consideration for funding.

https://grants.nih.gov/grants/how-to-apply-application-guide/format-and-write/page-limits.htm#cat_5 Jaime S. Rubin, Ph.D., <http://grantscourse.columbia.edu>

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**Where in the Application does the NIH Biosketch Go?
 How to Include the NIH Biosketch?**

R&R Senior/Key Person Profile (Expanded) Form
 RESEARCH & RELATED Senior/Key Person Profile (Expanded)

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RESEARCH & RELATED Senior/Key Person Profile (Expanded)

PROFILE - Project Director/Principal Investigator

Prefix: [] * First Name [] Middle Name [] Suffix: []
 * Last Name: [] Position/Title: [] Department: [] FORMS-G: 100 characters.
 Organization Name: [] Division: [] FORMS-G: 100 characters.
 * Street1: [] Street2: [] City: [] Country/Parish: [] State: [] FORMS-G: Updated state list. Province: []
 * Country: [] FORMS-G: Updated country list. * Zip / Postal Code: []
 * Phone Number: [] * E-Mail: []
 Credential, e.g., agency login: []
 * Project Role: [] ORCID ID must be associated with PD/PI eRA Commons Personal Profile of Fellowship and Career Development applications. Recommended for all.
 Degree Year: []
 * Attach Biographical Sketch []
 Attach Current & Pending Support []

VALID eRA COMMONS USERNAME MUST BE SUPPLIED. Contact PD/PI must be affiliated in Commons with applicant organization. Commons account designated on this form should not have both the PI and SO roles (if PD/PI also serves as SO, use a separate account for SO functions).
 * Required. Limited to 5 pages. Format page, instructions and samples: <http://grants.nih.gov/grants/forms/biosketch.htm>
 Only provide Current & Pending Support if specifically requested in FOA. May be requested later in pre-award process as Just-In-Time data.

https://grants.nih.gov/grants/ElectronicReceipt/Forms/Annotated_Forms_General_FORMS-G.pdf Jaime S. Rubin, Ph.D., <http://grantscourse.columbia.edu>

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RESEARCH & RELATED Senior/Key Person Profile (Expanded)

PROFILE - Project Director/Principal Investigator

Prefix: [] * First Name [] Middle Name [] Suffix: []
 * Last Name: [] Position/Title: [] Department: []
 Organization Name: [] Division: []
 * Street1: [] Street2: [] City: [] Country: [] Province: []
 * State: [] * Zip / Postal Code: []
 * Phone Number: [] * E-Mail: []
 Credential, e.g., agency login: []
 * Project Role: [] Other Project Role Category: []
 * Attach Biographical Sketch [] Add Attachment [] Delete Attachment [] View Attachments []
 Attach Current & Pending Support [] Add Attachment [] Delete Attachment [] View Attachments []

Credential, agency login: NIH eRA Commons username - **required field**

https://grants.nih.gov/grants/how-to-apply-application-guide/format-and-write/page-limits.htm#cat_5 Jaime S. Rubin, Ph.D., <http://grantscourse.columbia.edu>

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RESEARCH & RELATED Senior/Key Person Profile (Expanded)

Multiple Principal Investigators (MPI)

- The contact PI is listed first
- If there is more than one Principal Investigator, all are given the role of “PD/PI” (even if not at applicant organization)
- NIH does not use the term co-PD/PI [PD = Project Director]

https://crms.nih.gov/crms/how-to-use-application.html/Forms/related/100-how-to-use-the-application-summation.htm Jaime S. Rubin, Ph.D., http://grantscourse.columbia.edu

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RESEARCH & RELATED Senior/Key Person Profile (Expanded)

https://crms.nih.gov/crms/ElectronicReceipt/GRS/Associated_Forms/General_FORMS-Grid/ Jaime S. Rubin, Ph.D., http://grantscourse.columbia.edu

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RESEARCH & RELATED Senior/Key Person Profile (Expanded)

https://crms.nih.gov/crms/how-to-use-application.html/Forms/related/100-how-to-use-the-application-summation.htm Jaime S. Rubin, Ph.D., http://grantscourse.columbia.edu

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Senior/Key Personnel

Senior/Key Personnel “are defined as all individuals who contribute in a substantive, meaningful way to the scientific development or execution of the project, whether or not salaries are requested... List individuals that meet the definition of senior/key regardless of what organization they work for.”

https://crms.nih.gov/crms/how-to-use-application.html/Forms/related/100-how-to-use-the-application-summation.htm Jaime S. Rubin, Ph.D., http://grantscourse.columbia.edu

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Senior/Key Personnel

“Senior/key personnel must devote measurable effort to the project whether or not salaries or compensation are requested. “Zero percent” effort or “as needed” are not acceptable levels of involvement for those designated as Senior/Key Personnel.”

List alphabetically by last name after principal investigator.

https://crms.nih.gov/crms/efosarc.htm#Senior/KeyPersonnel Jaime S. Rubin, Ph.D., http://grantscourse.columbia.edu

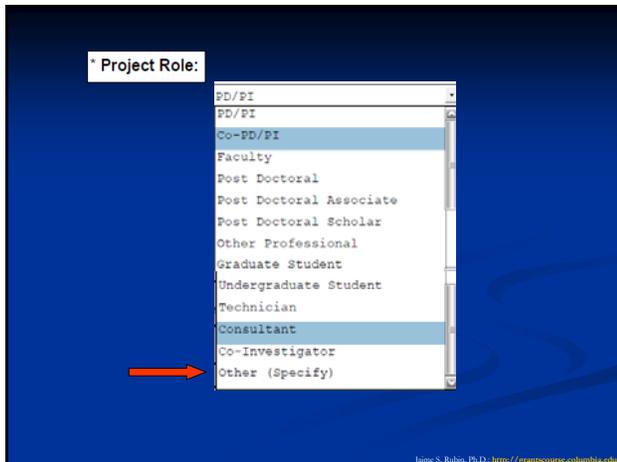
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RESEARCH & RELATED Senior/Key Person Profile (Expanded)

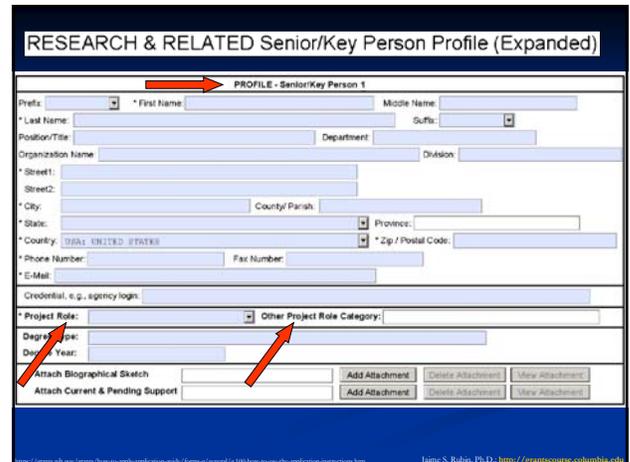
https://crms.nih.gov/crms/how-to-use-application.html/Forms/related/100-how-to-use-the-application-summation.htm Jaime S. Rubin, Ph.D., http://grantscourse.columbia.edu

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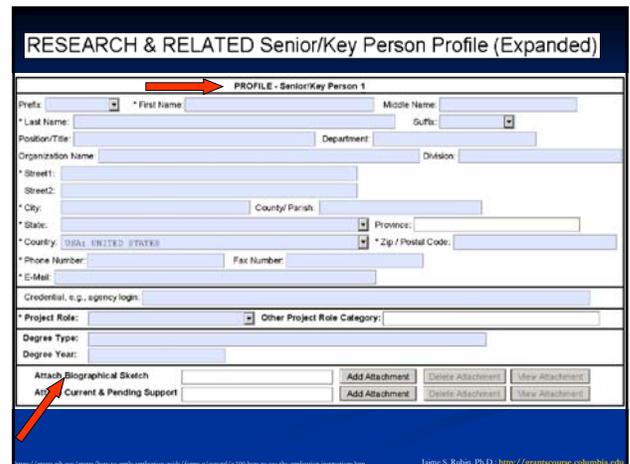


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Other Significant Contributors

- “contribute to the scientific development or execution of the project”
- No committed measurable effort - “zero person months” or “as needed”
- Listed after Senior/Key Personnel
- Can include NIH Biosketch
- e.g., Advisors

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R&R Senior/Key Person Profile (Expanded) Form

RESEARCH & RELATED Senior/Key Person Profile (Expanded)

Biosketch Format

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Biographical Sketch

- For Key Personnel (e.g., PI’s, Co-Investigators, Collaborators), Other Significant Contributors, Advisors, Consultants, etc.
- No graphics, figures, pictures, tables, etc.
- Template word document provided by NIH
- Upload to application in pdf format
- Up to 5 pages in length total
- <https://grants.nih.gov/grants/forms/biosketch.htm>
- [https://grants.nih.gov/grants/how-to-apply-application-guide/forms-general/g-240-r&r-seniorkey-person-profile-\(expanded\)-form.htm](https://grants.nih.gov/grants/how-to-apply-application-guide/forms-general/g-240-r&r-seniorkey-person-profile-(expanded)-form.htm)

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“Best Practices for an Effective NIH Biosketch”

Biosketch Format Pages, Instructions and Samples

Form Name	Biographical Sketch Format Page (non-fellowship) - Due Dates on/after January 25, 2022
Description	Prepare biographical sketches for applications and progress reports for all applications and awards, except fellowships.
How to Access	Non-fellowship Biosketch (blank format page, Word)
Instructions	Instructions for Biographical Sketch These instructions will be incorporated into the NIH Application Form Instructions with the next update by FY 2022.
Additional Information	<ul style="list-style-type: none">SAMPLE: Non-fellowship biosketchFAQsNIH Pre-award and Post-award Disclosures Relating to the Biographical Sketch and Other Support <p>Try SciENcv to help you develop your biosketch and automatically format it according to NIH requirements. Reflects removal of Section D per NOT-OD-21-073 first guide notice.</p>
Updated Date	October 2021

<https://grants.nih.gov/grants/forms/biosketch.htm> Jaime S. Rubin, Ph.D., <http://grantscourse.columbia.edu>

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Biosketch Format Pages, Instructions and Samples

Frequently Asked Questions (FAQs) Biosketches

- ▼ I. General
- ▼ II. SciENcv
- ▼ III. Citations
- ▼ IV. Contributions to Science
- ▼ V. Biosketch Compliance

Featured Questions

Q: The Biosketch instructions state that all positions and scientific appointments must be provided. Does this refer to active positions and appointments, or all positions a researcher has ever held?

The Biosketch must include all current positions and scientific appointments.

<https://grants.nih.gov/grants/forms/biosketch.htm> <https://grants.nih.gov/grants/forms/biosketch.htm> Jaime S. Rubin, Ph.D., <http://grantscourse.columbia.edu>

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Biographical Sketch

- **Education Block: Education and Training**
- **A. Personal Statement**
 - Why you have the expertise for your **role in the proposed project** (e.g., training, previous relevant experimental experience, technical expertise; collaborations, scientific environment, past relevant performance, leadership role in similar project, etc.)
 - Up to **four relevant “research products”** relevant to proposed project (e.g., publications, conference proceedings/ abstracts/ posters/presentations, databases, software). Citing interim research products is permitted (e.g., preprints, preregistered protocol)

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Biographical Sketch

- **A. Personal Statement (cont.)**
 - “Contributions to Science” not included in Section C.
 - Ongoing and recently completed research projects (last 3 years)
 - **Relevant to the proposed research**
 - Other projects that you want to highlight for the reviewers (e.g., another large/complex project that you lead or had another significant role, competitive fellowship award)
 - **“Impediments”** to past productivity (e.g., family responsibilities, illness, disability, military service) (optional)

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Biographical Sketch

- **B. Positions, Scientific Appointments and Honors** (most recent listed first)
 - Domestic and Foreign
 - “Including affiliations with foreign entities or governments. This includes titled academic, professional, or institutional appointments whether or not remuneration is received, and whether full-time, part-time, or voluntary (including adjunct, visiting, or honorary)”
 - Professional experience
 - Previous positions/employment
 - Honors, awards, fellowships
 - Professional achievements/recognition
 - Advisory/Review committees
 - Professional memberships
 - Clinical licensures, specialty board certifications

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Biographical Sketch

- **C. Contributions to Science**
 - Describe your most **significant contributions to science** (**up to five**), Not longer than ½ page (including citations)
 - Historical background of scientific problem
 - Main finding(s) – Impact on the field/progress of science and/or the application to health or technology
 - Describe **your specific role** in each “Contribution”
 - Reference up to **4 “research products”** (e.g., publications, abstracts, presentations, patents, databases, protocols)
 - May describe your specific contribution/role in “Contribution”
 - May include URL to a full **list of publications**
 - If included, must be a **federal website** (e.g., My Bibliography)

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BIOGRAPHICAL SKETCH
Provide the following information for the SeniorKey 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.)

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY

A. Personal Statement
B. Positions, Scientific Appointments, and Honors

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PMB No. 0925-0001 and 0925-0002 (Rev. 12/2020 Approved Through 02/28/2023)

BIOGRAPHICAL SKETCH
Provide the following information for the SeniorKey personnel and other significant contributors. Follow this format for each person. **DO NOT EXCEED FIVE PAGES.**

NAME: Hunt, Morgan Casey
eRA COMMONS USER NAME (credential, e.g., agency login): huntmc1

POSITION TITLE: Associate Professor of Psychology

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.)

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
University of California, Berkeley	BS	05/2003	Psychology
University of Vermont	PHD	05/2009	Experimental Psychology
University of California, Berkeley	Postdoctoral	08/2013	Public Health and Epidemiology

<https://grants.nih.gov/grants/forms/biosketch.htm> Jaime S. Rubin, Ph.D., <http://grantscourse.columbia.edu>

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A. Personal Statement

I am an Associate Professor of Psychology, and my research is focused on neuropsychological changes associated with addiction. I have a broad background in psychology, with specific training and expertise in ethnographic and survey research and secondary data analysis on psychological aspects of drug addiction. As PI or co-investigator on several university- and NIH-funded grants, I laid the groundwork for the proposed research by developing effective measures of disability, depression, and other psychosocial factors relevant to the aging substance abuser, and by establishing strong ties with community providers that will make it possible to recruit and track participants over time as documented in the following publications. In addition, I successfully administered the projects (e.g., staffing, research protections, budget), collaborated with other researchers, and produced several peer-reviewed publications from each project. As a result of these previous experiences, I am aware of the importance of frequent communication among project members and of constructing a realistic research plan, timeline, and budget. The current application builds logically on my prior work. During 2015-2016, my career was disrupted due to family obligations. However, upon returning to the field, I immediately resumed my research projects and collaborations and successfully competed for NIH support. In summary, I have the expertise, leadership, training, expertise and motivation necessary to successfully carry out the proposed research project.

Ongoing and recently completed projects that I would like to highlight include:

R01 DA942367
Hunt (PI)
09/01/16-08/31/21
Health trajectories and behavioral interventions among older substance abusers

R01 MH922731
Merryle (PI), Role: co-investigator
12/15/17-11/30/22
Physical disability, depression and substance abuse in the elderly

R21 AA988075
Hunt (PI)
01/01/19-12/31/21
Community-based intervention for alcohol abuse

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Citations:

- Merryle, R.J. & Hunt, M.C. (2015). Independent living, physical disability and substance abuse among the elderly. *Psychology and Aging*, 23(4), 10-22.
- Hunt, M.C., Jensen, J.L. & Crenshaw, W. (2018). Substance abuse and mental health among community-dwelling elderly. *International Journal of Geriatric Psychiatry*, 24(9), 1124-1135.
- Hunt, M.C., Wiechelt, S.A. & Merryle, R. (2019). Predicting the substance-abuse treatment needs of an aging population. *American Journal of Public Health*, 45(2), 236-245. PMID: PMC9162292
- Merryle, R. & Hunt, M.C. (2020). Randomized clinical trial of cotinine in older nicotine addicts. *Age and Ageing*, 38(2), 9-23. PMID: PMC9002364

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B. Positions, Scientific Appointments, and Honors

Positions and Scientific Appointments

2021 – Present Associate Professor, Department of Psychology, Washington University, St. Louis, MO
2020 – Present Adjunct Professor, McGill University Department of Psychology, Montreal, Quebec, Canada

2018 – Present NIH Risk, Adult Addictions Study Section, members
2015 – 2017 Consultant, Coastal Psychological Services, San Francisco, CA
2014 – 2021 Assistant Professor, Department of Psychology, Washington University, St. Louis, MO
2014 – 2015 NIH Peer Review Committee: Psychobiology of Aging, ad hoc reviewer
2014 – Present Board of Advisors, Senior Services of Eastern Missouri
2013 – 2014 Lecturer, Department of Psychology, Middlebury College, Middlebury, VT
2011 – Present Associate Editor, *Psychology and Aging*
2009 – Present Member, American Geriatrics Society
2009 – Present Member, Gerontological Society of America
2009 – 2013 Fellow, Division of Intramural Research, National Institute of Drug Abuse, Bethesda, MD
2006 – Present Member, American Psychological Association

Honors

2020 Award for Best in Interdisciplinary Ethnography, International Ethnographic Society
2019 Excellence in Teaching, Washington University, St. Louis, MO
2018 Outstanding Young Faculty Award, Washington University, St. Louis, MO

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C. Contributions to Science

- My early publications directly addressed the fact that substance abuse is often overlooked in older adults. However, because many older adults were raised during an era of increased drug and alcohol use, there are reasons to believe that this will become an increasing issue as the population ages. These publications found that older adults appear in a variety of primary care settings or seek mental health providers to deal with emerging addiction problems. These publications document this emerging problem and guide primary care providers and geriatric mental health providers to recognize symptoms, assess the nature of the problem and apply the necessary interventions. By providing evidence and simple clinical approaches, this body of work has changed the standards of care for addicted older adults and will continue to provide assistance in relevant medical settings well into the future. I served as the primary investigator or co-investigator in all of these studies.
 - Gryczynski, J., Shaft, B.M., Merryle, R., & Hunt, M.C. (2013). Community based participatory research with late-life addicts. *American Journal of Alcohol and Drug Abuse*, 15(3), 222-238.
 - Shaft, B.M., Hunt, M.C., Merryle, R., & Venturi, R. (2014). Policy implications of genetic transmission of alcohol and drug abuse in female nonusers. *International Journal of Drug Policy*, 30(5), 46-58.
 - Hunt, M.C., Marks, A.E., Shaft, B.M., Merryle, R., & Jensen, J.L. (2015). Early-life family and community characteristics and late-life substance abuse. *Journal of Applied Gerontology*, 28(2), 26-37.
 - Hunt, M.C., Marks, A.E., Venturi, R., Crenshaw, W. & Ratonian, A. (2018). Community-based intervention strategies for reducing alcohol and drug abuse in the elderly. *Addiction*, 104(9), 1438-1606. PMID: PMC9000292

Complete List of Published Work in MyBibliography:
<https://www.ncbi.nlm.nih.gov/myncbi/1CifFFV4VYQZE/bibliography/public/>

<https://grants.nih.gov/grants/forms/biosketch.htm> Jaime S. Rubin, Ph.D., <http://grantscourse.columbia.edu>

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“Best Practices for an Effective NIH Biosketch”

Biosketch Format Pages, Instructions and Samples

Form Name: **Biographical Sketch Format Page (Fellowship), Due Dates on/after January 25, 2022**

Description: Prepare biographical sketches for applications and progress reports for fellowship applications and awards.

How to Access: Fellowship Biosketch (blank format page, Word)

Instructions: Instructions for Biographical Sketch
These instructions will be incorporated into the NIH Application Form Instructions with the next update by FY 2022.

Additional Information:

- Predoctoral Fellowship biosketch sample (Word)
- Postdoctoral Fellowship biosketch sample (Word)
- FAQs
- NIH Pre-award and Post-award Disclosures Relating to the Biographical Sketch and Other Support

Try SciENcv to help you develop your biosketch and automatically format it according to NIH requirements.

Updated Date: October 2021

<https://grants.nih.gov/grants/forms/biosketch.htm>

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Fellowship: Biographical Sketch

- Students/Post-docs are considered the PI of their NIH Fellowship application (F’s)
- Student/Post-doc PI of an NIH Fellowship application uses a different NIH Biosketch format, as compared to all other “roles”
- Everyone else in the application uses the “usual” NIH Biosketch format
 - Mentor(s), Collaborators, Co-investigators, Advisors

<https://grants.nih.gov/grants/forms/biosketch.htm>

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NIH Biosketch for Fellowship Applications

- “Special” NIH Biosketch for Fellowship (F) applicants
- A. Personal Statement
- B. Positions, Scientific Appointments, and Honors
 - Scholarships, Fellowships, Traineeships
- C. Contributions to Science
 - High School Research:
 - Undergraduate Research:
 - Graduate Research:
 - Post-doctoral Research:
- D. Scholastic Performance (courses and grades)

<https://grants.nih.gov/grants/forms/biosketch.htm>

<https://grants.nih.gov/grants/forms/biosketch.htm>

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OMB No. 0926-0001 and 0926-0002 (Rev. 12/2021 Approved Through 02/28/2023)

BIOGRAPHICAL SKETCH

Provide the following information for the Seniorkey 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.)

INSTITUTION AND LOCATION	DEGREE (if applicable)	Start Date MM/YYYY	Completion Date MM/YYYY	FIELD OF STUDY

A. Personal Statement

B. Positions, Scientific Appointments and Honors

C. Contributions to Science

D. Scholastic Performance

YEAR	COURSE TITLE	GRADE

<https://grants.nih.gov/grants/forms/biosketch.htm>

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OMB No. 0926-0001 and 0926-0002 (Rev. 12/2021 Approved Through 02/28/2023)

BIOGRAPHICAL SKETCH

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

NAME: Simmons-Gonzales, Leilani

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

POSITION TITLE: Graduate Student Research Assistant

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.)

INSTITUTION AND LOCATION	DEGREE (if applicable)	Start Date MM/YYYY	Completion Date MM/YYYY	FIELD OF STUDY
Purdue University	BA	09/2014	05/2018	Biological Chemistry
UC San Diego	PHD	08/2018	05/2023 (Expected)	Molecular Biology

<https://grants.nih.gov/grants/forms/biosketch.htm>

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A. Personal Statement

I first became interested in human health and disease in high school when I was awarded a NIH Diversity Supplement to work as a research technician for two summers in Dr. Indira Creative's lab at the University of Hawaii. I continued to pursue this interest as an undergraduate at Purdue University, where I conducted research with Dr. Daniel Richardson on the mechanisms of action of a new class of small molecules for cancer treatment. This resulted in a co-authorship publication, as well as an invitation to present a poster at the annual Oncological meeting in Denver, Colorado. By the end of my undergraduate career, I knew that I wanted to pursue a long-term career in research. For my graduate training at UC San Diego, I have moved into the fields of genetics and biochemistry by studying the signaling and motility mechanisms of cancer cells, under the mentorship of Dr. Nani Green. Dr. Green is an internationally recognized leader in the field of cancer genetics and has an extensive record for training predoctoral and postdoctoral fellows. Along with giving me new conceptual and technical training, the proposed training plan outlines a comprehensive set of career development activities and workshops. I will have opportunities to engage in public speaking, conduct literature analysis, consider biomedical ethics, and learn about varied career options. For my initial project, I am currently developing a novel protocol for the identification of transcription complexes involved in cancer signaling pathways, which I hope to submit as a first author publication in the next few months. As a native Hawaiian, I am the first in my family to graduate from college, and I am excited to continue making great strides with my education. Overall, I believe that my current research setting in conjunction with my proposed training plan will provide a solid foundation for my long-term goal to become an academic researcher.

1. Nieman PY, Simmons-Gonzales L, Richardson, D. Gen Y: a novel small molecule with cytotoxic abilities targeting colon cancer cells. Cellular and Molecular Biology 2018 June 7(20):13672-78.

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“Best Practices for an Effective NIH Biosketch”

B. Positions, Scientific Appointments, and Honors

Positions and Scientific Appointments

2019 – 2020	Robertson Fellowship for Outstanding Graduate Students, Genetics Department, UIC San Diego
2018 – Present	Graduate Research Assistant, UIC San Diego
2016 – 2018	Lab Technician, University of Hawaii
2014 – Present	Member, Association for Women in Science
2014 – Present	Member, Sigma Xi
2014 – 2016	Diversity Supplement, National Institutes of Health

Honors

2020	Virtual Poster Presenter, Genetics and Molecular Biology Meeting
2019	Poster Presenter, Advances in Cancer Research and Therapy Meeting
2018	Paula F. Laufenberg award for best senior project in the Biology Department, Purdue University
2014 – 2018	Scholarship, National Merit Scholarship Program
2014	Scholarship, Daughters of Hawaii Society

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C. Contributions to Science

- High School Research:** I spent two summers doing research in the laboratory of Dr. Indira Creative at University of Hawaii, funded by a NIH Diversity Supplement award. Dr. Creative has developed several new anti-fungal drugs that might protect against skin infections. Over the course of two summers I set up in vitro cultures of skin cell lines and conducted a wide range of toxicity assays. We were excited to find that one of the new agents showed almost no toxicity, even at fairly high doses. Dr. Creative is now testing the drug in animals exposed to different types of fungal infections, including *Candida albicans*.
 - Footman B, Eisner JK, **Simmons-Gonzales, L**, Creative IM. Testing XXH for toxicity in vitro. University of Hawaii Research Symposium, 2012 May, Manoa, HI.
- Undergraduate Research:** I was part of a project in the laboratory of Dr. Daniel Richardson at Purdue University. Dr. Richardson's laboratory studies the mechanisms of action of small molecules for cancer treatment. During my time in his lab I was looking at how a new small molecule, Gen Y, is able to target cancerous cells. My contributions to this work were included in a publication recently accepted in Cellular and Molecular Biology. The work was particularly exciting because it looks like the mechanism of action of Gen Y might be completely novel, making it a potential candidate for treating patients afflicted with colon cancer. Dr. Richardson was recently awarded a patent for this new drug.
 - Nieman PY, **Simmons-Gonzales L**, Richardson, D. Gen Y: a novel small molecule with cytotoxic abilities targeting colon cancer cells. Cellular and Molecular Biology, 2018 June, 7(20): 13672-78.
 - Simmons-Gonzales, L**, Richardson, D. Testing the ability of a small molecule, Gen Y, to target colon cancer cells. Advances in Cancer Research and Therapy, 2019 September, Denver, CO.
- Graduate Research:** My ongoing predoctoral research is focused on transcriptional gene regulation and signaling impacting motility of cancer cells. I believe the results from my research will likely be highly relevant to human health as they will provide new details into the workings of complex biological systems, which will allow for further extrapolations into the development of several types of cancer and their progression. I am currently developing a novel protocol for the identification of transcription complexes involved in cancer signaling pathways, which I hope to submit as a first author publication in the next few months.
 - Simmons-Gonzales, L**, Green, N. A tandem identification approach for transcriptional complexes involved in the signaling and motility of cancerous cells. Genetics and Molecular Biology Virtual Meeting; 2020 September

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“For each contribution, you may cite up to four publications or research products that are relevant to the contribution. If you are not the author of the product, indicate what your role or contribution was. Note that while you may mention manuscripts that have not yet been accepted for publication as part of your contribution, you may cite only published papers to support each contribution. Research products can include audio or video products... conference proceedings such as meeting abstracts, posters, or other presentations; patents; data and research materials; databases; educational aids or curricula; instruments or equipment; models; protocols; and software or netware. Use of hyperlinks and URLs to cite these items is not allowed.”

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D. Scholastic Performance

YEAR	COURSE TITLE	GRADE
PURDUE UNIVERSITY		
2014	Introductory Biology	A
2014	Introductory Biology Lab	A
2014	Foundations of Chemical Principles	A
2014	French and Francophone World	A
2014	Ethics, Religion, and Culture Today	A
2015	Organismal and Population Biology	B
2015	Omics	B
2015	First Year Seminar: Nation and Migration	A
2015	Statistics, Probability, and Reliability	A
2015	Calculus I	B
2015	General Physics I	B
2015	Introductory Chemistry	A
2015	Population & Eco/ Genetics	A
2015	Organic Chemistry	B

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UC SAN DIEGO

2018	Seminar in Genetics	P
2018	Statistics for the Life Sciences	P
2018	Ethics in Biological Research	CRE
2019	Seminar in Physiology and Behavior	P
2019	Cancer Immunology	P
2020	Mechanisms of Cell Motility	P
2020	Biochemical Mechanisms of Cancer Cells	P
2020	Toxicology	P
2020	Physiology for the Molecular Biologist	P

Except for the scientific ethics course, UC San Diego graduate courses are graded P (pass) or F (fail). Passing is C plus or better. The scientific ethics course is graded CRE (credit) or NC (no credit). Students must attend at least seven of the eight presentation/discussion sessions for credit.

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Good Luck!

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