

**APPLICANT BIOGRAPHICAL SKETCH—Instructions  
(see below for Actual Predoctoral Sample)**

Use only for individual predoctoral and postdoctoral fellowships, dissertation research grants (R36), and Research Supplements to Promote Diversity in Health-Related Research (Admin Suppl). DO NOT EXCEED FIVE PAGES.

NAME OF APPLICANT:

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

POSITION TITLE:

EDUCATION/TRAINING *(Most applicants will begin with baccalaureate or other initial professional education, such as nursing. Include postdoctoral training and residency training if applicable. High school students should list their current institution and associated information. Add/delete rows as necessary.)*

| INSTITUTION AND LOCATION | DEGREE<br><i>(if applicable)</i> | START DATE<br>MM/YYYY | END DATE<br><i>(or expected end date)</i><br>MM/YYYY | FIELD OF STUDY |
|--------------------------|----------------------------------|-----------------------|--|----------------|
|                          |                                  |                       |  |                |

**NOTE: The Biographical Sketch may not exceed five pages. Follow the formats and instructions below.**

**A. Personal Statement**

Briefly describe why you are well-suited to receive the award for which you are applying. The relevant factors may include aspects of your training; your previous experimental work on this specific topic or related topics; your technical expertise; your collaborators or scientific environment; and 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.

- **R36 Applicants (PD/PI) Only:**  
In addition to the information outlined above, include a description of your career goals and intended career trajectory, as well as your interest in the specific areas of research designated in the FOA.
- **Diversity Supplement Candidates Only:**  
In addition to the information outlined above, include a description of your general scientific achievements and/or interests, as well as your specific research objectives and career goals. Indicate any source(s) of current funding.

## B. Positions and Honors

List in chronological order all non-degree training, including postdoctoral research training, all employment after college, and any military service. High school students and undergraduates may include any previous positions. Clinicians should include information on internship, residency and specialty board certification (actual and anticipated with dates) in addition to other information requested. This information is used in the reviewing the application and in determining the stipend level for Postdoctoral Fellowships. State the Activity/Occupation and include start/end dates, field, name of institution/company, and the name of your supervisor/employer. If you are not currently located at the applicant organization, include your projected position at the applicant organization as well.

| ACTIVITY/<br>OCCUPATION | START<br>DATE<br>(mm/yy) | ENDING<br>DATE<br>(mm/yy) | FIELD | INSTITUTION/<br>COMPANY | SUPERVISOR/<br>EMPLOYER |
|-------------------------|--------------------------|---------------------------|-------|-------------------------|-------------------------|
|                         |                          |                           |       |                         |                         |

## Academic and Professional Honors

List any academic and professional honors that would reflect upon your potential for a research career and qualifications. Include all scholarships, traineeships, fellowships, and development awards. Indicate sources of awards, dates, and grant or award numbers. List current memberships in professional societies, if applicable.

## C. Contributions to Science (for predoctoral students and more advanced candidates only; high school students, undergraduates, and postbaccalaureates should skip this section)

Considering your level of experience, briefly describe your most significant contributions to science. While all applicants may describe up to five contributions, graduate students and postdoctorates are encouraged to consider highlighting two or three they consider most significant. These may include research papers, abstracts, book chapters, reviews, as well as non-publication research products, such as materials, methods, models, or protocols. For each contribution, indicate the historical background that frames the scientific problem; the central finding(s); the relevance of the finding(s) to science, technology, or public health; and your specific role in the described work. For each contribution, you may reference up to four peer-reviewed publications or other non-publication research products (can list 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. The description of each contribution should be no longer than one half page including figures and citations. Please also 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. Manuscripts listed as "pending publication" or "in preparation" should be included and identified. Indicate if you previously used another name that is reflected in any of the citations.

## D. Scholastic Performance

Predocutorial applicants: Using the chart provided, list by institution and year all undergraduate and graduate courses with grades. In addition, in the space following the chart, explain any marking system if other than 1-100, A, B, C, D, F, or 0-4.0 if applicable. Show levels required for a passing grade.

Postdoctoral applicants: Using the chart provided, list by institution and year all undergraduate courses and graduate scientific and/or professional courses germane to the training sought under this award with grades. In the space following the chart, explain any marking system if other than 1-100, A, B, C, D, F, or 0-4.0 if applicable. Show levels required for a passing grade.

| YEAR | SCIENCE COURSE TITLE | GRADE | YEAR | OTHER COURSE TITLE | GRADE |
|------|----------------------|-------|------|--------------------|-------|
|      |                      |       |      |                    |       |

| YEAR | SCIENCE COURSE TITLE | GRADE | YEAR | OTHER COURSE TITLE | GRADE |
|------|----------------------|-------|------|--------------------|-------|
|      |                      |       |      |                    |       |

OMB No. 0925-0001 and 0925-0002 (Rev. 06/15 Approved Through 8/31/2015)

**APPLICANT BIOGRAPHICAL SKETCH SAMPLE—PREDOCTORAL FELLOWS**

(Note this Sample is for a Predoctoral Fellowship Applicant only and does not include information specific to R36 or Diversity Supplements. For a Postdoctoral Fellowship Sample, see: <http://grants.nih.gov/grants/funding/424/postdocfellowshipbiosample.docx>)

Use only for individual predoctoral and postdoctoral fellowships, dissertation research grants (R36), and Research Supplements to Promote Diversity in Health-Related Research (Admin Suppl). DO NOT EXCEED FIVE PAGES.

NAME OF APPLICANT: Leilani Robertson-Chang

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

POSITION TITLE: Graduate Student Research Assistant

EDUCATION/TRAINING *(Most applicants will begin with baccalaureate or other initial professional education, such as nursing. Include postdoctoral training and residency training if applicable. High school students should list their current institution and associated information. Add/delete rows as necessary.)*

| INSTITUTION AND LOCATION | DEGREE<br><i>(if applicable)</i> | START DATE<br>MM/YYYY | END DATE<br><i>(or expected end date)</i><br>MM/YYYY | FIELD OF STUDY    |
|--------------------------|----------------------------------|-----------------------|--|-------------------|
| Swarthmore College       | B.A.                             | 08/2008               | 05/2012  | Biology           |
| UC San Diego             | Ph.D.                            | 08/2012               | 05/2018  | Molecular Biology |

**A. Personal Statement**

My long term research interests involve the development of a comprehensive understanding of key developmental pathways and how alterations in gene expression contribute to human disease. My academic training and research experience to date have provided me with an excellent background in molecular biology and microbiology. While in high school I was awarded an NIH Diversity Supplement award to work as a research technician for two summers in Dr. Indira Creative’s lab at the University of Hawaii. As an undergraduate at Swarthmore College, I conducted research with Dr. Xavier Factor on the mechanisms of action of a new class of antibiotics. This resulted in a co-authorship publication, as well as an invitation to present a poster at the annual Antibiotica meeting in Denver, Colorado. For my graduate training at UC San Diego, I have moved into the fields of genetics and biochemistry by studying the regulation of transcription in yeast, under Dr. Tanti Auguri. Dr. Auguri is an internationally recognized leader in the field of yeast 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 set of career development activities and workshops – e.g. public speaking, literature analysis, biomedical ethics, and career options. For my initial project I am currently developing a novel protocol for the purification for components of large transcription complexes 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 so I am excited to keep pushing forward with my education. Overall, I feel that my choice of sponsor, research project, and the training I will get from this fellowship will give me a solid foundation for my long-term goal to become an academic researcher.

## B. Positions and Honors

| ACTIVITY/<br>OCCUPATION     | START<br>DATE<br>(mm/yy) | END<br>DATE<br>(mm/yy) | FIELD             | INSTITUTION/<br>COMPANY | SUPERVISOR/<br>EMPLOYER |
|-----------------------------|--------------------------|------------------------|-------------------|-------------------------|-------------------------|
| Lab Technician<br>(Summers) | 06/07                    | 08/08                  | Biology           | University of Hawaii    | I.M Creative            |
| Predoc                      | 08/12                    | Present                | Molecular biology | UC San Diego            | Xavier Factor           |

### Academic and Professional Honors

Daughters of Hawaii Scholarship, 2008

National Merit Scholarship, 2008-2012

Paula F. Laufenberg award for best senior project in the Biology Department, Swarthmore College, 2012

B.S. awarded with high honors, Swarthmore College, 2012

NIH Diversity Supplement 2007-2008 (Summers)

### Memberships in Professional Societies

Sigma Xi

Association for Women in Science

## C. Contributions to Science

My contributions to science are organized to reflect the different research projects I have worked on to date, in high school, college, and now in graduate school.

I. High School Research: I spent two summers doing research in the laboratory of Dr. Indira M. 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*.

### Abstracts

Footman, B., Eisser, J.K., Robertson-Chang, L. and Creative, I.M. 1998. Testing XXH for toxicity in vitro. Abstract for poster presentation, University of Hawaii Research Symposium, Manoa, HI.

II. Undergraduate Research: I was part of a project in the laboratory of Dr. Xavier Factor at Swarthmore College. Dr. Factor's laboratory studies the mechanisms of action of antibiotics. During my time in his lab I was looking at how a new antibiotic, Gen Y, is able to unravel bacterial DNA. The work was particularly exciting because it looks like the mechanism used by Factor Y might be completely novel, making it a potential candidate for treating patients infected with antibiotic resistant organisms. Dr. Factor was recently awarded a patent for this new drug.

### Research papers

Nieman, P.Y., Robertson-Chang, L., Pearson, K. and Factor, X. 2003. Gen Y: a novel antibiotic with DNA unwinding abilities. *Cell. Mol. Biol.* 30: 25-30.

### Abstracts

Robertson-Chang, L. and Factor, X. Testing the ability of antibiotic Gen Y to kill Gram-negative bacteria. Abstract for poster presentation. 2002. Antibiotica annual meeting, Denver, Colorado, September 2002.

III. Graduate Research: My ongoing predoc research is focused on transcriptional gene regulation in *Saccharomyces cerevisiae*. 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 certain diseases and their progression. I am currently developing a novel protocol for the purification for components of large transcription complexes which I hope to submit as a first author publication in the next few months.

**Research papers**

Robertson-Chang L and Auguri, T. 2005. A tandem affinity purification tag approach allows for isolation of interacting proteins in *Saccharomyces cerevisiae*. In preparation.

**Abstracts**

Robertson-Chang L and Auguri, T. A tandem affinity purification tag approach allows for isolation of interacting proteins in *Saccharomyces cerevisiae*. Abstract for poster presentation, 2004 Yeast Genetics and Molecular Biology Meeting, Seattle, Washington, September 2004.

**D. Scholastic Performance**

| YEAR               | SCIENCE COURSE TITLE                           | GRADE | YEAR               | OTHER COURSE TITLE                               | GRADE |
|--------------------|--|-------|--------------------|--|-------|
| SWARTHMORE COLLEGE |  |       | SWARTHMORE COLLEGE |  |       |
| 2008               | Cellular and Molecular Biology                 | A     | 2008               | First Year Seminar: Nation and Migration         | A     |
| 2008               | Foundations of Chemical Principles             | A     | 2009               | Statistics, Probability, and Reliability         | A     |
| 2009               | Organismal and Population Biology              | B     | 2009               | Calculus I                                       | B     |
| 2009               | Omics  | B     | 2010               | American Literature                              | B     |
| 2009               | General Physics I                              | B     | 2011               | Anthropology of Childhood and the Family         | A     |
| 2009               | Introductory Chemistry                         | A     | 2011               | Disease, Culture and Society in the Modern World | A     |
| 2009               | Organic Chemistry I                            | B     |                    |  |       |
| 2010               | General Physics II                             | B     |                    |  |       |
| 2010               | Organic Chemistry II                           | B     |                    |  |       |
| 2010               | Microbial Pathogenesis and the Immune Response | A     |                    |  |       |
| 2010               | Introduction to Cognitive Science              | A     |                    |  |       |
| 2010               | Biological Chemistry                           | B     |                    |  |       |
| 2011               | Human Genetics                                 | A     |                    |  |       |
| 2011               | Senior Project                                 | A     |                    |  |       |
| 2011               | Bioinformatics                                 | B     |                    |  |       |
| 2012               | Cell Biology                                   | A     |                    |  |       |
| 2012               | Physics in Modern Medicine                     | A     |                    |  |       |
| 2012               | Genomics and Systems Biology                   | A     |                    |  |       |
| 2012               | Senior Project                                 | A     |                    |  |       |
| UC SAN DIEGO       |  |       |                    |  |       |
| 2012               | Seminar in Genetics                            | P     |                    |  |       |

| YEAR | SCIENCE COURSE TITLE             | GRADE | YEAR | OTHER COURSE TITLE | GRADE |
|------|----------------------------------|-------|------|--------------------|-------|
| 2013 | Statistics for the Life Sciences | P     |      |                    |       |
| 2013 | Ethics in Biological Research    | CRE   |      |                    |       |
| 2014 | Seminar in Physiology & Behavior | 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.

SAMPLE