



W.M. Keck Science Department

Claremont McKenna College • Pitzer College • Scripps College

W. M. Keck Science

Policy on Responsible Conduct of Research (RCR)

for NSF-Sponsored Research and other federal programs as mandated (Under the Auspices of the Claremont McKenna College Office of Sponsored Research)

To ensure that the training of future scientists and researchers in the United States incorporates appropriate efforts to provide education in the responsible and ethical conduct of research, Section 7009 of the America Creating Opportunities to Meaningfully Promote Excellence in Technology, Education, and Science (COMPETES) Act mandates that beginning on January 4, 2010, “each institution that applies for financial assistance from the [National Science] Foundation for science or engineering research or education describe in its grant proposal a plan to provide appropriate training and oversight in the responsible and ethical conduct of research to undergraduate students, graduate students, and postdoctoral researchers participating in the proposed research project.”

NSF’s implementation of Section 7009 of the America COMPETES Act (<http://www.nsf.gov/bfa/dias/policy/rcr.jsp>) requires the following “Institutional Responsibilities”:

- a) An institution must have a plan in place to provide appropriate training and oversight in the responsible and ethical conduct of research to undergraduates, graduate students, and postdoctoral researchers who will be supported by NSF to conduct research. As noted in the NSF “Grant Proposal Guide” (Chapter II.C.1e), institutional certification to this effect is required.
- b) While training plans are not required to be included in proposals submitted to NSF, institutions are advised that they are subject to review, upon request.
- c) An institution must designate one or more persons to oversee compliance with the RCR training requirement.
- d) Institutions are responsible for verifying that undergraduate students, graduate students, and postdoctoral researchers supported by NSF to conduct research have received training in the responsible conduct of research.

The W.M. Keck Science Department of Claremont McKenna, Pitzer, and Scripps Colleges endorses this effort to properly prepare students for engagement in responsible and ethical conduct in research and has, under the auspices of the CMC Office of Sponsored Research, enacted the following policy to meet this goal and to comply with NSF grant requirements.

Keck Science Policy on RCR for all Faculty, Students, and Postdoctoral Researchers Participating in NSF-Sponsored Research and Training Projects:

In order to prepare students and postdoctoral researchers as responsible and ethical researchers, the Department has instituted PREPAIR (Program for Responsible and Ethical Preparation As Informed Researchers). PREPAIR requires that all Principal Investigators, undergraduates (whether receiving wages or working as a volunteer,

whether earning academic credit or not), graduate students, and postdoctoral researchers participating in any NSF-funded grant activity complete approved PREPAIR training.

PREPAIR training for NSF compliance consists of the following two components:

- a) First, the three interactive tutorials created by the Center for Materials and Devices for Information Technology Research must be successfully completed. Navigate to the CMDITR site: www.responsible-research.org. In the middle of the homepage, click on the “user account registration form” link under “Users: Create an Account”. (Keck Science is a “Registered Group”.) Provide the information requested (your name will be added to the Keck Science group, and the results of your training will be accessible to the Dean of the Department and Director of Sponsored Research). Under the “Academic Department” dropdown menu, choose “biology”, “chemistry”, “physics”, or other field as appropriate. Under the “What Group are you affiliated with?” dropdown menu, select “Keck Science Department”. Complete the page to “Sign Up.” You are now ready to proceed to the interactive tutorials.
- b) Second, the PI(s) leading the NSF sponsored research project should engage in on-going mentoring of students and postdoctoral researchers during the period of the grant to provide regular guidance with respect to RCR issues, such as authorship and publication practices, peer review, stewardship of data, lab procedures, examples of research misconduct, conflicts of interest, IRB issues, policies if appropriate regarding human subjects including informed consent and animal welfare. Mentors should also provide insights regarding proper mentor/trainee relationships and collaboration.

In the Keck Science Department Office (Keck 110), documents pertaining to the Responsible Conduct of Research are available for consultation, as is a copy of the book, “On Fact and Fraud: Cautionary Tales from the Front Lines of Science,” by David Goodstein (Princeton University Press, 2010).

PIs, students and postdoctoral researchers and other participants working on an NSF-funded projects must complete a form indicating that have successfully completed the on-line training component of the PREPAIR program within 30 days of initial participation in the project and that the appropriate PI-mentoring will take place during the grant activity. This form is available in the Department Office and should be signed and submitted to the Office, which will maintain appropriate files for documentation and audit purposes. When the PI submits an annual report to the NSF, a separate brief report specifying what student and/or postdoctoral mentoring has taken place should also be filed with the Department Office (but not with the NSF), which will maintain the report for documentation and audit purposes.

The Institutional Officers responsible for RCR and the PREPAIR program are the Keck Science and CMC Directors of Sponsored Research, and the Dean of Keck Science.