



March 30, 2009

National Science Foundation

RE: Response to call for public comment on requirement for students and postdoctoral researchers involved in NSF proposals to be educated in the responsible and ethical conduct of research (RCR)

To whom it may concern:

We, the undersigned members of the Responsible Conduct of Research Education Committee (RCREC) of the Association for Practical and Professional Ethics, the nation's only non-governmental organization dedicated to the development, provision, and assessment of RCR education, respectfully submit the following comments on the NSF's proposed requirement that RCR education be provided to all trainees associated with NSF research and training grants.

Based on twenty years of experience with both federally required and voluntary RCR instruction, we believe that it is essential for NSF to address the following questions and obstacles in implementing any policy on required RCR education.

- A viable policy requiring RCR education must involve a plan to assure that funded institutions, programs, and investigators can and do follow the policy. Assuring that funded institutions have the capacity to meet the policy is complex and ensuring meaningful adherence is extremely difficult. In our experience, the lack of federal effort to verify whether NIH-funded institutions with various training grant programs carry out their RCR education plans has given program directors and institutional officials mixed messages about the seriousness of the requirement. **NSF should review plans for RCR instruction seriously in the consideration of grant awards.** Once grants are awarded, **NSF should verify that funded programs in fact carry out their approved plans and that these plans are sustainable.** **Where site visits are part of NSF oversight, such visits should include a review of educational activities in RCR and provide feedback designed to strengthen RCR training programs.**
- NSF funds work in many disciplines in which consideration of RCR is new and for which there are few curricular resources available. Limited funding and limited understanding of what education in research ethics/RCR involves has led many institutions to rely exclusively on off-the-shelf, on-line programs that are not immediately linked to the individual institution's own programs or priorities. While web-based RCR training can be a crucial element in comprehensive programs, used alone online modules and other such self-study activities are not sufficient for meaningful introduction to responsible conduct, let alone comprehensive consideration of discipline- or project-specific issues. Such programs are best used as curricular materials in an

interactive, longitudinal, interpersonal educational context. The development of a culture of research integrity needs real-time exchange to allow individuals at all levels to examine their personal perceptions and potential broader implications. **NSF should encourage institutions to explore a diversity of approaches to RCR education that will allow them to optimize learning relevant to both project- and institution-specific concerns, as well as the range of fundamental issues about which all career scientists should be thoughtfully aware.**

- NSF must recognize that high-quality education in RCR requires faculty effort for teaching RCR, which should be identified and funded as an essential core activity of all NSF programs. **NSF should clearly delineate how its individual grant programs intend to fund the new education requirement, and institutions that receive NSF funds must be held responsible for identifying how they use NSF funds to support RCR education.**
- While NSF has had a longstanding commitment to funding the development of new educators in research ethics, the new requirement will create a new need for trained RCR educators in a variety of disciplines, as well as strategies for educating faculty investigators in parallel with trainees. **NSF should increase its funding of train-the-trainers and continuing education programs in research ethics and RCR, and should call for research mentors to receive RCR education themselves. It should also encourage funded institutions to identify faculty to provide interdisciplinary RCR instruction and develop institution-wide RCR education activities.**
- Finally, despite many educators' efforts to develop means of evaluating the effects of RCR education on investigators and the research environment, there are no accepted methods for their full assessment. **We strongly recommend that NSF make the development of conceptual models and practical assessment of the effects of RCR education a research priority of this initiative.**

Federally mandated education in the responsible conduct of research has the potential to make a positive difference in research practice, but only if the mandates themselves are well conceived and responsibly administered. Otherwise they run the risk of doing more harm than good. A culture of integrity and ethical decision-making will not take root in a fragmented and unfocused program; a perfunctory approach implies that education in the responsible conduct of research, and responsible research itself, are unimportant and not to be taken seriously. We applaud NSF's efforts to promote responsible conduct and encourage its leadership to take a comprehensive approach to the complexity of this undertaking.

Sincerely,

Elizabeth Heitman, PhD
Center for Biomedical Ethics and Society
Vanderbilt University
2525 West End Avenue, Suite 400
Nashville, TN 37215
615-936-2686
elizabeth.heitman@vanderbilt.edu

Corresponding for the Responsible Conduct of Research Education Committee of the
Association of Practical and Professional Ethics

Signatories from the RCR EC:

Lida Anestidou, DVM, PhD
Program Officer
Institute for Laboratory Animal Research
The National Academies
lanestidou@nas.edu

Stephanie J. Bird, PhD
Co-Editor-in-Chief
Science and Engineering Ethics
sjbird@mit.edu

Mary Brydon-Miller, PhD
Director, Action Research Center
Associate Professor, Educational Studies and Urban Educational Leadership
University of Cincinnati
Mary.Brydon-Miller@uc.edu

James M. DuBois, PhD, DSc
Hubert Mäder Chair of Health Care Ethics
Department Chair and Bander Center Director
Department of Health Care Ethics
Saint Louis University
duboisjm@slu.edu

Julia Frugoli, PhD
Associate Professor
Department of Genetics and Biochemistry
Clemson University
jfrugol@clemson.edu

Elizabeth Heitman, PhD
Associate Professor
Center for Biomedical Ethics and Society
Vanderbilt University
elizabeth.heitman@vanderbilt.edu

Michael Kalichman, PhD
Director, Research Ethics Program
University of California, San Diego
Past Chair, Responsible Conduct of Research Education Committee, Association for
Practical and Professional Ethics
kalichman@ucsd.edu

Francis L. Macrina, PhD
Edward Myers Professor of Dentistry
Vice President for Research
Virginia Commonwealth University
Founding Member, Responsible Conduct of Research Education Committee,
Association for Practical and Professional Ethics
macrina@vcu.edu

Julia A. Pedroni, PhD
Department of Philosophy
Williams College
Julia.A.Pedroni@williams.edu

Kenneth D. Pimple, PhD
Director of Teaching Research Ethics Programs
Poynter Center for the Study of Ethics and American Institutions
Indiana University Bloomington
pimple@indiana.edu

Dena Plemmons, PhD
Research Ethics Program
University of California, San Diego
dplemmons@ucsd.edu

Daniel R. Vasgird, PhD, CIP
Director, Office of Research Compliance Services
University of Nebraska, Lincoln
Founding Member, Responsible Conduct of Research Education Committee,
Association for Practical and Professional Ethics
dvasgird2@unl.edu

Sara Wilson, PhD
Associate Professor, Mechanical Engineering
University of Kansas
sewilson@ku.edu

On behalf of the Association of Practical and Professional Ethics

Brian Schrag, PhD
Executive Secretary
Association of Practical and Professional Ethics
bschrag@indiana.edu

Vivian Weil, PhD
Director, Center for the Study of Ethics in the Professions
Illinois Institute for Technology
Chair, Executive Committee, Association of Practical and Professional Ethics
weil@itt.edu