

Scientific Integrity

Purpose: The Centers for Disease Control and Prevention/Agency for Toxic Substances and Disease Registry (CDC/ATSDR-henceforth referred to as CDC) has numerous policies on various aspects of scientific integrity that may not be known to its scientists. This document provides an overarching summary of the policies, activities, and guiding principles that exist within CDC in support of four key areas of scientific integrity: (1) foundations of scientific integrity in government, (2) public communications, (3) use of federal advisory committees, and (4) professional development of government scientists and engineers. This guide allows CDC scientists, and those who support its scientific endeavors, to easily locate the appropriate policies that support the agency's principles for scientific integrity. The purpose of this guide is to ultimately strengthen scientific integrity in the conduct of CDC science, assure the public of the credibility of the agency's scientific findings and results, and provide a transparent platform to demonstrate CDC's commitment to a culture of scientific integrity. By embodying the principles of scientific integrity, CDC will continue to uphold the core values of accountability, respect, and integrity. **Scope:** The guiding principles in this document represent an identification and synthesis of policies and activities that support scientific integrity in the four key areas. They are meant to complement and highlight the numerous CDC policies and activities that address and support scientific integrity and serve as an overarching framework under which existing policies and more detailed program guidance and activities will continue. Because of the integrated nature of the guiding principles outlined herein and the broadness of some policies, many of the same policies and activities may be cited across multiple sections of this guide.

Scientific Integrity and Research Ethics: An Approach from the Ethos of Science Springer

Scientific integrity and transparency : hearing before the Subcommittee on Research, Committee on Science, Space, and Technology, House of Representatives, One Hundred Thirteenth Congress, first session, Tuesday, March 5, 2013.

The EPA's ability to effectively implement its mission of protecting public health and the environment relies largely on the integrity and transparency of: (1) its assessments of the potential human health effects of exposure to chemicals; and (2) its fed. advisory committees, which provide independent, expert reviews of EPA's scientific work. EPA's Integrated Risk Info. System (IRIS) program is critical in developing the agency's scientific positions on the potential health effects of exposure to toxic chemicals. EPA's Science Advisory Board convenes panels to review EPA's scientific assessments. This testimony highlights scientific integrity issues re: (1) the IRIS assessment process; and (2) fed. advisory committee policies and procedures. Illustrations.

The paper addresses a fundamental challenge facing anti-doping regulation in sport: securing scientific integrity. The importance of evidence in anti-doping is similar to that found across many fields where science and expertise meet policy, ethics and regulation. The authors argue that a growing body of evidence indicates that anti-doping regulation under the World Anti-Doping Agency is sometimes arbitrary and too often not grounded in a solid foundation of evidence. They document shortfalls in standards of scientific integrity in four contexts: (1) the prevalence of doping, (2) performance benefits and health risks, (3) errors and inconsistencies in accusation, and (4) the evaluation of anti-doping policies. They give several suggestions to enhance scientific integrity in anti-doping regulation and argue that greater transparency will help to reduce inconsistencies and errors.

This handbook is a 'one-stop shop' for current information, issues and challenges in the fields of research ethics and scientific integrity. It provides a comprehensive coverage of research and integrity issues, both within researchers' 'home' discipline and in relation to similar concerns in other disciplines. The handbook covers common elements shared by disciplines and research professions, such as consent, privacy, data management, fraud, and plagiarism. The handbook also includes contributions and perspectives from academics from various disciplines, treating issues specific to their fields. Readers are able to quickly source the most comprehensive and up-to-date information, protagonists, issues and challenges in the field. Experienced researchers keen to assess their own perspectives, as well as novice researchers aiming to establish the field, will equally find the handbook of interest and practical benefit. It saves them a great deal of time in sourcing the disparate available material in these fields and it is the first 'port of call' for a wide range of researchers, research advisors, funding agencies and research reviewers. The most important feature is the handbook's ability to provide practical advice and guidance to researchers in a wide range of disciplines and professions to help them 'think through' their approach to difficult questions related to the principles, values and standards they need to bring to their research practice.

The true story of Dr. Caroline Crocker's experience as an adjunct science professor at George Mason University. Addresses her teaching techniques, methodology, and perceived discrimination. Also provides a semi-biographical account of her experience with students.

This book is an easy to read, yet comprehensive introduction to practical issues in research ethics and scientific integrity. It addresses questions about what constitutes appropriate academic and scientific behaviors from the point of view of what Robert Merton called the "ethos of science." In other words, without getting into tricky questions about the nature of the good or right (as philosophers often do), Koepsell's concise book provides an approach to behaving according to the norms of science and academia without delving into the morass of philosophical ethics. The central thesis is that: since we know certain behaviors are necessary for science and its institutions to work properly (rather than pathologically), we can extend those principles to guide good behaviors as scientists and academics. The Spanish version of this book was commissioned by the Mexican National Science Foundation (CONACyT) and is being distributed to and used by Mexican scientists in a unique, national plan to improve scientific integrity throughout all of Mexico. Available now in English, the examples and strategies employed can be used throughout the English speaking research world for discussing issues in research ethics, training for scientists and researchers across disciplines, and those who are generally interested in ethics in academia.

With a seeming increase in the number of high-profile cases of research misconduct, there is a need for promoting and upholding the principles for the responsible conduct of research. At the 3rd World Conference on Research Integrity, convened in Montréal in 2013, vital issues relating to ethics and behavior in research environments were discussed at length. This book captures the major content and discussions arising from the conference. The Montréal Conference, like the previous conferences, attracted a diverse group of delegates and speakers, including government and institutional leaders, policy makers, journal editors, officials of research funding agencies, scientists and other researchers, students and postdoctoral fellows, representatives of academic societies and academies, and those responsible for compliance and regulation, as well as many who are engaged in doing empirical research on topics related to research integrity. The aim of this book is to share the ideas emerging from the rich discussion at the conference with scholars and policymakers around the world. It covers the main topics that are today seen as vital to decision making about responsible research. The book also sets the stage for the 4th World Conference on Research Integrity, which will be held in Brazil in mid-2015. This book and the prior World Conference publication, , represent the largest ongoing global discussion of issues relating to integrity in research. It provides its readers with the opportunity to learn more about and eventually engage these issues locally or globally with colleagues.

This widely adopted textbook provides the essential content and skill-building tools for teaching the responsible conduct of scientific research. Scientific Integrity covers the breadth of concerns faced by

scientists: protection of animal and human experimental subjects, scientific publication, intellectual property, conflict of interest, collaboration, record keeping, mentoring, and the social and ethical responsibilities of scientists.

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Climate change research and scientific integrity: hearing before the Committee on Commerce, Science, and Transportation, United States Senate, One Hundred Tenth Congress, first session, February 7, 2007.

The integrity of knowledge that emerges from research is based on individual and collective adherence to core values of objectivity, honesty, openness, fairness, accountability, and stewardship. Integrity in science means that the organizations in which research is conducted encourage those involved to exemplify these values in every step of the research process. Understanding the dynamics that support " or distort " practices that uphold the integrity of research by all participants ensures that the research enterprise advances knowledge. The 1992 report Responsible Science: Ensuring the Integrity of the Research Process evaluated issues related to scientific responsibility and the conduct of research. It provided a valuable service in describing and analyzing a very complicated set of issues, and has served as a crucial basis for thinking about research integrity for more than two decades. However, as experience has accumulated with various forms of research misconduct, detrimental research practices, and other forms of misconduct, as subsequent empirical research has revealed more about the nature of scientific misconduct, and because technological and social changes have altered the environment in which science is conducted, it is clear that the framework established more than two decades ago needs to be updated. Responsible Science served as a valuable benchmark to set the context for this most recent analysis and to help guide the committee's thought process. Fostering Integrity in Research identifies best practices in research and recommends practical options for discouraging and addressing research misconduct and detrimental research practices.

Preface The purpose of writing this book is to clarify the proper approach to the discussion and study of research integrity and publication ethics in medical research; this will include a code of ethics for academics, as well as cover plagiarism and intellectual property rights. At present, there is a lack of robust agreement on the degree of empirical scientific evidence for specific problems that frequently undermine integrity in research, leading to research misconduct. There is also scant knowledge about publication ethics, for which publication of a definitive code is required. In addition, many instances of what may appear to be fabricated evidence or falsified data have arisen due to a lack of knowledge about best practice rather than intentional fraud. A valuable resource is needed to support and define collaboration between research scholars in this field, and to recognize the boundaries and principles involved. This book seeks to establish a firm knowledge base to address issues arising from research integrity, publication ethics, plagiarism, and protection of intellectual property. It wishes to act as an important guideline for research students for which, at present, there is a notable absence. Key individuals who will benefit the most from this book are qualified professionals involved in the field of medical research; that is, clinical researchers, research students, and scientists. The general public, who need to place complete trust in research integrity, may also be interested in further understanding a topic that is all too infrequently discussed and rarely in the public domain. Scientists are expected to occupy the high moral ground when it comes to the search for truth, especially in regard to the human body. Cases of misconduct tend to hit the headlines due to this very fact, which is why it is imperative that the target audience is as wide as possible to effect transparency on the subject. The features and contents of this book will impart a greater depth of understanding about integrity and publication ethical issues to medical research scientists prior to conducting their research, and to journal editors throughout the publication process. It will explain and define the subject with clear parameters, incorporating a code of ethics. The present book challenges the current climate of ignorance about research integrity and ethics. It will help avoid instances of misconduct, and ensuing investigations, which often arise due to ignorance. It will save time, money, and the psychological effects of accusation, reprimand, and subsequent punitive action by avoidance of wrongdoing. If a medical researcher has been found to have fabricated the results of their studies, the book will act as a valuable guideline for proposed action; the target audience will gain from a clearer definition of research integrity. It will obviate the tendency of some research scientists, even those highly experienced, to base their findings on personal experience, philosophical bias, political and media responses, and individual case studies. A valuable feature of the book will be helping research scientists to advance to the next level of understanding in the study and discussion of research integrity and publication ethics. A number of the interpretations in this book are based on special guidelines co-authored by W Jerjes and C Hopper as well as a number of authors. Also, we acknowledge the support of English language specialist Sandy Eifion-Jones in improving the standard of English for the initial draft of this book. The authors

The World Conferences on Research Integrity provide a forum for an international group of researchers, research administrators from funding agencies and similar bodies. The second such conference, held in Singapore in July 2010. This volume brings together a selection of presentations and key guidelines and statements emerging from the Conference.

As the social work profession increasingly emphasizes scholarship and research, the education and training of faculty and students in the responsible conduct of research (RCR) becomes imperative. Research Integrity and Responsible Conduct of Research provides specific guidelines regarding the practical considerations, recommendations, and tools in the ethical and responsible practice of social work research. Using core instructional areas identified by the U.S. Office of Research Integrity, this essential guide covers data acquisition, management,

sharing and ownership; conflict of interest and commitment; subjects' protection; research misconduct; publication practices and responsible authorship; mentor and mentee responsibilities; peer review; and collaborative science. For each core area, the book identifies specific issues that are relevant for social work researchers. For example, the chapter on collaborative science discusses issues related to community-based research, and the chapter on subjects' protection covers common institutional review board issues with social behavioral protocols, such as doing research "on" students. Case studies designed to enhance critical thinking about ethical dilemmas confronted by social scientists in the practice of research are also included. Drawing on research, curriculum models, and identified best practices that have been primarily developed for biomedical researchers, the book presents practical strategies for educating and promoting RCR among social scientists. With useful case studies, sample protocols, and take-home points, this is a succinct yet valuable guide to the ethical practice of research for social work students, faculty, and agency-based staff.

The first edition of this best selling title has been adopted at numerous institutions as a text for teaching responsible research conduct. Significantly revised and refined based on the experience gained from its use in the classroom, *Scientific Integrity*, 2nd edition once again is the definitive single source for teaching this important topic.

This is our report on the subject audit conducted by the Office of Inspector General (OIG) of the U.S. Environmental Protection Agency (EPA). This report contains findings that describe the problems the OIG has identified and corrective actions the OIG recommends. This report represents the opinion of the OIG and does not necessarily represent the final EPA position. Final determinations on matters in this report will be made by EPA managers in accordance with established audit resolution procedures.

Climate change research and scientific integrity hearing before the Committee on Commerce, Science, and Transportation, United States Senate, One Hundred Tenth Congress, first session, February 7, 2007.

Science is built on trust. The assumption is that scientists will conduct their work with integrity, honesty, and a strict adherence to scientific protocols. Written by geoscientists for geoscientists, *Scientific Integrity and Ethics in the Geosciences* acquaints readers with the fundamental principles of scientific ethics and shows how they apply to everyday work in the classroom, laboratory, and field. Resources are provided throughout to help discuss and implement principles of scientific integrity and ethics. Volume highlights include: Examples of international and national codes and policies Exploration of the role of professional societies in scientific integrity and ethics References to scientific integrity and ethics in publications and research data Discussion of science integrity, ethics, and geoethics in education Extensive coverage of data applications *Scientific Integrity and Ethics in the Geosciences* is a valuable resource for students, faculty, instructors, and scientists in the geosciences and beyond. It is also useful for geoscientists working in industry, government, and policymaking. Read an interview with the editors to find out more: <https://eos.org/editors-vox/ethics-crucial-for-the-future-of-the-geosciences>

Scientific Integrity: A Handbook for Research Midwest Nursing Research Society This handbook provides a practical overview of information to help nurses take an ethical approach to research. Nurse researchers from across the Midwest collaborated to update this handy reference to guide students, nurses, and researchers. This Third Edition of *Scientific Integrity* is expanded to address the range of ethical issues researchers may encounter today. Topics range from considerations in research design to obtaining informed consent to ethical publication practices. Content addresses important issues to consider when working with vulnerable populations. This updated version includes the following contents: * Ethical principles underlying good research practices * Scientific integrity and scientific misconduct * Protecting human subjects * Vulnerable groups in research * Current research topics such as online research, big data, quality improvement studies, international research * Study and data management issues * Authorship and publication practices * Up-to-date references

"Many people say that it is the intellect which makes a great scientist. They are wrong: it is character." -- Albert Einstein *Integrity in Scientific Research* attempts to define and describe those elements that encourage individuals involved with scientific research to act with integrity. Recognizing the inconsistency of human behavior, it stresses the important role that research institutions play in providing an integrity--rich environment, citing the need for institutions to provide staff with training and education, policies and procedures, and tools and support systems. It identifies practices that characterize integrity in such areas as peer review and research on human subjects and weighs the strengths and limitations of self--evaluation efforts by these institutions. In addition, it details an approach to promoting integrity during the education of researchers, including how to develop an effective curriculum. Providing a framework for research and educational institutions, this important book will be essential for anyone concerned about ethics in the scientific community.

Research methods and statistics are central to the development of professional competence and evidence based psychological practice. (Noun, masculine) research on the development of psychological literacy. Despite this, many psychology students express little interest in, and in some cases of active dislike of, learning research methods and statistics. This ebook brings together current research, innovative evidence-based practice, and critical discourse.

Scientific Integrity: Text and Cases in Responsible Conduct of Research, 3rd Edition, presents an important revision of a best-selling text in the expanding field of responsible conduct of research training. Presents the core topics for graduate and postdoctoral trainees and professional researchers on the principles of scientific integrity Contains highly relevant interactive case studies, 30% of which are new to third edition, written by practicing scientists on the front lines of ethical issues Covers essential topics related to the conduct of scientific investigation, such as guidelines, policies, standards, and codes Offers a companion Web site, maintained by the author, containing a rich collection of Internet resources Includes discussion questions to promote critical thought Provides updates to most appendix material

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