Responsible Conduct of Research Workshop Series, 2017-2018

Misconduct in Research & Creative Activities

--February 8, 2018--
James Pivarnik

- Research Integrity Officer
- Professor of Kinesiology & Epidemiology
What Every Student Should Know About Research Misconduct

James M. Pivarnik, PhD
Research Integrity Officer (RIO)
Michigan State University
www.rio.msu.edu
RIO@msu.edu
107 Olds Hall
517-432-6698
Character is doing the right thing when nobody's looking. There are too many people who think that the only thing that's right is to get by, and the only thing that's wrong is to get caught.

(J. C. Watts)
A few recent research misconduct cases
Marc Hauser

- Studied cognitive evolution in primates
- Found guilty of 8 counts of research misconduct in 2010
- Harvard placed him on administrative leave, he later resigned
Dipak K Das

- Studied resveratrol
- Found guilty by UCONN of 145 instances of Research Misconduct
- Case began as an anonymous tip in 2008
Dong-Pyou Han

- HIV/AIDS researcher
- Added human HIV antibodies to rabbit blood
- The scam went on for years, the investigator resigned from IA State in Oct, 2013
- Sentenced to 57 months in prison
The Poehlman case: running away from the truth

John E. Dahlberg* and Christian C. Mahler

*U.S. Department of Health & Human Services, Office of Research Integrity
1*U.S. Department of Health & Human Services, Office of the General Counsel

Keywords: scientific misconduct, lifetime debarment, criminal fraud, gerontology research, menopause transition

ABSTRACT: Eric T. Poehlman, Ph.D., was an internationally recognized, tenured professor at the University of Vermont (UVM) in Burlington when, in October 2000, a junior member of Poehlman’s laboratory became convinced that he had altered data from a study on aging volunteers from the Burlington area. This suspicion developed into one of the most significant cases of scientific misconduct in the history of the US Department of Health and Human Services’ (HHS) Office of Research Integrity (ORI), launching a US Department of Justice (DOJ) civil and criminal fraud investigation and, eventually, to a much publicized guilty plea and felony conviction. In the end, Dr. Poehlman admitted to 54 findings of scientific misconduct made by the UVM and ORI, agreed to retract or correct ten of his publications and to exclude himself from federal procurement and nonprocurement transactions for life. The United States Government’s handling of this case was distinguished by a highly cooperative approach that integrated the resources of the US Attorney’s Office for the District of Vermont (USAO) and both ORI and the Office of the Inspector General (OIG) in HHS in the common goal of prosecuting research fraud.

* The content of this article represents the personal views of the authors and does not express the opinion or policy of DHHS or its components.

A paper on this topic was presented at the 6th International Bioethics Conference on the subject of ‘‘The Responsible Conduct of Basic and Clinical Research’, held in Warsaw, Poland, 3-4 June 2005.

Addresses for correspondence:
John E. Dahlberg, Ph.D., Senior Investigator, Division of Investigative Oversight, Office of Research Integrity, U.S. Department of Health & Human Services, Tower Oaks Bldg., Suite 750, Rockville, Maryland 20852, USA; email: j.dahlberg@osophs.dhhs.gov.

Christian C. Mahler, J.D., Senior Attorney, Office of the General Counsel, Public Health Division, U.S. Department of Health & Human Services, 5600 Fishers Lane, Suite 4A-53, Parklawn Bldg., Rockville, Maryland 20857, USA; email: c.mahler@psc.gov.


Science and Engineering Ethics, Volume 12, Issue 1, 2006 157
Concussion-Related Measures Improved in High School Football Players Who Drank New Chocolate Milk, UMD Study Shows

UPDATE: This press release refers to study results that are preliminary and have not been subjected to the peer review scientific process.

COLLEGE PARK, Md. — Fifth Quarter Fresh, a new, high-protein chocolate milk, helped high school football players improve their cognitive and motor function over the course of a season, even after experiencing concussions, a new preliminary University of Maryland study shows.

The study, funded through the Maryland Industrial Partnerships program and conducted by Jae Kur Shim, a professor of kinesiology in the School of Public Health, followed 474 football players from seven high schools in Western Maryland throughout the fall 2014 season.

“High school football players, regardless of concussions, who drank Fifth Quarter Fresh chocolate milk during the season, showed positive results overall,” said Shim. “Athletes who drank the milk, compared to those who did not, scored higher after the season than before it started, specifically in the areas of verbal and visual memory.”

Football players were tested before the season, after concussions and post-season.
Why won’t the University of Maryland talk about the chocolate milk/concussion study it was so eager to promote?

Editor's note: In response to concerns first raised by HealthNewsReview.org in a news release review and the following blog post, the University of Maryland has announced it is conducting an investigation into the study at the center of this controversy.

Why did the University of Maryland issue multiple news releases about a health research project, and then decline to talk about it? That’s just one of the questions piling up about research involving high school football players, concussions and a brand of chocolate milk.

It started routinely. I was asked by HealthNewsReview.org to take the first look at a news release from the University of Maryland. "Concussion-Related Measures Improved in High School Football Players Who Drank New Chocolate Milk, UMD Study Shows" read the headline. The lead went further, claiming not just an association, but that the milk was responsible.

On December 22, the University of Maryland published a remarkable press release about some research it had conducted. According to the release, a study conducted by a professor at the UMD School of Public Health had shown that a product called Fifth Quarter Fresh — basically, a fancy, fortified chocolate milk — "helped high school football players improve their cognitive and motor function over the course of a season, even after experiencing concussions."

Given the current focus on youth concussions, it’s no surprise that this news traveled fast and that the claim appears to have benefited the company in question. Motivated by what appeared to be sturdy scientific evidence, the University of Maryland took the lead in promoting the product.
Wakefield’s article linking MMR vaccine and autism was fraudulent

Clear evidence of falsification of data should now close the door on this damaging vaccine scare

“Science is at once the most questioning and... sceptical of activities and also the most trusting,” said Arnold Relman, former editor of the New England Journal of Medicine, in 1989. “It is intensely sceptical about the possibility of error, but totally trusting about the possibility of fraud.” Never has this been truer than of the 1998 Lancet paper that implied a link between the measles, mumps, and rubella (MMR) vaccine and a “new syndrome” of autism and bowel disease.

Authored by Andrew Wakefield and 12 others, the paper’s scientific limitations were clear when it appeared in 1998. As the ensuing vaccine scare took off, critics quickly pointed out that the paper was a small case series with no controls, linked three common conditions, and relied on parental recall and beliefs. Over the following decade, epidemiological studies consistently found no evidence of a link between the MMR vaccine and autism. By the time the paper was finally retracted 12 years later, after forensic dissection at the General Medical Council’s (GMC) longest ever fitness to practise hearing, few people could deny that it was fatally flawed both scientifically and ethically. But it has taken the diligent scepticism of one man, standing outside medicine and science, to show that the paper was in fact an elaborate fraud.

In a series of articles starting this week, and seven years after first looking into the MMR scare, journalist Brian Deer now shows the extent of Wakefield’s fraud and how it was perpetrated. Drawing on interviews, documents, and data...
Office of Research Integrity

THE LAB
Avoiding Research Misconduct
Interactive Movie on Research Misconduct
Watch Full Version Online
What the RIO does

- The RIO is responsible for seeing to it that the MSU Procedures Concerning Allegations of Misconduct in Research and Creative Activities are carried out in an unbiased, confidential, and professional manner.

- Required for any institution seeking and accepting federal funding (42 CFR 93)
Research Integrity Officer

The Research Integrity Officer (RIO) receives and manages Allegations of Misconduct in Research within the MSU community. Research Misconduct includes Plagiarism, Fabrication, Falsification, and other research activities that seriously deviate from accepted practices in the research community. The Michigan State University policy can be found in the Procedures Concerning Allegations of Misconduct in Research and Creative Activities.

The RIO also manages authorship and data disputes according to MSU's Authorship and Research Data: Management, Control, and Access guidelines. In this role, the RIO provides advice to administrators, faculty and students in best authorship and data management practices.

Please feel free to contact us if you have questions/concerns about any research integrity matter. Our discussions can remain confidential.

James M. Pivamik, Ph.D.
Research Integrity Officer
107 Olds Hall
408 W. Circle Drive
East Lansing, Michigan 48824
Phone: (517) 432-6698
Email: rio@msu.edu

Announcements

MSU bloggers post on 'Spartan Ideas'
Spartan Ideas is an MSU website maintained by MSU Libraries and the Office of the Vice President for Research and Graduate Studies. It is designed to showcase a continuously growing selection of MSU’s faculty, student, and staff blogs. A team of MSU librarians "curates" this collection, choosing...more

1 2
PROCEDURES CONCERNING ALLEGATIONS OF MISCONDUCT IN RESEARCH AND CREATIVE ACTIVITIES

19 June 2009
The role of the RIO

- The RIO shall coordinate implementation of these Procedures and shall be responsible for their fair and impartial administration. The RIO shall not be an advocate for the Complainant or the Respondent.
Question

- Is the RIO the most thankless job at Michigan State University?
  - Yes
Question

- Is the RIO the most despised entity at Michigan State University?
  - No
So who is?
What exactly is “Research Misconduct”? 
Research Misconduct (Michigan State)

Fabrication, Falsification, Plagiarism, or any other practice, that Seriously Deviates from practices commonly accepted in the discipline or in the academic and research communities generally in proposing, performing, reviewing, or reporting Research and Creative Activities. Misconduct does not include appropriative practices in the Creative Arts insofar as they accord with accepted standards in the relevant discipline. Misconduct does not include honest error or honest differences in the interpretation or judgment of Research data.
It doesn’t matter what I think, the evidence says everything

Mac Taylor, CSI New York
How does the process begin?
Misconduct Process

- Allegation
  - Complainant(s)
  - Respondent(s)

- Preliminary Assessment (by me)
  - Meet definition?
  - Any evidence?
My most important phrase
My most important phrase

- “it could be”
Misconduct Process

- Allegation
  - Complainant(s)
  - Respondent(s)

- Preliminary Assessment (by me)
- Inquiry Panel
- Investigative Committee

- Exoneration or Finding
Fabrication

- Fabrication is making up data or results and recording or reporting them.
Falsification

- Falsification is manipulating research materials, equipment, or processes, or changing or omitting data or results such that the research is not accurately represented in the research record.
Figure 1: Cases formally opened by ORI that involve questioned images.
Plagiarism

- Plagiarism is appropriation of another person's ideas, processes, results, or words without giving appropriate credit.
Pyramus and Thisbe, in classical mythology, youth and maiden of Babylon, whose parents opposed their marriage. Their homes adjoined, and they conversed through a crevice in the dividing wall. On a night when they had arranged to meet at the tomb of Ninus, Thisbe, who was the first at the trysting place, was frightened by a lion with jaws bloody from its prey. As she fled, she dropped her mantle, which was seized by the lion. When Pyramus came, the torn and bloody mantle convinced him that she had been slain. He killed himself, and Thisbe, returning, took her own life with his sword. The white fruit of a mulberry tree that stood at the trysting place was dyed red with Pyramus' blood, and the fruit was ever after the color of blood.
• Written by Ovid
• Between 5-3 BC
Does Pyramus and Thisbe remind you of anything?
Does Pyramus and Thisbe remind you of anything?

- William Shakespeare
- 1595
Does Pyramus and Thisbe remind you of anything?

- Arthur Laurents
- 1957
Accusations of plagiarism should be judged individually, taking into account the actual damage done to the original author and current copyright holder, and whether or not the alleged theft actually has any artistic merits in its own right.

- Feb 27, 2007
- thunderpeel2001.blogspot.com
- Posted by Johnny Walker
A judgment of plagiarism requires that the copying, besides being deceitful in the sense of misleading the intended readers, induces reliance by them. By this I mean that the reader does something because he thinks the plagiarizing work original that he would not have done had he known the truth.

- Richard A. Posner
- The Little Book of Plagiarism (Pantheon Books, NY), 2007
- Page 19
September 11, 2009

President Barack Obama
The White House
Washington, DC 20500

Dear Mr. President:

On behalf of the more than 35,000 members and certified professionals of the American College of Sports Medicine (ACSM), I am writing to thank you for highlighting the importance of covering routine checkups and preventive care, like mammograms and colonoscopies, in your speech on Wednesday, Sept. 9, 2009, before a joint session of Congress.

However, we believe that prevention and wellness is much more than just clinical preventive services and should include initiatives designed to encourage healthy lifestyles, including increasing physical activity and improving nutrition. As you know, five of the costliest illnesses and conditions—cancer, cardiovascular disease, diabetes, lung disease, and strokes—can be prevented through a combination of healthy lifestyles and essential screenings.

ACSM is the largest sports medicine and exercise science organization in the world. Its members have applied their knowledge, training, and dedication in sports medicine and exercise science to promote healthier lifestyles for people around the globe. In addition to improving the health of citizens worldwide, our members’ research has also proven that fitness increases worker productivity and job performance.

You may be interested to know that for more than two years ACSM has been spearheading an innovative program to prevent illness and disease. The Exercise is Medicine™ program, launched in conjunction with the American Medical Association, is designed to encourage America’s patients to incorporate physical activity and exercise into their daily routine. Exercise is Medicine™ specifically calls on doctors to prescribe exercise to their patients, which is the kind of initiative that will help you achieve your goal of stepping up efforts to advance the cause of healthy living.

We thank you once again for your commitment to providing leadership on this issue and we look forward to working with you to ensure that healthy lifestyles, including increased physical activity and better nutrition play a much more prominent role in the future than it has in the past.

Sincerely,

James M. Pivarnik, FACSM
President
American College of Sports Medicine

cc:
Nancy-Ann DeParle, White House Office of Health Reform
Kathleen Sebelius, HHS Secretary
Standard of Determination for Research Misconduct

- There be a **significant departure** from accepted practices of the relevant research community; and
- The misconduct was committed **intentionally, knowingly, or recklessly**; and
- The allegation be proven by a **preponderance of the evidence**
"I tend not to believe people. People lie. The evidence doesn't lie."

Gil Grissom, CSI
Serious Deviation from Common Practice

- ???????????????????????
Serious Deviation from Common Practice

- Stealing, destroying, or damaging the research property of others with the intent to alter the research record

- Listing someone’s name as an author on a publication, without his/her knowledge or permission
Serious Deviation from Common Practice

- Misrepresenting background information, including biographical data, citation of publications, or status of manuscripts

- Abuse of confidentiality: taking or releasing the ideas or data of others which were shared with the legitimate expectation of confidentiality, e.g., stealing ideas from others' grant proposals, award applications, or manuscripts for publication when one is a reviewer for granting agencies or journals
Question

- Do we deal with any other bad things?
- Sometimes
Disclosure

Report potential conflicts of interest
Research Integrity Matters
Research Integrity Council
grad.msu.edu
vprgs.msu.edu

Compliance
Understand and follow the rules
Honesty Recognition Confidentiality Disclosure Compliance Protection Collegiality Communication
Research Integrity Matters
Research Integrity Council
grad.msu.edu
vprgs.msu.edu

Protection
Respect research participants

Honesty  Recognition  Confidentiality  Disclosure  Compliance  Protection  Collegiality  Communication
• “Unacceptable Research Practices” means practices that do not constitute Misconduct but that violate applicable laws, regulations, or other governmental requirements, or University rules or policies, of which the Respondent had received notice or of which the Respondent reasonably should have been aware, for proposing, performing, reviewing, or reporting Research or Creative Activities.
What about individuals who are always on the edge?
“Questionable Research Practices” means practices that do not constitute Misconduct or Unacceptable Research Practices but that require attention because they could erode confidence in the integrity of Research or Creative Activities.
Research Integrity Matters
Research Integrity Council
grad.msu.edu
vprgs.msu.edu

Collegiality
Work well with others

Honesty   Recognition   Confidentiality   Disclosure   Compliance   Protection   Collegiality   Communication
What percentage of potential allegations coming to our office is associated with some sort of previous conflict between/among the parties involved?

~ 90%!!
What’s the Score?

- We average about 6-10 new cases per year
What’s the Score?

- Every case undergoes a Preliminary Assessment
  - Approximately 1/3 cases end there
- Of the 2/3 of cases that move on,
  - 1/3 end with an Inquiry
  - 2/3 move on to a full Investigation
Causes of research misconduct? (Davis et al, 2007)

- Individual
- Situational
- Organizational
- Structural
- Cultural
Recent Cases

- Hypothetical, of course
Recent Cases

- Falsification/fabrication of data by a student
  - Complainant was faculty, and students
- Lab supervision could have been better
Recent Cases

- Plagiarism in a dissertation by a student
  - Complainant was external to MSU

- Dissertation committee may not have provided proper oversight
Recent Cases

- Serious Deviation and Plagiarism by a student
  - Complainants were faculty members

- Possible prior acts by Respondent drove the Allegation
Recent Cases

- Plagiarism by a faculty member
  - Complainant was a student

- Case complicated by “agreements” made among administrators, faculty member, and student, that are not clearly understood by all parties
Recent Cases

- Unacceptable Research Practices by faculty member
  - Complainant was a student

- Graduate Dean helped student secure another lab for doing the right thing
You can report anonymously

Misconduct Hotline
You can report anonymously

Submit a Report

Online Hotline
Visits to the reporting website are not tracked. You can choose to provide your name or remain anonymous.

Submit a report online »

Phone Hotline
Anonymous calls can be made 24 hours a day, seven days a week.
Dial (800) 763-0764
If you see something, say something.
And now for something completely different
What Every Student Should Know About Authorship and Data Ownership
Whose name goes where on the paper, and whose data are they anyhow?
Rationale

- Role of peer-reviewed research
- Importance in faculty evaluations
- Increasing level of collaborative efforts
- Student education
The Future of Peer Reviewed Publishing?

COMMENTARY

The Ethics of Scientific Publishing: Black, White, and “Fifty Shades of Gray”

Anthony L. Zietman, MD, FASTRO

Department of Radiation Oncology, Massachusetts General Hospital, Boston, Massachusetts

Received Feb 21, 2017, and in revised form Jun 2, 2017. Accepted for publication Jun 8, 2017.
Francis Crick and James Watson
MOLECULAR STRUCTURE OF NUCLEIC ACIDS

A Structure for Deoxyribonucleic Acid

We wish to propose a structure for deoxyribonucleic acid (DNA), the material of which corn seeds are composed, and the chemical and physical properties of which are explained and illustrated by this structure.

The double helix of the DNA molecule is composed of two antiparallel strands, each consisting of a sequence of nucleotides. The nucleotides are held together by hydrogen bonds, forming a stable structure. Each strand is composed of a sugar-phosphate backbone, with a nitrogenous base attached at each position.

The structure is stabilized by the base pairing of adenine-thymine and guanine-cytosine, which form complementary pairs.

This model explains the physical properties of DNA, such as its helical shape, and the chemical properties, such as its resistance to denaturation by heating or chemical agents.

We propose that this structure provides a framework for the storage and transmission of genetic information, as well as a means for the replication and transcription of DNA.
Acknowledgement

- We are much indebted to Dr. Jerry Donohue’s constant advice and criticism, especially on atomic disturbances. We have also been stimulated by a knowledge of the general nature of the unpublished experimental results and ideas of Dr. M. H. Wilkins, Dr. R.E. Franklin and their co-workers.
Maurice Wilkins
Maurice Wilkins
The Nobel Prize in Physiology or Medicine 1962 was awarded jointly to Francis Harry Compton Crick, James Dewey Watson and Maurice Hugh Frederick Wilkins "for their discoveries concerning the molecular structure of nucleic acids and its significance for information transfer in living material" (1953).
So what’s the problem?
Rosalind Franklin
Rosalind Franklin

MICHIGAN STATE UNIVERSITY

Rosetta Franklin

NATURE

April 25, 1953

Vol. 171

We present this work to Prof. J. B. Randall for endorsement. Photos: D. H. D. Price, R. M. E., and D. E. J. Rooney, J. E. M. W. and A. V. K. H. H. Activity on the Rosalind is a subject of interest in its own right, and we are grateful for the opportunity to present it here. We wish to thank Dr. J. D. Randall and Dr. P. H. S. for the figures. Dr. P. H. S. was responsible for the origin of the Rosalind Franklin model. Dr. J. D. Randall and Dr. P. H. S. were responsible for the origin of the Rosalind Franklin model.

Molecular Configuration in Sodium Thymonucleic Acid

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It was awfully "nobel" of Wilkins to get us a peek at Rosalind's X-ray photos of DNA, eh what James.

Sure thing Crick. We wouldn't have seen the double helix without it. Thanks for that Maurice.
History

- The Nobel Prize in Medicine 1962

Francis Harry Compton Crick

James Dewey Watson

Rosalind Franklin
(Died of cancer 1958)

Maurice Hugh Frederick Wilkins
Did Rosalind Franklin get shafted?
The author list should include all appropriate researchers and no others. Authorship provides credit for a researcher’s contributions to a study and carries accountability. The Nature journals do not prescribe the kinds of contributions that warrant authorship but encourage transparency by publishing author contributions statements. Nature journals editors are not in a position to investigate or adjudicate authorship disputes before or after publication. Such disagreements if they cannot be resolved amongst authors should be brought up to the relevant institutional authority.

- Nature, 2014
Who Qualifies for Authorship?

- Idea Person?
- Data Collectors?
  - Paid vs Unpaid
- Statistician?
- Head of Lab?
- Students?
- Colleagues?
- Relatives?
Medicine and Science in Sports and Exercise
To be an author, each individual shall have contributed to the manuscript in at least two (2) of the following areas:

- * Significant manuscript writer
- * Significant manuscript reviewer/reviser
- * Concept and design
- * Data acquisition
- * Data analysis and interpretation
- * Statistical expertise
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- * Concept and design
- * Data acquisition
- * Data analysis and interpretation
- * Statistical expertise

Manuscripts with more than six (6) authors require justification for exceeding that number. The Journal reserves the right to ask authors to reduce the number of authors.
What about an *abstract* submission to a research meeting?

Are the rules different?
1. Authorship Responsibility, Criteria, and Contributions. Each
author should meet all criteria below (A, B, C, and D) and should
indicate general and specific contributions by reading criteria A,
B, C, and D and checking the appropriate boxes.

☐ A. I certify that
• the manuscript represents original and valid work and that nei­
ther this manuscript nor one with substantially similar content un­
der my authorship has been published or is being considered for
publication elsewhere, except as described in an attachment, and
copies of closely related manuscripts are provided; and
• if requested, I will provide the data or will cooperate fully in
obtaining and providing the data on which the manuscript is based
for examination by the editors or their assignees; and
• for papers with more than 1 author, I agree to allow the cor­
responding author to serve as the primary correspondent with the
editorial office, to review the edited typescript and proof, and to
make decisions regarding release of information in the manu­
script to the media, federal agencies, or both; or, if I am the only
author, I will be the corresponding author and agree to serve in
the roles described above.

☐ B. I have given final approval of the submitted manuscript.

☐ C. I have participated sufficiently in the work to take public
responsibility for (check 1 of 2 below)
☐ part of the content.
☐ the whole content.

☐ D. To qualify for authorship, you must check at least 1 box
for each of the 3 categories of contributions listed below.

☐ I have made substantial contributions to the intellectual con­
tent of the paper as described below.
1. (check at least 1 of the 3 below)
☐ conception and design
☐ acquisition of data
☐ analysis and interpretation of data
2. (check at least 1 of 2 below)
☐ drafting of the manuscript
☐ critical revision of the manuscript for important intel­
lectual content
3. (check at least 1 below)
☐ statistical analysis
☐ obtaining funding
☐ administrative, technical, or material support
☐ supervision
☐ no additional contributions
☐ other (specify) ____________ _

Your Signature Date Signed
Participation that does not qualify for authorship includes:

- Data gathering
- Provision of financial or other support
Bone Mineral Density in Collegiate Female Athletes: Comparisons Among Sports

Lanay M. Mudd, MS; Willa Fornetti, DO, MS; James M. Pivarnik, PhD

Michigan State University, East Lansing, MI

Lanay M. Mudd, MS, contributed to conception and design; analysis and interpretation of the data; and drafting, critical revision, and final approval of the article. Willa Fornetti, DO, MS, contributed to conception and design; acquisition of the data; and drafting, critical revision, and final approval of the article. James M. Pivarnik, PhD, contributed to conception and design, acquisition and analysis and interpretation of the data, and critical revision and final approval of the article.
Any Limit on Number of Authors?
International Committee of Medical Journal Editors (ICMJE)

- http://www.icmje.org/
- First met in Vancouver in 1978
- Later became the ICMJE
- Developed a number of statements and standards re: manuscript submission
- Most recently revised in Oct, 2014
- One issue is authorship
According to ICMJE, authorship should be based on:

1) substantial contributions to conception and design, or acquisition of data, or analysis and interpretation of data
2) drafting the article or revising it critically for important intellectual content
3) final approval of the version to be published
4) Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

*Authors should meet conditions 1,2,3 and 4
Additional info

- Acquisition of funding, collection of data, or general supervision of the research group, alone, *does not* justify authorship.

- Each author should have participated sufficiently in the work to take public responsibility for *appropriate* portions of the content.
What does MSU say?

**Michigan State University Guidelines on Authorship**

Approved by the Council of Research Deans, October 25, 2012

1. **Authorship:** A person shall qualify as an Author, if and only if the following conditions are satisfied:

   • Participation in conception and design of the creative work, study, review, analysis
   or interpretation of any data.
   • Participation in the drafting of the creative work or manuscript or in the editing of the creative work or manuscript.
   • Final approval of the version of the creative work or manuscript to be published.
   • Ability to explain and defend appropriate portions of the work or study in public or scholarly settings.
Ending Honorary Authorship

CREDIT FOR SCIENTIFIC RESEARCH CONTRIBUTIONS MUST BE CLEARLY AND APPROPRIATELY ASSIGNED at the time of publication. This task has become increasingly complicated because of the number of different laboratories and contributors involved in many studies. The good news is that academic institutions, funders, and publishers are exploring new ways to clarify attribution,* and many publishers now require disclosure of specific contributions for scientific authorship. As part of this effort, it is critical that the problem of honorary authorship be effectively addressed. According to a recent report, honorary authors were attached to 25% of research reports, 15% of review articles, and 11% of editorials published in six major medical journals in 2008.* It is time to end this practice.

A true author is someone who has made substantive intellectual contributions to a study and is responsible for a component of the work. Honorary authorship violates this central principle. Why then is it so frequent? In some cases, honorary authorship amounts to "coercive authorship," in which a senior person informs a junior colleague that the senior person must be listed as an author, even though he/she did not contribute substantially—or at all—to the work. In other cases, the principal investigator may adopt the name of a prominent scientist in the field as a guest author in an attempt to boost the paper's chance of publication. Both types of behavior have fraudulent aspects, distorting the ethical culture that is central to a healthy academic environment.

To discourage honorary authorship and ensure appropriate accountability for published results, many journals have updated their policies on authorship. For some (including Science), all authors must formally agree to be listed as authors, specify their contributions to the manuscript, and certify that they approve of its content and submission to the journal. But scientific journals could go even further by adding a statement on authorship forms that reminds authors of their accountability in the event of challenges to the veracity or integrity of the work, such as "By signing this statement, I acknowledge that I take credit for the content of the published work. I also acknowledge that I will take responsibility for the work if questions arise in the future as to its veracity and credibility." Such a statement would serve as a firm reminder that being inappropriately listed as an author has negative consequences if the results are challenged or retracted.

Research institutions should develop and promulgate clear statements in their research policies about the importance of upholding ethical standards of authorship. For example, Washington University in St. Louis defines both guest and gift authorship as research misconduct, whereby "guest (honorary, courtesy, or prestige) authorship is defined as granting authorship out of appreciation or respect for an individual, or in the belief that expert standing of the guest will increase the likelihood of publication, credibility, or status of the work" and "gift authorship is credit, offered from a sense of obligation, tribute, or dependence, within the context of an anticipated benefit, to an individual who has not contributed to the work." Each institution should also specify to whom concerns should be directed, without fear of retribution, when an author feels coerced to include an inappropriate author.

It is incumbent on more-senior colleagues to assist in educating their colleagues about the proper standards for authorship. But all scientists should take a stand against coercive authorship and refuse to comply with such behavior. In this way, senior faculty and mentors will serve as role models of best practices, reinforcing for more-junior investigators the importance of ensuring appropriate authorship. Honorary authorship must no longer be tolerated. Concerted efforts by institutions, authors, and journals are needed to put an end to this fraudulent and unethical practice.

— Philip Greenland and Phil B. Fontanarosa

12http://wotl.elsevier.com/authorship.html

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Quit whining, it’s not a big deal
Baltimore, David

Baltimore, David (bôl'timôr, –môr) [key], 1938–, American microbiologist, b. New York City, Ph.D. Rockefeller Univ., 1964. He conducted (1965–68) virology research at the Salk Institute before becoming a professor at Massachusetts Institute of Technology in 1972. In 1970 he and his wife Alice Huang discovered a virus caused by an enzyme that could transcribe DNA into RNA. He shared the 1975 Nobel Prize in Physiology or Medicine with Renato Dulbecco and Howard Temin for his study on the connections between viruses and cancer.

Appointed president of Rockefeller Univ. in 1990, he resigned the next year after a scientific fraud scandal. A paper he coauthored was said to contain fraudulent data from another author, Dr. Thereza Imanishi-Kari, and Baltimore was criticized for his vehement defense of the paper despite the evidence. In 1996, an appeals panel overturned the verdict of the original investigating office, the federal Office of Scientific Integrity (now the Office of Research Integrity), and Baltimore and Imanishi-Kari were exonerated. In 1997 Baltimore was appointed president of the California Institute of Technology.

The Columbia Electronic Encyclopedia, 6th ed.
Contributorship

- All contributors who do not meet the criteria for authorship should be listed in an acknowledgments section. Examples of those who might be acknowledged include a person who provided purely technical help, writing assistance, or a department chair who provided only general support.
Question.....

- Does (or should) being a member of a thesis or dissertation committee automatically qualify one for authorship?
Order, Order
Who Cares?

- Compendium of physical activities: classification of energy costs of human physical activities
- Over 3800 Citations!!!
- Ainsworth et al.
- Ainsworth, Haskell, Leon, Jacobs, Montoye, Sallis, Paffenbarger
American Psychological Association (APA)

- According to the 6th edition of the APA manual, "The names of the authors should appear in the order of their contributions, centered between the side margins."
Authorship Order

- The group should jointly make decisions about contributors/authors before submitting the manuscript for publication. The corresponding author/guarantor should be prepared to explain the presence and order of these individuals. It is not the role of editors to make authorship/contributorship decisions or to arbitrate conflicts related to authorship.

- (ICMJE, 2008)
Authorship Order

- No proposal for more informative and standardized systems for ordering the names of authors has been universally accepted. (Rennie, 1994)

- While the significance of a particular order may be understood in a given setting, order of authorship has no generally agreed upon meaning. (Harvard Medical School, 1999)
Deciding the order of authors on research papers is a recognised problem. Currently, authorship order cannot be interpreted by readers and editors. The last position often carries more status. In some papers the senior investigator is named last, in others it is the head of the laboratory or department, and in others it is the person who contributed least. (BMJ, 1997)
The order of authors is a collective decision of the authors or study group. This policy does not address questions or disputes regarding the order of authorship on publications. **It is not possible for the University to define the order of authorship.** In conjunction with the lead author, co-authors should discuss authorship order at the onset of the project and revise their decision as needed. **All authors must work together to make these informed judgments.**

- WUSTL, Compliance and Policies, 2009
What does MSU say?

3. **Lead Author and Order of Authors:** The Lead author is defined as the person who leads a research/scholarly effort or creative work and makes a major contribution to a multi-authored work. The Lead author is also responsible for gathering the appropriate consents necessary (animal, human use) and for validating the integrity of the work. The Lead author takes the lead of discussing the contributions, recognition and order of all authors that participate in the study. All authors, regardless of position, have a voice in this discussion. *Ideally, author arrangement is agreed to proactively, formally, and in writing prior to the initiation of the study.* A sample agreement that allows for formal recognition and agreement on authorship can be found as an appendix to this policy. As the study evolves, agreements regarding authorship may need to be further discussed. Most journals and other scholarly outlets do not include statements on author order, so the Lead Author should guide this process and adhere to the norm of the discipline.
Self-Plagiarism
Self-Plagiarism

- Text Recycling
- Copyright Infringement
- Partitioning (salami slicing)
- Redundant Publication
What is a redundant publication?
What is a redundant publication?

- According to the ICMJE:

  Redundant (or duplicate) publication is publication of a paper that overlaps substantially with one already published in print or electronic media.
What’s the big deal?

- Duplicate publication of original research is particularly problematic, since it can result in inadvertent double counting or inappropriate weighting of the results of a single study, which distorts the available evidence.
How to prevent redundancy?

- Responsibility of author(s) to let the Journal Editor know that there may be an issue.
- Complete disclosure should be made up front when the manuscript is submitted.
When submitting a paper, the author must always make a complete statement to the editor about all submissions and previous reports (including meeting presentations and posting of results in registries) that might be regarded as redundant or duplicate publication. The author must alert the editor if the manuscript includes subjects about which the authors have published a previous report or have submitted a related report to another publication. Any such report must be referred to and referenced in the new paper. Copies of such material should be included with the submitted manuscript to help the editor decide how to handle the matter.

- ICMJE, 2008
Related Question

- Who “owns” the data collected by a student for his/her dissertation at MSU?
Research Data: Management, Control, and Access

Both the University and the PI have responsibilities and rights concerning access to, use of, and maintenance of original research data. Except where precluded by the specific terms of sponsorship or other agreements, tangible research property, including scientific data and other records of research conducted under the auspices of Michigan State University, belongs to Michigan State University. The PI should be responsible for maintenance and retention of research data.
Research Data: Management, Control, and Access

- The PI is the signatory person who has scholarly responsibility for the conduct of the proposed research.

- When individuals involved in research projects at Michigan State University leave the University, they may take copies of research data for projects on which they have worked. The PI must, however, retain original data at Michigan State University.
Bottom Line (IMHO)

- To determine authorship rules
  - First, check with the journal
  - Next, check MSU guidelines
- PI or advisor has final say on where to submit and authorship order
- If in doubt, feel free to check with me
So what’s the answer?
Thank you...Any Questions?
How many RCR Workshops have you attended, including tonight’s?

1. One
2. Two
3. Three
4. Four
5. Five
6. Six
7. More than six
Which of the following describes best your disciplinary academic affiliation

1. Arts & Humanities
2. Clinical Programs
3. Education
4. Engineering & Tech Disciplines
5. Life Sciences
6. Physical Sciences
7. Social Sciences
8. Professional Programs
9. Other
I understand and could explain what constitutes Research Misconduct at MSU.

1. Not at all
2. Somewhat
3. Moderately
4. Very
5. Completely
Do you feel that you have an obligation to report acts by others that you observe & know to violate University policies or Research Integrity Guidelines?

1. Yes
2. No
Would you report violations of academic integrity if it could be done anonymously?

1. Yes
2. No
Would you report violations of academic integrity if it could NOT be done anonymously?

1. Yes..  
2. No
I would report a fellow student to the RIO if I believed s/he committed research misconduct.

1. Strongly Agree
2. Agree
3. Neutral
4. Disagree
5. Strongly Disagree
6. It would depend on the situation
I would report a faculty member who was not my major professor to the RIO if I believed s/he committed research misconduct.

1. Strongly Agree
2. Agree
3. Neutral
4. Disagree
5. Strongly Disagree
6. It would depend on the situation
I would report my major professor to the RIO if I believed s/he committed research misconduct.

1. Strongly Agree
2. Agree
3. Neutral
4. Disagree
5. Strongly Disagree
6. It would depend on the situation
Do you have direct knowledge of situations at MSU that you believe would constitute Research Misconduct based on tonight’s explanations?

1. Yes
2. No
Rigor and Reproducibility,
March 1, 2018