The Legal Consequences of Research Misconduct:

False Investigators and Grant Proposals

Eric A. Fong, Allen W. Wilhite, Charles Hickman, and Yeolan Lee

Introduction

A recent study found that when some scholars apply for research grants they may add extraneous investigators, individuals who are not expected to contribute to the research effort, to their grant proposals. These individuals are labeled "false investigators." For example, at some institutions, lab directors may be routinely added to grant proposals simply because the proposal is coming out of that lab, not because the director will be making a significant contribution to the research. Sometimes young scholars add their mentor to a proposal as a show of respect or gratitude, in other cases a small group of scholars might reciprocate, adding each other to their various proposals to increase their chances of receiving an award. This manuscript argues that adding false investigators violates U.S. civil and criminal statutes. Federal grant proposals lie within the jurisdiction of the U.S. Government and are therefore subject to prosecution under laws designed to protect the government from attempts to use fraud to procure government funds including False, Fictitious or Fraudulent Claims (18 U.S.C. §287), the False

Eric A. Fong, Ph.D., is an Associate Professor of Management at the University of Alabama in Huntsville and graduated from the University of Florida in Gainesville, FL with a Ph.D. in 2004. Allen W. Wilhite, Ph.D., is a Professor of Economics at the University of Alabama in Huntsville and graduated from the University of Illinois in Urbana-Champaign, IL with a Ph.D in 1981. Charles Hickman, J.D., is a retired Associate Clinical Professor of Accounting and Business Law. He earned his Master of Letters and Laws — Taxation from the University of Missouri in Kansas City, MO in 1989 and his Juris Doctor — Law from the University of Arkansas in Fayetteville, AR in 1985. Yeolan Lee, Ph.D., is an Assistant Professor of Management at University of Alabama in Huntsville and graduated from The Ohio State University in Columbus, OH with a Ph.D. in 2013.

Statements Act (18 U.S.C. §1001), and civil damages under the False Claims Act (31 U.S.C. §3729).2 In fact, U.S. Government jurisdiction extends to all grants originating with granting organizations receiving federal funds, which means submitting grants that include false investigators to state agencies and many non-profit organizations are also potential violations. The submission of a grant application that includes a false investigator to an organization receiving federal funds, whether that grant is later funded or not, is a violation of the False Statements Act (FSA). Furthermore, if grant proposals that include false investigators are approved and receive funding, the participants are also violating 18 U.S.C. §287 (criminal false and fictitious claims against the U.S. Government) and the False Claims Act (FCA).

In addition, responsibility for research misconduct extends beyond the immediate participants. Legal culpability also exists for everyone signing off on a proposal who knows, or should have known, that false investigators may be included. Thus, violations, whether criminal or civil, can include those with administrative authority over the grant; such as department chairs, deans, and sponsored program officers, who approve grant proposals prior to their submission with the knowledge that the proposal may include a false investigator, or any other materially false information. For example, consider a university research lab that typically includes lab directors in grant proposals. If the lab director does not directly participate in a funded research project, then administrators approving these grant proposals are putting themselves at legal risk. Moreover, liability is not limited to individuals, but also extends to institutions; a number of universities have settled FCA actions for millions of dollars in penalties and/or have had to defend themselves from FCA prosecution in court. It is important to note that effort certification procedures do not insulate institutions from potential prosecution; in fact, as argued below, effort certification could be used as evidence against an institution to document a false claim.

According to Jacob,³ when it comes to research integrity the "the implementation of legal and regulatory frameworks has so far remained under-theorized, and this has limited the possibility of grasping the

In this manuscript, we attempt to make a connection between research integrity and the law. This manuscript starts with a discussion of false investigators in grant proposals. It then addresses the civil and criminal elements of the inclusion of false investigators in grant proposals. To conclude, the manuscript provides policy initiatives that may help reduce the practice of false investigators.

distinctive interpretative challenges that engagement with research integrity problems poses to legal and other experts." In this manuscript, we attempt to make a connection between research integrity and the law. This manuscript starts with a discussion of false investigators in grant proposals. It then addresses the civil and criminal elements of the inclusion of false investigators in grant proposals. To conclude, the manuscript provides policy initiatives that may help reduce the practice of false investigators.

The Inclusion of False Investigators

Growing competition for publication and grant funding provides incentives for scholars to work more efficiently, but it can also lead to abuses, corner cutting, and fabrication.⁴ Many forms of academic and research misconduct have been identified and studied; fake peer-review, plagiarism, falsifying data, adding names to research publications, and so forth,⁵ but the majority of these forms of misconduct focus on publishing. Little research focuses on grants and those studies examine the impact of research misconduct in publishing on an academic's subsequent grant funding.⁶ This manuscript focuses on misconduct in grants; specifically, on the practice of adding extraneous investigators even though those added individu-

als are not expected to make any contribution to the research effort.

Fong and Wilhite show that the inclusion of false investigators is widespread with reported incidents spanning the academic spectrum including science, engineering, medicine, business, and the social sciences.⁷ And, although many reasons were given for adding a false investigator, the most common (representing 60% of the cases) was that the false investigator's reputation increased the chances of a positive

review. Other common reasons were that the false investigator was the director of the lab where the work was being conducted, that the added individual was in a position of authority and could influence the respondent's career, some additions were suggested by reviewers, and some scholars added their mentor. Irrespective of the individual's rationale, it is research misconduct because it is a falsification in proposing research that is "committed intentionally, knowingly, or recklessly"s and it has civil and criminal consequences.

The subsequent sections address the legal implications of false investigators by systematically reviewing the elements of the FCA, the FSA, and 18 U.S.C. §287,

criminal false or fictitious claims, and then applying those elements to the addition of false investigators.⁹

The Civil Liability of False Investigators

The origin of the False Claims Act (31 U.S.C. §3729) dates back to the Civil War with the enactment of "An Act to prevent and punish Frauds upon the Government of the United States," imposing civil liability on people who present false claims to the government for the purpose of obtaining payment.¹⁰ The FCA focuses on the recovery of claims for the U.S. Government. This statute is the means by which the government recovers money from grant fraud and imposes civil penalties. As of 2018, the Act provides for a civil penalty of not less than \$11,181 and not more than \$22,363, plus 3 times the amount of damages suffered by the Government attributable to the false claim.¹¹ If found liable, the defendant may also be liable for the U.S. Government's cost of pursuing civil action to recover the damages and levy penalties. The elements that must be proven to establish liability under the civil FCA are: 1) The defendant made a false statement or engaged in a fraudulent course of conduct; 2) Such statement or conduct was made or carried out with the requisite scienter; 3) The statement or conduct was material; and 4) The statement

or conduct caused the government to pay out money or forfeit money due.¹² Each of these elements will be analyzed.

False Statement or Fraudulent Conduct

In *Universal Health Services v. United States ex rel. Escobar*, the court approved of two standards for what constitutes an actionable falsehood under the FCA.¹³ The first is an actual specific false representation and the second is an implied false certification. Including an investigator who, in fact, performs no work, or has performed no work, on a research grant, would fall into the category of an actual false representation. An example of a false implied certification would be effort certifications made by a researcher, certifying a researcher had spent research time on a funded project, when in fact they had not.

Scienter

Scienter refers to a guilty state of mind, or necessary level of intent in carrying out a wrongful act. In Universal Health Services v. United States ex rel. Escobar, the court determined that this element can be proven in three ways: 1) actual knowledge of falsehood; 2) deliberate ignorance; and 3) for civil liability under the FCA, reckless disregard for the truth is sufficient to establish the knowledge requirement. The authors would assert that if grantees submit a claim knowing there is a false investigator, this would be actual knowledge. Similarly, purposefully avoiding such knowledge also meets the requirement. For administrators, the most concerning means by which the knowledge requirement can be met is reckless disregard. This implies some level of a due diligence and a lack of meaningful oversight by administrators rises to the level of recklessness, particularity if the granting agency, the grantee institution, or a particular administrator, is charged with meaningful oversight of the grant application and funding process.

Materiality

Materiality deals with whether an action *reasonably might influence* a governmental decision. The *Escobar* case was largely about the requirement of materiality and the fundamental question was whether payment would have occurred if false or fraudulent conduct was known.

Causation

The issue of causation is the extent to which the false or fraudulent conduct results in the payment of a false claim. In *United v. Luce*, ¹⁴ the court rejected a "but for" test and adopted the broader proximate causation as the standard by which FCA cases would be governed.

Therefore, if it is reasonably foreseeable that a defendant's falsehood was the cause of the government's harm, the requirement for causation is satisfied.

There is case law demonstrating that false investigators meet these elements. For example, a jury determined that Cornell University Medical College was in violation of the FCA by making false statements in connection with grant applications.¹⁵ Renewal grant applications to the NIH included "key personnel" who later had no involvement in the grant (i.e., the grant application included individuals who did not contribute to the research effort; false investigators). Cornell argued that such false statements were not material; that they did not influence the grant decision. However, the appeals court ruled against them because the concern was whether the false statement, in this instance the inclusion of "key personnel" (i.e., false investigators), had the natural tendency or capability of influencing the receipt of money, which in this case was the NIH's decision to grant the money to Cornell.

Universities have increasingly faced FCA litigation and, in most instances, have settled rather than go to trial. For example, in 2015 the University of Florida reached a \$20 million settlement regarding FCA allegations revolving around improper charges to U.S. Department of Health and Human Services, in 2014 Duke University Health System, Inc. reached a \$1 million FCA settlement regarding fraudulent Medicare, Medicaid, and TRICARE billing, and in 2016 the University of Missouri-Columbia paid a \$2.2 million settlement related to false Medicare claims. Although these settlements do not relate to false investigators, they show that universities are beginning to pay the price for fraud and as knowledge of false investigators grows, so do the chances that universities will find themselves in FCA litigation.

Civil false claims cases can be brought by anyone, such as a disgruntled employee, support staff, someone who has been fired, etc. They are called a relator. The relator files a lawsuit under seal and notifies the government. The government then has to decide whether to take over the litigation or allow the relator to proceed. If there is a recovery to the government, the relator is entitled to 15% to 30% of the amount recovered. Grant awards can be for millions of dollars which creates a significant incentive for someone to blow the whistle. In one such example, the Federal District Court awarded damages equal to the full amount paid on the grants, \$1,657,455 and trebled that amount as provided by the False Claims Act.¹⁶ The Cornell case was originally brought by a relator, Daniel Feldman, with knowledge of the inclusion of false investigators on grant applications to the NIH and, prior to appeal, the total damages were \$1,519,595.

The Criminal Liability of False Investigators

Until the enactment of the FCA (31 U.S.C. §3729) in 1863, false and fraudulent claims were solely a criminal offense (18 U.S.C. §287). With the development of the FCA, the U.S. Government could reclaim their losses from fraud and monetarily penalize the responsible party through civil prosecution using the FCA as well as criminally penalize those responsible through 18 U.S.C. §287. False statements were one means by which someone could be held liable for a false claim under the FCA and 18 U.S.C. §287. In 1934, Congress amended 18 U.S.C. §287, removing the requirement that a false statement be for the purpose of financial fraud and thus making false statements, whether for financial fraud or not, illegal.¹⁷ Thus, if someone makes a false statement to the U.S. Government for any reason, that individual can be in violation of 18 U.S.C. §287. In 1948, Congress separated false statements from false claims creating the False Statements Act (18 U.S.C. §1001).18 From this point forward, false statements were criminally prosecuted under the False Statements Act and false claims were criminally prosecuted under 18 U.S.C. §287. Depending upon an individual's actions, they could be criminally prosecuted for two crimes, false statements and false claims, but criminal liability with regards to false investigators begins with false statements in grant applications.

The False Statements Act (18 U.S.C. §1001)

Under the False Statements Act, whoever, in any matter within the jurisdiction of the executive, legislative, or judicial branch of the U.S. Government, knowingly and willfully -1) falsifies, conceals, or covers up by any trick, scheme, or device a material fact; 2) makes any materially false, fictitious, or fraudulent statement or representation; or 3) makes or uses any false writing or document knowing the same to contain any materially false, fictitious, or fraudulent statement or entry - shall be fined under this title, imprisoned not more than 5 years. ¹⁹

Submission of a grant application with a false investigator is a materially false statement; recall, the court has found that the inclusion of a false investigator is material (could reasonably influence a grant decision) in the Cornell case. Moreover, the precedent that false statements in grant proposals are illegal are clear; researchers have been convicted, fined, and imprisoned for false statements including the addition of false investigators in grant applications. For example, in *U.S. v. Anghaie*, Dr. Samim Anghaie and his wife, Sousan Anghaie, were convicted of crimes under both the FSA and 18 U.S.C. §287; making false statements in grant applications and making false claims with regard to the grant funds. One of the false state-

ments, for which the Anghaies were convicted, was the listing on grant applications a "Principal Investigator" who performed no work on the contract (i.e., a false investigator). Dr. Anghaie was sentenced to 6 months imprisonment, his wife received a sentence of home confinement, and each was ordered to pay \$500,000 fines.

In addition to *U.S. v. Anghaie* there are other cases involving prosecutions under the False Statements Act based almost exclusively on the inclusion of false investigators in a grant proposal. For example, in *U.S. v. Thomson*, Scott Thompson applied for a \$150,000 Small Business Technology Transfer grant from the NSF on behalf of Isosceles, LLC.²¹ The grant proposal specified that Dr. Jing Li would be hired by Isosceles as the principal investigator. Dr. Li was never hired by Isosceles. The Defendant, Thomson, none the less submitted claims for payment specifying that Dr. Li had worked at least 160 hours on the project. The Defendant was convicted of multiple counts of making false claims, false statements, and wire fraud as well as one count of receiving stolen government money.

U.S. v. Ding and Zotova²² is perhaps the strongest case predicated on the inclusion of a false investigator as the basis for criminal prosecution. In Ding and Zotova, the case is predicated on a representation in the grant proposal that Yulia Zotova would be the principal investigator and Lehigh University would be a subcontractor. The facts of the case show that Dr. Zotova was never involved in performing the funded research. While the funded work was completed, it was performed by Yujie Ding and graduate students using resources at Lehigh where Dr. Ding was a prominent professor, but Dr. Zotova did not participate. Dr. Ding and Dr. Zotova were convicted on multiple counts of wire fraud based on false certifications that Dr. Zotova was the PI and had performed significant services.

If universities have administrators (e.g., Chairs, Deans, and individuals in their Sponsored Programs Office) sign fraudulent proposals then the question can be raised, "did they know or should they have known?" Although it is necessary that a defendant "know" the statement is false for liability under the False Statements Act, case law provides that avoidance of knowledge will not protect a defendant if the facts indicate that this knowledge was purposely avoided. "Deliberate Ignorance" is a substitute for actual knowledge. In essence, if a Defendant is shown to have purposefully avoided knowledge of a false statement or claim, the government has met its burden of the falsity element of the crime. Thus, administrators may not be able to avoid liability by claiming they did not know that a false investigator was included in a grant proposal or on invoices for grant funds.

There are cases where administrators were charged with false statements using deliberate ignorance as the burden for establishing knowledge. In U.S. v. Calhoon, John Calhoon (the Defendant), a manager at an organization dealing with Medicare reimbursement, claimed that he had not noticed that non-reimbursable royalty fees were included in the Medicare cost reports because he was a hands-off manager. The jury convicted Calhoon of making false statements in claiming Medicare reimbursement using deliberate ignorance as a substitute for actual knowledge.23 Calhoon appealed the decision and argued that the "deliberate ignorance" jury instruction should not have been given, but the 11th Circuit Court of Appeals determined the "deliberate ignorance" charge was proper and not prejudicial.

In *U.S. v. Delgado*, Maria Delgado (the Defendant), a billing administrator and self-professed medical billing expert with 30 years of experience, submitted ineligible Medicaid and Medicare reimbursement requests for therapy sessions.²⁴ The Defendant argued she lacked the necessary knowledge to be guilty of making false statements. The 5th Circuit held that where a defendant: (1) was subjectively aware of a high probability of the existence of illegal conduct; and (2) the defendant purposely contrived to avoid learning of the illegal conduct, a jury may be instructed that "deliberate ignorance" is sufficient to show knowledge on the part of the defendant.

It is also pertinent to note here that the recruitment of others to make false statements also has criminal liability consequences. ²⁵ Section 2, article b, of Title 18 of the U.S. Code (18 U.S.C. §2(b)) states that the willful causing of an offense, which includes false statements, against the United States, imposes liability as a "principal" on that individual causing the offense even if the offense was performed by another person. ²⁶ Fong and Wilhite show that significant portion of the false investigators were included because they were the lab director or some other person of authority who "could impact [the survey respondent's] career." ²⁷ If the survey respondents felt pressure to include someone not expected to contribute then those authority figures may also be culpable.

Criminal False, Fictitious, or Fraudulent Claims (18 U.S.C. §287)

If funds are granted to a proposal that includes a false investigator then spending those funds may constitute a violation of 18 U.S.C. §287 (criminal false, fictitious, or fraudulent claims). The elements of criminal false claims are that the defendant: 1) made or presented a false, fictitious, or fraudulent claim to a department of the United States; 2) knew such claim was false, fic-

titious, or fraudulent; and 3) did so with the specific intent to violate the law or with a consciousness that what he was doing was wrong. Violations of the first two elements occur when: 1) a statement was made; 2) it was false; 3) it was material, meaning it has the potential to influence a decision; 4) it was made with specific intent, meaning knowledge of the falsity; and 5) it was within the jurisdiction of the United States.²⁸ The arguments below suggest that submitting a fraudulent proposal to a federal granting agency, such as the NSF, NIH, or Department of Defense, or any agency that receives federal funds, meets each of these elements. The third element, knowing it is wrong, is a fundamental pillar of scholarly research; intentional falsification on proposed research is wrong. To be clear, the submission of a fraudulent grant proposal, in and of itself, is a criminal offense (a false statement), thus even if a proposal is not funded, the False Statements Act (18 U.S.C. §1001) has been violated. But, the potential for a second criminal offense arises if the grant is awarded because expenditures from that grant are a claim based on a false statement and they violate 18 U.S.C. §287. In essence, someone is in violation of 18 U.S.C. §287 if they receive any funds obtained with a false statement.

STATEMENT

A *statement* is any statement or representation, sworn or unsworn, whether required by the government or not, whether in writing or not.²⁹ When researchers submit a grant proposal, that proposal includes many statements and some of those statements are about who will be contributing to the research effort and what their contributions will be.

FALSITY

A statement is *false* when there is a false representation or when there is concealment of a relevant fact.³⁰ The inclusion of a "false investigator" constitutes a false statement because it is a false representation of the persons who will be responsible for conducting the funded research if the grant is awarded. Again, 20% of 10,000 survey respondents said that they included someone as an investigator even though they were not expected to contribute.³¹

MATERIALITY

A statement is *material* if it *reasonably might influence* a governmental decision.³² The U.S. Supreme court has determined that materiality is an issue for a jury to decide, so materiality turns on the ability to make a convincing case to a jury.³³ Proposals with false investigators are asking the government to give research support to someone not involved in the research. That is a decision the government would not make absent the individual's inclusion on the grant, thus, the false request influences the decision. Furthermore, grant reviewers regularly consider the reputation and past experience of applicants when evaluating proposals.³⁴ In fact, the application guidelines of the NSF direct investigators to provide examples of their work, and other activities, related to the project being proposed.35 Fong and Wilhite find that 60% of those who admit to adding false investigators did so because they believe the false investigator's reputation will impact the funding decision.³⁶ Reputation often matters when agencies distribute funds and it is that potential influence that makes the proposal material. There is precedence for this application of materiality; in U.S. ex rel. Daniel Feldman v. Wilfred van Gorp and Cornell University Medical College, a jury determined that the inclusion of "key personnel" in a grant proposal who are not really going to work on the grant is material.37

INTENT

The *intent* requirement in the law is that a statement is a "knowing and willful" false statement. The actor does not have to intend to specifically deceive the government or even know that the false statement is illegal, they just have to willfully (intentionally) make a statement they know is false.38 The inclusion of a false investigator meets the intent standard. The grant proposer knows that they are including someone as a contributor to a grant proposal even though that individual is not going to be part of the research process. That is all that is required. Even if the participants did not intend their false investigators to sway the funding decision, intent is still satisfied. In Fong and Wilhite, respondents provide a number of reasons for the inclusion of false investigators (their reputation might sway the decision, it was their department chair or director of the lab, etc.),³⁹ but the specific reason a researcher was added does not matter; since there was a rationale for their inclusion, the inclusion was intentional. Because NSF grant applications require all investigators to sign proposals, both the grant proposer and the false investigator have legal knowledge of this false statement.

JURISDICTION

A statement must be within the *jurisdiction* of some branch of the U.S. Government (executive, legislative, or judicial) for criminal liability to apply to a false statement. Grant proposals are a signed request for government funds, meeting the jurisdiction requirement. Moreover, the actor does not have to know it is in the jurisdiction of the U.S. government and the

statement does not have to be communicated directly to the U.S. government to be in the U.S. Government's jurisdiction.⁴⁰ This means that sending a grant to a non-federal agency, such as a non-profit research institute, that receives federal funds is covered by this law. Furthermore, researchers do not have to have prior knowledge that such an agency has federal funds to be prosecuted. Courts have consistently ruled that statements to state or local governments receiving federal funds or are otherwise overseen by the U.S. government are within the jurisdiction of the law.⁴¹ This opens the possibility that internal state university grants are within the jurisdiction of this law.

Many universities receiving grant funding have effort certification policies in an attempt to ensure grant funds are not misused. Unfortunately, in the case of false investigators, the effort certification process occurs after the law has been broken. The false statement violation happens when a grant is submitted. Then, if such a grant is awarded, *any* claim made on the funds violates the false claims act. Even if a specific expenditure was completely appropriate in the sense that it followed the grant's approved budget, the fact that the funds were awarded based on a false statement makes that otherwise legitimate claim a false claim. Thus, if a grant includes a false investigator, effort certification actually documents false claims.

Because the falsification of a funding proposal is typically determined after the award of the proposal, violations of the FSA and 18 U.S.C. §287 are usually prosecuted together. ⁴² In any case where a fraudulent grant application is submitted, the grant is funded, and funds are spent, applicants can be charged with both crimes. Additionally, once these legal lines have been crossed, there are additional crimes that can potentially be charged in connection with the fraudulent grant application; such as wire fraud, mail fraud, and conspiracy. As discussed above, in *U.S. v. Ding and Zotova*, Drs. Yujie Ding and Yulia Zotova were convicted on multiple counts of wire fraud based on false certifications that Dr. Zotova was the PI and had performed significant services. ⁴³

Conclusion

Researchers have identified a number of costs to society as well as to individual academics when it comes to research misconduct; for society it misleads readers,⁴⁴ wastes resources,⁴⁵ and puts patients at risk⁴⁶ and for the individual researcher it damages their reputation and career.⁴⁷ Sovacool argues that society should raise the cost to individual researchers to help reduce misconduct by explicitly making misconduct illegal.⁴⁸ Other researchers point out that some

research misconduct may already violate the law. For example, Stegemann-Boehl suggests that the use of falsified data in statements made to German funding agencies may be punishable as fraud.49 Another is by Stern and Lemmens, who argue that publications that include "guest" or "honorary" authorship, where someone is given credit as an author even though they did not fulfill authorship requirements, may violate the False Claims Act if proof can be provided that it led to a fraudulent claim to the government.⁵⁰ This manuscript focuses on a newly observed form of research misconduct, adding "false investigators" to grant proposals. By presenting a legal argument that the inclusion of false investigators in grant proposals breaks federal laws, this manuscript is attempting to make researchers aware that there are far reaching consequences to misconduct. However, this manuscript goes further, it points out that administrators should be concerned about this form of misconduct because they are signing these grant proposals and thus are personally entangling themselves, and their universities, in this legal process.

Fong and Wilhite provide evidence that the inclusion of false investigators in grant proposals is pervasive.⁵¹ It may be pervasive because little research has investigated the legality of this behavior and academics may unwittingly think it is acceptable. Academics from all disciplines may be unintentionally exposing themselves, their colleagues, and their institutions to criminal and civil liability when they include a false investigator because it violates the False Statements Act and, if the grant is funded, the False Claims Act.

Liability is not limited to U.S. researchers. The NIH, for example, funds research both in the U.S. and internationally, so academics from around the world can face U.S. penalties. In addition, many countries provide state funded research and have laws similar to those in the U.S. Stegemann-Boehl suggests there may be consequences based on German law in relation to fraudulent data submitted to German granting agencies.⁵² Other examples include the United Kingdom's (U.K.) Fraud Act 2006, Canada's Criminal Code parts 361 and 380 on false pretense and fraud, and Article K.3 of the Treaty on European Union (E.U.); all make similar statements to the U.S. False Statements and False Claims Acts regarding the protection of government funds in relation to false statements and/or false claims; researchers seeking funding in countries with such laws who are adding false investigators to their proposals may be unintentionally committing a crime.

Finally, administrators can be held both criminally and civilly liable for the inclusion of false investigators in grant proposals they sign. Thus, they face personal risk and can damage the reputation of their institution. Administrators have been held criminally liable in cases dealing with false statements and while it would be unreasonable to suggest that administrators should know every circumstance where a false investigator was included in a grant proposal, it would not be surprising to find out that certain institutions have cultures that encourage grant writers to include lab directors, other administrators, or mentors who do not actually play a role. That an administrator would allow such cultures to persist and then continue to sign grant documents knowing the potential for misconduct puts that administrator in a precarious legal position. They may be liable because of "deliberate ignorance;" seen as purposefully avoiding knowledge of a false statement. Their actions also put their institutions at significant monetary risk through FCA liability. It should also be reiterated that effort certification is not a means of protecting administrators or institutions from false claims, but instead documents that fact that such claims were made. Effort certification is not a means of protection for the type of misconduct addressed in this manuscript.

There are policy changes that can help and they are as follows:

- Universities and research institutions should review their internal policies and specifically address who should be and who should not be included in grant proposals. Institutional cultures that automatically include directors of labs, department heads, or administrators should be re-examined. In some situations, it may be appropriate to include lab directors and the like on some grants, but institutions should have explicit policies that clearly delineate when those inclusions are appropriate and when they are not. In conjunction with this policy review, individuals who might be willing to expose abuses should be extended safe harbor; whistleblowing that keeps institutions out of a legal quagmire benefits those institutions.
- Potential offenders may not be fully aware that
 they are committing acts of academic misconduct
 or that they are even breaking the law. Thus, all
 researchers should be made aware of the consequences through better responsible conduct of
 research (RCR) training. Vasgird (2007: 835)
 states "A broad and comprehensive RCR education program can be invaluable in diminishing
 any communication and knowledge gap that
 might exist between institutional policy makers
 and those whom the policies may affect." 53
- It may be possible to reduce the perceived benefit of adding false investigators. It seems that many

granting agencies, and the reviewers for those agencies, consider investigators' publications, experience, and skills important and thus why identifying information is part of grant review. However, the overwhelming reason false investigators are added to proposals is that their reputation may sway reviewers; consequently, removing the potential impact of reputation should help cut back on the practice and thus any policy that increases the anonymity of grant participants should reduce the incentive to add false investigators. The most extreme policy would be to institute double blind review; this serves to take reputation completely out of the process.

To conclude, research teams that include extraneous or false investigators appear to be violating criminal and civil law. A large number of academics seem to be unaware of these laws or ignore them. The purpose of this manuscript is to raise awareness of the potential legal consequences to their actions; specifically, violations of the FCA and FSA. While the practice of adding false investigators may be the norm at some universities that does not make it legal. For administrators, the appearance of condoning this behavior may only aid potential prosecution. By turning a blind eye to the inclusion of false investigators, administrators are practicing their own form of "intentional, knowing, and reckless" behavior with regards to falsified, proposed research; they are failing with regard to research integrity. If the recognition that they are not meeting research integrity standards is not enough to change their behavior, administrators may find the fact that they and their universities can be held liable strong motivating factors to take this, and hopefully all research misconduct, seriously.

Note

Dr. Fong reports grants from Office of Research Integrity, during the conduct of the study.

Acknowledgement

This work was supported by a grant from the Office of Research Integrity (ORI) through the U.S. Department of Health and Human Services (HHS) [Grant Number ORIIR130003]. The content is solely the responsibility of the authors and does not necessarily represent the official views of ORI or HHS.

References

- E. A. Fong and A. W. Wilhite, "Authorship and Citation Manipulation in Academic Research," *PLoS One* 12, no. 12 (2017): e0187394, available at https://doi.org/10.1371/journal.pone.0187394 (last visited May 5, 2020).
- 18 Û.S.C. §1001 (2006); 31 U.S.C. §3729 (2009); 18 U.S.C. §287 (1986).

- M. Jacob M, "Under Repair: A Publication Ethics and Research Record in the Making," Social Studies of Science 49, no. 1 (2019): 77-101, at 78-79.
- 4. M. S. Anderson, E. A. Ronning, R. De Vries, and B.C. Martinson, "The Perverse Effects of Competition on Scientists' Work and Relationships," Science and Engineering Ethics 13, no. 4 (2007): 437-461; D. Fanelli, "Negative Results are Disappearing from Most Disciplines and Countries," Scientometrics 90, no. 3 (2012): 891-904; B. C. Martinson, A. L. Crain, M. S. Anderson, and R. De Vries, "Institutions' Expectations for Researchers' Self-Funding, Federal Grant Holding, and Private Industry Involvement: Manifold Drivers of Self-Interest and Researcher Behavior," Academic Medicine 84, no. 11 (2009): 1491-1499.
- 5. D. Fanelli, "How Many Scientists Fabricate and Falsify Research? A Systematic Review and Meta-Analysis of Survey Data," PLoS One 4, no. 5 (2009): e3573, DOI:10.1371/journal. pone.0005738; C. Ferguson, A. Marcus, and I. Oransky, "Publishing: The Peer-Review Scam," Nature 515, no. 7528 (2014): 480-482; A. Flanagin, L. A. Carey, and P. B. Fontanarosa, "Prevalence of Articles with Honorary Authors and Ghost Authors in Peer-Reviewed Medical Journals," JAMA 280, no. 3 (1998): 222-224; B. R. Martin, "Whither Research Integrity? Plagiarism, Self-Plagiarism and Coercive Citation in an Age of Research Assessment," Research Policy 42, no. 5 (2013): 1005-1014.
- A. M. Stern, A. Casadevall, R. B. Steen, and F. C. Fan, "Financial Costs and Personal Consequences of Research Misconduct Resulting in Retracted Publications," *eLife* (2014): e02956, DOI: 10.7554/eLife.02956.
- 7. See Fong and Wilhite, *supra* note 1.
- Department of Health and Human Services 42CFR Parts 50 and 93, Public Health Service Policies on Research Misconduct; Final Rule, Federal Register (17 May 2005).
- 9. §3729, supra note 2.
- 10. Act of March 2, 1863, 12 Stat. 696 (1863).
- 11. §3729(1)(G), supra note 2.
- United States ex rel. Rose v. Stephens Inst., 901 F.3d 1124 (9th Cir. 2018).
- Universal Health Services v. United States ex rel. Escobar, 136
 S. Ct. 1989 (2016).
- 14. United States v. Luce, 873 F.3d 999 (7th Cir. 2017).
- U.S. ex rel. Feldman v. van Gorp and Cornell University Medical College, 697 F.3d 78 (2nd Cir. 2012).
- 16. Ex rel. longhi v. Lithium Power Techs., 575 F.3d 458 (5th Cir. 2009)
- 17. Hubbard v. U.S., 514 U.S. 695, 706 (1995).
- Public Law (Pub. L.) 80-772, 62 Statues at Large (Stat.) 683, (1948).
- 19. §1001, supra note 2.
- U.S. v. Anghaie, 1:09-CR-3 (N.D. Fla. 2011); U.S. v. Kellermann, 992 F. 2d 177 (8th Cir. 1993); U.S. v. Siddiqui, 235 F.3d 1318 (11th Cir. 2000).
- U.S. v. Thomson, 2015 U.S. Dist. LEXIS 68759 *; 2015 WL 3440858 (D. So. Dakota 2015).
- U.S. v. Ding and Zotova, 2016 U.S. Dist. Lexis 88320 (E.D. Pa. 2016).
- 23. U.S. v. Calhoon, 97 F.3d 518 (11th Cir. 1996).
- 24. U.S. v. Delgado, 668 F.3d 219 (5th Cir. 2012).
- 25. Milton v. U.S., 8 F.3d 39 (D.C. Cir 1993).
- 26. U.S. v. Curran, 20 F.3d 560, 565 (3rd Cir 1994).
- 27. See Fong and Wilhite, supra note 1.
- 28. U.S. v. Calhoon, supra note 23.
- U.S. v. Gilliand, 312 U.S. 86, 89 (1941); U.S. v. Des Jardins,
 722 F.2d 578, 580 (9th Cir. 1985); U.S. v. Fitzgibbon, 619 F.2d
 874, 878 (10th Cir. 1980).
- 30. U.S. v. Calhoon, supra note 23.
- 31. See Fong and Wilhite, supra note 1.
- 32. U.S. v. Chen, 324 F.3d 1103 (11th Cir. 2003).
- 33. U.S. v. Gaudin, 515 U.S. 506 (1995).

- 34. N. Gallini and S. Scotchmer, "Intellectual Property: When is it the Best Incentive System?" *Innovation Policy and the Economy* 2 (2002): 51-77.
- 35. Proposal and award policies and procedures guide, NSF, 17-1 OMB Control Number 3145-0058 (2017).
- 36. See Fong and Wilhite, supra note 1.
- 37. U.S. ex rel. Daniel Feldman v. Wilfred van Gorp and Cornell University Medical College, 697 F.3d 78 (2nd Cir. 2012).
- 38. U.S. v. Hsia, 176 F.3d 517 (D.C. Cir. 1999).
- 39. See Fong and Wilhite, supra note 1.
- U.S. v. Yermian, 468 U.S. 63 (U.S. S. Ct 1984); U.S. v. Heuer,
 4 F.3d 723 (9th Cir. 1993); U.S. v. Ross, 77 F.3d 1523 (7th Cir. 1995).
- 41. U.S. v. Shaffer, 199 F.3d 826, 829 (6th Cir. 1999).
- U.S. v. Anghaie, supra note 20; U.S. v. Anghaie, 633 Fed. Appx. 514 (11th Cir. 2015).
- 43. U.S. v. Ding and Zotova, supra note 22.
- 44. I. Boutron and P. Ravaud, "Misrepresentation and Distortion of Research in Biomedical Literature," *PNAS* 115, no. 11 (2018): 2613-2619.
- 45. See Fanelli, *supra* note 5.
- R. G. Steen, ^aRetractions in the Medical Literature: How Many Patients are Put at Risk by Flawed Research?" *Journal of Medical Ethics* 37, no. 11 (2011): 688-692.

- 47. See Stern et al., supra note 6; A.M. Michalek, A. D. Hutson, C. P. Wicher, and D. L. Trump, "The Costs and Underappreciated Consequences of Research Misconduct: A Case Study," PLoS Medicine 7, no. 8 (2010): e1000318, DOI:10.1371/journal. pmed.1000318; E. Gammon and L. Franzini, "Research Misconduct Oversight: Defining Case Costs," Journal of Health Care Finance 40, no. 2 (2013): 75-99.
- B. K. Sovacool, "Using Criminalization and Due Process to Reduce Scientific Misconduct," American Journal of Bioethics 5, no. 5 (2005): W1-W7.
- S. Stegemann-Boehl, "Misconduct in Science and the German Law," Science and Engineering Ethics 6, no. 1 (2000): 57-62.
- S. Stern and T. Lemmens, "Legal Remedies for Medical Ghost-writing: Imposing Fraud Liability on Guest Authors of Ghost-written Articles," *PLoS Medicine* 8, no. 8 (2011): e1001070, available at https://doi.org/10.1371/journal.pmed.1001070 (last visited May 5, 2020).
- 51. See Fong and Wilhite, *supra* note 1.
- 52. See Stegmann-Boehl, supra note 49.
- D. R. Vasgird, "Prevention Over Cure: The Administrative Rationale for Education in the Responsible Conduct of Research," Academic Medicine 82, no. 9 (2007): 835-837.