Intellectual Property & Patents

Vital Facts Every PI Needs to Know
A Note from the Publisher

Dear Professional:

Thank you for ordering “Intellectual Property: Expert Tips, Tactics, and Insider Advice” from the Principal Investigators Association Resource Library. This compilation is designed to help you with everything PIs need to know about patents and other areas of intellectual property.

Our editors have selected for you the most helpful Intellectual Property-related items which appeared in the pages of Principal Investigator Advisor monthly newsletter and PI eAlert weekly ezine. This unique assembly is a treasure chest of tips, tactics, and advice for any investigator concerned with Intellectual Property creation and protection.

Best Regards,

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PS: In addition to the special reports that make up the Resource Library, Principal Investigators Association offers a weekly e-Alert and a year-long series of audio conferences – all devoted to helping you improve performance and spend more time doing what you love: the research.

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Intellectual Property Articles
Important Facts All PIs Need to Know About IP and Patent Laws

How do you go from a discovery in your laboratory to intellectual property (IP) on a balance sheet? It's a trickier process than many would guess. A scientist might assume something isn't IP when it very well might be, or just the reverse. That's according to Howard Rockman, a Chicago attorney who's been practicing patent law for scientists for more than 40 years.

Rockman, who addressed a Principal Investigators Association audio conference on the subject, outlined nine keys to keep in mind when thinking about turning your lab discoveries into IP:

1. A patent doesn't automatically give you the right to make something. An inventor designed a biological enzyme designed to gobble up oil, which could be used in oil spills. However, the necessary testing wasn't done for environmental impact.

Bottom line: A patent gives you exclusive rights to develop your idea, not to bring it to market. To do that, you'll have to follow all other appropriate regulations.

2. Winning a patent doesn't mean you might not infringe on someone else's patent. “It’s very expensive to have a product hit the market and you get hit with a patent-infringement suit,” said Rockman.

Keep in mind that once you get your patent, that patent is not a guarantee:

• that it doesn't literally infringe on another's IP
• that continued development of the invention necessary to bring the product to market may not eventually infringe on someone else's patent, and
• that even though there's no literal infringement, your product may not function the same way but lead to the same result as another (called the doctrine of equivalence). That could set up a functional and technical analysis of the patent claim.

Rockman recommends a freedom-to-use search of any patents that could possibly be infringed, including looking forward to see what might be infringed with future development.

3. A patent doesn't give you a monopoly. “Most everything is an improvement of something else,” Rockman said. “A competitor will try to invent a new, non-infringing patent. This advances new technology. What a patent does do is grant the holder the right to exclude others from using the patent for a limited time (20 years). Patent right is not a right to manufacture.”

4. Know that disclosure starts a ticking clock. In the USA, you have one year from public disclosure to file your patent application or lose your rights. Public disclosure means publication — but that's a gray-area legal concept involving actions such as posting a paper on a file-transfer protocol (FTP) server or putting up publicity
posters. Courts would evaluate both on a case-by-case basis, judging on whether a person with ordinary skill in the art could make your invention based on the disclosure.

Lectures aren’t covered, but, as Rockman points out, most lectures these days involve distribution of an accompanying CD-ROM — and that is publication. A wave file posted to the Internet, and printed handouts, could accomplish the same thing.

Suggestion: Before you publicize your findings, check with your tech-transfer office so that you don’t accidentally reveal too much. Some findings are fine, but if someone can make your invention based on your disclosure, the clock starts ticking.

“Before you make any disclosure, make sure you get a patent application on file,” said Rockman.

5. International rules are different. Your international rights in most countries are gone at the moment of public disclosure, unless you’ve already filed. Because so much work is done overseas, work with your tech-transfer office to protect your international IP.

“Overseas, you must have a patent app on file in your home country at time of disclosure,” Rockman said.

6. Consider a provisional patent application. One solution to the ticking-clock/public disclosure problem is to file a provisional patent application with the patent office. It’s simpler than the standard application and doesn’t demand the same levels of disclosure. The advantage: It legally establishes a date for your invention, so you have priority over anyone who comes up with the same idea later.

Rockman recommends three steps:
• State the problem you’re trying to solve.
• State why the prior art failed to solve the problem.
• State how your novel idea will solve it.

That should protect you while you develop your idea.

7. Avoid being too obvious. “The question of what is obvious and what is not obvious has driven me over the cliff for the past 40 years in my career,” said Rockman.

To get a patent, you need to show four things:
• Patentable subject matter. These are articles of manufacture, tools to build the articles, processes and compositions of matter, and they can include modified living organisms.
• Utility. The invention must be useful for some purpose.
• Novelty. It’s new — the invention is not found in even one piece of prior art.
• Non-obviousness. This means whether the invention is an obvious solution to someone schooled in the art. A classic example is a clay doorknob that functions the exact same way as a brass one. Merely substituting another material for the doorknob isn’t patentable.
“I encourage my scientists NOT to assume that the ideas they come with are obvious,” Rockman said. “Inventions may seem obvious in hindsight, but the patent law doesn’t concern itself with obviousness at the time of a patent application, but with what you come up with at the time of invention.”

*Bottom line:* As tricky as the legal concept of obviousness is, don’t let it stop you from pursuing your ideas. “The ideas you have in your head can become valuable assets,” Rockman said.

**8. Know who owns the IP rights.** Inventors initially own all patent rights — the inventors or scientists working in designated development. However, most universities and corporations own the IP rights because of agreements the scientists signed.

“The job you have is the consideration you received for transferring all rights to the institution or corporation,” said Rockman. “Many universities will give the investor a percentage of income generated by the patent or royalties from it.”

**9. Keep in mind the budget for patent applications.** It varies widely, and Rockman’s group usually quotes between $4,500 to $20,000 to prepare and guide a patent application through the process.

*The complete audio conference is available on CD, MP3, or in transcript form. For ordering details, visit www.principalinvestigators.org.*
READER QUESTION

Over my 25-year career as a PI, I maintained an extensive computer-based database of all my work. I am now about to retire but wish to continue my research using only my collected data, and my department chairman agreed to this. However, the new lab director insists that he be included as co-author on any future publications (even those based on the older data). Who is considered to have ownership of the older data? How can it be used by someone who was never involved in obtaining it?

EXPERT COMMENTS

This question raises a number of issues, initially including who owns or has rights to the database. People have a tendency to assume that they can take with them their own work product when they leave a place of employment. This is not often the case. It is likely you don’t own the rights to the database.

I will assume for simplicity that you worked your entire 25-year career at one place. If that is a university, it is likely the university’s intellectual-property policy covers numerous types of intellectual property (IP), including non-technical and technical data under the broad category of “Trade Secrets.”

Such policies usually provide that IP you developed while working at the university is owned by the university or its technology-transfer company.

You likely have an employment agreement with the university that similarly provides that IP you developed is owned by the technology-transfer company. If you worked for a company, again it likely has an employment agreement saying the company owns the IP.

A complication is that, 25 years ago, some IP policies and some employment agreements may not have covered data rights. But university employment agreements still typically provide that the employee/PI is subject to the faculty handbook or the published university policies as modified or amended from time to time.

Assuming that the employer owns the database, another issue is whether the department chairman has authority to permit you to take it with you upon departure. In all likelihood, the chairman lacks this authority.

At a university, the authority would need to come from the technology-transfer company or from the administration. In the case of a company, the authority would need to come from an officer with authority to grant such permission.
In the unlikely scenario that you signed only one employment agreement 25 years ago and it makes no reference to data rights, then the ownership rights could be unclear. But even in this case, the university or company probably would claim the rights. It would still be best for you not to assume that you own the database or can take it with you.

The better course would be for you simply to ask permission to take the data. Most universities and companies are flexible. Considering that you wish to continue your research, a suitable arrangement likely could be made.

Another complication arises with sponsored research. If the government was sponsor, it may have certain rights in and to the data and those would have to be considered in deciding what future use you could make of the data.

If the research was privately sponsored, the signed agreement may determine who has rights and what future use may be made of the data.

If you do not have complete rights, it’s true that someone who was never involved in obtaining the data might be able to use it. For example, if the university is owner it could say what future use may be made of the database and who may use it. In the case of government-sponsored research, the government likely could make such decisions.

Lastly, the issue of the new lab director insisting that he or she be included as a co-author on any future publications (even those based on the older data) raises a question of ethics.

The new lab director should not be included as a co-author merely by the fact that he or she is director but made no real contribution. Unfortunately, there appear to be no definitive guidelines for determining whether someone should be listed as an author or a co-author.

The International Committee of Medical Journal Editors (ICMJE) states:

“Authorship credits should be based on 1) substantial contributions to conception and design [of the project], or acquisition of data, or analysis and interpretation of data; 2) drafting the article or revising it critically for important intellectual content; and 3) final approval of the version to be published. Authors should meet conditions 1, 2, and 3, in the ICMJE’s present definition (www.icmje.org).” (emphasis added). See also, European Molecular Biology Organization (EMBO) Reports, “Who did what?,” Vol. 5, No. 5, page 446 (2004).

The National Institutes of Health (NIH), in its Guidelines for the Conduct of Research in the Intramural Research Program, states that “individuals who have assisted in the research by their encouragement and advice or providing space, financial support, reagents, occasional analyses or patient materials should be acknowledged in the text, but not be authors.”

Thus, someone providing a bench, microscope, or who donated part of their funds toward the research of others might not automatically be granted co-authorship under NIH guidelines.

Comments by Todd Deveau, JD, partner, Thomas Kayden Horstemeyer & Risley, LLP, an intellectual property law firm in Atlanta.
READERS’ RESPONSES

Collegiate Professor — written by Greg Dressler

Co-author rules clearly state that authorship must include a contribution to the design, execution, or interpretation of experiments, generation of a key reagent, writing of the manuscript, or analysis of the data. Unless the new lab director makes a contribution to the paper, he/she is not entitled to co-authorship. The NIH has strict guidelines and most journals now expect each author to list their contribution to the work. It sounds like this new director has no claim on authorship from what you describe.

Principal Investigator, RMD, Inc. — written by Gerald Entine

I agree with Professor Dressler that the new lab director cannot be an author unless he contributes in a meaningful way to the paper.

However, the data itself belongs to the institution, and others at the institution can use the data and analyze it in new ways to reach new conclusions. In this case, those others might be authors on the paper and the person who generated the data might be either a co-author or the paper may simply include a formal acknowledgment stating his contribution, depending on the specifics of the article.

Senior Scientist — written by Jonathan Cole

There are several disturbing aspects to the assertion of your new lab director. The most disturbing is his or her insistence to be included as a co-author on papers using the data. Setting aside the ownership question for a moment, co-authorship is a complex decision but one thing it should not be based on is an institutional policy about who “owns” the data. If my lab director insisted on being a co-author on papers by his or her right of office, I would complain about this over his head and do it very, very loudly. Actually I think it would be grounds to have this director fired.

An institutional policy like this of data ownership is one of the biggest hindrances to get scientists to participate in institutionally supported databases.

Associate Professor — written by Elizabeth L. Krause

It strikes me as quite clear that the new lab director is completely off his rocker and in need of some serious ethics training with regard to authorship. My institution has ethical guidelines for co-authorship in working with
graduate students, and these apply equally to co-workers. Deveau’s response about who owns data addresses other important issues that many of us will likely face in the future.

Thanks for asking the question.

Professor — written by RRA

The existence of publically available databases such as the Gene Expression Omnibus (GEO) implies that data generated under support from places like NIH are in the public domain. In fact, most journals require that certain types of data be placed in one of these public databases prior to publication. The new NIH grant application asks that you detail how results will be made public. Anyone who wants to re-analyze and publish a paper using your data should be able to do so, giving credit to the person or group that generated it. New analytical tools become available and should be applied to old data if the application develops new insight. I have re-analyzed old data in the context of new data or insight many times and published papers, just as others have used my old data and done the same thing. This is the way science works. Publication places data in the public domain

written by Clinical Prof

I think that in this instance the theory and the practice are very far apart. It is interesting to hear the comments above re: complaining about the lab director and that he/she is “off his rocker.” The reality is that at most institutions the new lab director’s claim would be respected, he/she would be given full access to the data, and any complaints made would be, for all practical purposes, ignored.

Program Director — written by Scott Overmyer

I would personally ignore the lab director’s demand. It seems to me to be an unreasonable grab for publications to which he or she is not entitled.

Professor of Medicine, Baylor College of Medicine — written by Daniel Musher MD

Two separate issues here.

First question is framed incorrectly, leading to tangential responses. It’s not a question of “owning” data. The person who gathered them has the full right to use them unless his/her university has a contractual statement that prevents him from doing so.

With regard to co-authorship, most medical journals now ask for a statement on the role of each coauthor — contribution to data collection, data analysis, drafting the manuscript, etc. A statement that Dr. Joe Blow came in as the new head of the lab and wishes to be included as a co-author won’t be acceptable.
This commentary is off-base — written by OldTechie

1. Unless there is an invention pending, IP is not at issue. As Musher notes, the generator of the data has full rights to use the data in any way he/she sees fit. Any IP that results would, however, belong to the original employer unless it resulted independently ("not obvious to someone of ordinary skill," etc.); this is seldom an issue.

2. The new director’s request is problematic except as the new director (like any other member of the scientific public) he would have the data available. Unless the new director met criteria, he/she would have to lie to accept co-authorship at any reputable journal. More importantly (also noted earlier), this is a perfect example of lack of "responsible conduct of research." I cannot believe any institution with NIH support would tolerate or condone this.

Assistant Professor — written by J. M.

1. I probably own the data, since it is likely that they were obtained with federal funds.
2. My advice is to make the data public and accessible.
3. Then to use it as you seem fit.
4. Authorship is a very stretchy concept, and although some Journals now require to state the role of each co-author, sometimes you have to say "provided unique reagents" (i.e., I was allowed to use her instrument) or "provided framework and discussion of the data generated" (i.e., was around and I have to include him).

where is the intellectual contribution of your chair? — written by Associate Professor

Your chair is showing a lack of integrity. S/he has not made an intellectual contribution to the design, development, evaluation, or writing of the research project. If s/he becomes part of a research project you undertake with this data at some point, obviously that changes things. However, being chair does not warrant a publication. In fact, shame on him or her for expecting it.

Professor — written by Hyun Sil Kim

On first question, it is interesting and I think that I would have same experience in the near future. Although new lab director did not get involved in data collection, it would be so difficult to get him out from the data because he is the new lab director.

I think there is necessity of some negotiation or deal between the retired PI and new lab director. As you know well, we have many things to do for journal publication and it is really long-time process. Publication is a nearly impossible job only with data collection. How about giving the chance of other contribution for publication to the new lab director if he insists that he would be included as co-author on any future publications?
Proposal format — written by Zoraida Aguilar

RE the question whether an author has the rights to the data collected, does the former employer, whether be it a university or a private firm, have privileges over the format of proposals? Are formats of proposals considered intellectual properties? or copyrighted materials?

The new generation of PI = politicians — written by Punished for honesty

Most of the “new generation” PI’s are like that. I spent two and a half years as a senior research associate for a junior prof. She wormed her way on any paper within a country mile. My work gave her three publications in two and a half years, and on two of them she managed to put on as co-author someone else in the department who made zero contributions. But her mentor is retiring, and she needs someone new to help her get grant funding, so she bends over backward to find new friends. I was ordered not to write the one paper where she is only middle author (I did one experiment in her lab, the rest of the data was from years ago) because “she was now paying my salary, all my work should be on her papers only.” At that point I started looking for a new job. Then I stumbled upon a hornets’ nest that cost me my job and possibly my career. My boss convinced me to do a gene-expression profiling experiment that I knew would not work, especially as she removed some of the control samples “to save money.” As predicted, nothing useful was learned from the experiment. My boss used faulty data analysis to “generate” data that fit her hypothesis beautifully. Additionally, I found that the lab that did the actual gene chip analyzed the primary data based on an erroneous assumption regarding the format. They believed it to be log2 when it was in fact log10 — and I was ignored. I got the same response when I borrowed a cell line from another lab and accidentally discovered that they got their cell lines mixed up. So the whole department is based on sloppy data and political gamesmanship. I lost my job because I refused to allow fabricated data into my manuscript. The PI didn’t even have the balls to fire me. She simply harassed me until I became physically ill and had to resign. That is science now: it has degenerated into politics, smoke, and mirrors — and those few who try to do good, honest work are forced out.

written by Observer

Because the new lab director’s request is clearly unethical and to give benefit of the doubt to presumably intelligent people, I’m wondering whether there is another side to this story. Is it possible that the new lab director was hired by the institution and enticed in part by the exclusive availability of a pre-existing resource (database) to use in their future research? Now that he/ she has arrived only to realize it’s not going to be exclusive, he/she is requesting co-authorship ? Not that this would make it right: I’m just trying to figure out why someone might *feel* they have a right to co-authorship.

This situation actually is more complex than it appears. Once the current PI retires, he/she is not really entitled to use the current institution as affiliation for publications unless there is a formal agreement that the PI retains a
position (which there probably is after 25 years of service). The current PI does not own the data. It belongs to the institution and their future obligation is to the new PI (sorry, that's how it works). Given that the institution owns the data, owes their future allegiance to the new director, it may be difficult to move forward by negotiating. Making the whole database public seems like the best approach to get out of this situation. Then anyone including yourself can use the data to publish what you like. No need to discuss anything with the new PI, and shame on him/her anyway for being such a poor scientist as to even suggest it.

Bigger Picture — written by Tech Transfer

3 Major issues arise here.
1. Who owns it?
2. Right to Use it?
3. Authorship/Inventorship

1. Under most university policies (which are backed by state employment laws) the university owns all intellectual property developed in the scope of work of their employees. The university almost always grants back to the professor the right to publish said works in academic journals (as this is the mission of universities). Research that is supported by federal funds falls under the Bayh-Dole Act which is very specific concerning who has rights to use the intellectual property. Publication of the IP is a given right; however, the ownership and protection of the IP falls to the university. If the university fails/refuses to protect the IP, the federal government then allows the inventor to step up and if IP still goes unprotected then the government has the option to take it over.

In university settings, it is commonplace for faculty to move from university to other institutions, including other universities and private companies. In doing so, they must receive an inter-institutional agreement at allows them to continue working on any IP that was originally developed somewhere else to protect the rights of all the owners of IP (both older IP and newer IP). Most universities are more than willing to sign inter-institutional agreements.

2. The faculty member’s right to utilize the IP ends when their contract with the university ends. The faculty is NOT a co-owner of the IP. If they wish to continue their research at another institution, they must receive either a waiver of rights or an inter-institutional agreement that details how the rights of the owner of the IP will be protected.

3. Inventorship — As for the lab director who insists as being included as co-PI, perhaps he was merely insisting that any use of the existing data be attributed to the university where it was founded? If he was in fact insisting on authorship (which is quite common in university settings), then he is being unethical and a report to the review board is warranted.

As far as inventorship, any patent examiner would require that the contribution to invention be clarified and the lab director would be removed from record if no contribution was made.
Either way, a quick phone call to your tech transfer office should resolve the issue. If no patentable IP has been generated, you could protect yourself with a royalty-free, worldwide, non-exclusive license to utilize your IP in any way you see fit.

When patents are not on the horizon, this is an easy fix to a messy situation.

Good luck to you~

Author Rules — written by Prof Tim Reynolds

Many years ago as a junior doctor I had a professor from another department who wanted his name on every paper written by anyone with a connection to his department [which was not the department I worked in]. I simply added a list of ‘functions’ on the end of the title page of a paper he expected to be named on and gave it to him for ‘final signoff.’ He was presented with the manuscript and the letter to sign for submitting it [he was not expected nor expecting to make any editorial comment].

It simply had:

AA, AB, AC: Experimental Design
AA, AB : Laboratory Work
AC : Statistics and manuscript drafting
AA, AB, AC: Manuscript review and final drafting
Prof X : Head of Dept. X

It was clear from the list of functions that he’d had no part in the experiment and that his name was merely there because he expected it. He realized that this would look bad and withdrew his demand.

Professor & Chair — written by Joshua Schimel

Mr. Deveau is completely off base in linking intellectual property issues with authorship issues in this case. He is right about who owns the IP — it’s the university. If there is something patentable, it is the university that gets to patent it. But as others have commented above, authorship is a matter of intellectual contribution, and the lab director had none. Ergo, he or she is not entitled to authorship on the papers.

In fact, insisting on authorship is a personal thing here. The Institution owns IP but the institution would not be an author. The director does not hold individual rights to the IP and is not entitled to claim personal benefit from it, which authorship grants. The director is reasonable in requiring that the institution get appropriate credit for the work, but that would involve only two things in this case:

1. Require that the author use his or her university address to ensure that the lab gets credit for the work and papers, even if the author is no longer associated with the lab. The data were collected while he or she was at the lab, and so the lab is entitled to that credit.
2. The funding source that supported generating the data be acknowledged. The new papers grow off that funding.

Finally, if this is a university and the data were generated under federal research funding, then they are legally public. If the lab director tries to constrain access to the database, then the PI is entitled to FOIA it.

Publication co-authorship rules — written by Prof Malcolm Woollard

During the early stages of my career as a researcher I was occasionally exposed to academic ‘bullying’ by more senior staff who attempted to insist that their name should appear as a co-author on papers for which they had no intellectual ownership. I stuck to my guns and freely quoted the International Committee of Medical Journal Editors rules in support of my stance. As a journal editor my colleagues and I use these as our main point of reference when arguments about authorship and contributorship are presented to us. I recommend sending a copy to your director and suggest that if he feels unable to comply with their guidance he complain directly to the editor of any publications which you choose to submit papers to. I am sure he will then withdraw his demands in order to avoid the embarrassment of being informed that he has no right to co-authorship.

Professor — written by William Meggs, MD, PhD

As a scientist, it is abhorrent that a scientist spending a career designing experiments, formulating hypotheses, and collecting data could lose all rights to that data, and further that a third party could come in and publish the data. It is further abhorrent that publishers of scientific journals copyright data, and one may have to pay them royalties to use the data in future publications and review articles.

The chair of a department at my university demands that his name be on every paper if one of his faculty members is a co-author. My colleagues refuse to collaborate due to the obvious ethical violations inherent in this rule.

Professor — written by Bill

This is another example of the intrusion of the world of lawyers and legalism into science. The practical personal ethics of the situation depends on interpersonal relationships and on institutional norms. Despite everything the journals say, there are some places where lab directors still commonly get their names on papers — they may request the opportunity to do a final edit so they have some rationale; or not. At other institutions this same behavior would be grounds for termination. One can decry the absence of uniform standards, but I find it much more useful to try to adapt to one’s environment than to try to force all researchers and all institutions into the same mold, even in the name of ethics.
written by Patricia Wiltshire

I find all the comments very interesting indeed, and rather than make a comment, I would like to ask another question. If, as a freelance consultant, one is asked (for very minimal funding from a grant - £200,000 worth of work was carried out for £8,000 reimbursement) to carry out analysis of samples and the main grant holders are incapable of interpreting the data, can they insist on authorship of every paper I produce using the original data? In fact, interpretation of the data indicates that their original premise was very faulty and the only reason I would want to use the data is to demonstrate the flaws in original methods and protocols and to apply caveats for other workers. I have been told that, if I use the data for any publication, all of the people involved with the grant would expect co-authorship although they contributed nothing to interpretation. In fact, I would only use the results to indicate how such research should be carried out. They devised the sampling strategy without consultation, with the result that the data are unsuitable for purpose.

Professor Emeritus (Law & Technology) — written by IP and Academic credit

Beware of any blanket statements that IP “belongs” to the employer. In many cases related to patents it has effectively been dedicated to the public one way or another.

I chaired an engineering school promotion and tenure committee. We had lots of ways of discouraging the unethical “money and power” co-authors. In one case we told a department chair that any junior faculty member’s paper with his chair name on it would be routinely ignored in the P & T process since it was obviously published in a journal with no controls on who was listed as an author. We also required formal authorship statements in co author situations. I do recall an assistant professor truthfully stating “I had the idea and the grad student did 110% of the work. Senior Prof. X made numerous suggestions, all of which were ultimately rejected, but unquestionably contributed to the work by forcing me to articulate more clearly why the suggestions were rejected. Junior Prof Y, who had some time on her hands waiting for her experiment to work, actually wrote up the paper.

In Response to “Bill,” it is not about lawyers and it is not an issue of personal ethics. Academic authorship is an issue of professional ethics to be decided on the level of the profession.

In response to Dr. Meggs. I agree that any researcher should have the permanent right to use data, but it is inherent in science that other researchers should be able to examine the data and draw and publish their own conclusions.

Doctrines of “fair use” are very useful in dealing with copyright issues.

Like to know who owns the copyrights of the images, also generated during data collection? — written by Media Designer

I'm a media designer who works with neuroscientists to design presentations of their work. Since I see some incredibly beautiful images they produce, I'd like to honor them with their own gallery … but after reading this,
I’m beginning to wonder who actually owns the images... (also considered data, I assume?) Being married to a scientist, I appreciate how hard the work is and can totally understand their sense of ownership over years of gathering data, so I’ll leave the original question on the lab director and authorship for those of you with more academic battle scars than I have! But my question is related to the images: Q: “How come I can buy a T-shirt with a picture of Earth on it ... wasn’t it most likely generated by pubic funds from a NASA trip into space where this image was taken?? So, does ‘JQ Public’ own any of the Mother Earth images?” Thanks in advance ... I appreciate your input ... and all the hard work you guys do!

personal vs professional ethics — written by Bill

Professional ethics have become intrusive, excessively legalistic, and largely unenforceable. The effort to impose these ethics has also led to the gradual erosion of personal ethics which probably weren’t all that great to begin with. The overall result is that one has islands of high ethical standards in a sea of cynicism. This is particularly unfair to those who actually try to follow the rules. Admittedly all of this is off-topic but I couldn’t resist.

@Meggs & Ownership of life works — written by Tech Transfer

Unfortunately, there are some situations in which a faculty member may lose rights to access data that was developed in the scope of work. I would venture that this is a rare occurrence and usually would occur in the face of some sort of academic dishonesty.

It is important for faculty members to fully understand their employment contracts and their rights and responsibilities surrounding intellectual property.

That said, your knowledge that is acquired after a lifelong career in research is not something that can be left behind when you switch employers. Many private companies maintain a “non-compete” clause that prohibits previous employees from obtaining positions in competitor companies.

Universities will very willingly enter into inter-institutional agreements with a faculty member’s new post to protect their rights and to also facilitate the advancement of the technology. The last thing that anyone wants is for the project to die off completely because the faculty moved.

If you are considering leaving and you have IP or lab notebooks that you want to continue working on at your new post, it is in your best interest to talk with your tech transfer office. They can facilitate the move, often without the involvement of a department chair. (University IP is under the control of the university tech transfer office, NOT the department chair!!)
written by Tech Transfer

Any institution that hires a faculty member to conduct research should fully vet the research history of the new faculty. To protect themselves, as much as to protect the faculty.

Be wary of any institution that allows you to continue your research without an agreement with your previous employer as to how ownership of that earlier data will be handled.

written by Joe

The new director is completely unethical (and arrogant) to insist on authorship. It would be correct to file a complaint with the higher-ups (assuming a university at least the dean of your school but better to take it right to the president of the university). Enough of the arrogant padding their CV’s and egos off the backs of others!

Corporate Research — written by Daniel H

Your question lacks precision but for argument’s sake assume that the database represents a pool of knowledge which has not as yet been fully exposed to others in publications. The data, therefore, represent a tool to produce publications because the knowledge that it contains can guide research questions and experiments that can generate new knowledge and new data. If and when you take it you are taking a part of the laboratory with you. Strictly speaking, there are complications with this, but consider the legal position when people leave employment: no judge in the land would stop anyone from making a living out of knowledge that they took with them in their heads! That is why some companies introduce clauses to stop people working for a competitor; or why some companies pay people handsomely to stay at home and do nothing. Therefore, in practice, I think you are safe in ignoring the requests of the new lab director. Also, it will not be possible for you to compete with the lab that has staff and other resources, so his request for co-authorship is unreasonable.

Vice chairman, Research & Ethics, Ebonyi State University Teaching Hospital, Abakaliki - Nigeria — written by OUJ Umeora (Dr.)

The issue of ownership of the database is at best controversial. One needs to understand if any prior contract/agreement existed between the PI and the institution before he started gathering the data. Ownership should then be decided on the basis of that agreement/contract. If no such agreement exists, then a consensus may be arrived at presently to suit and not disadvantage any parties as long as the research participants remain protected by the new agreement. On the issue of the new director insisting on being a co-author: This is unethical and can be considered as gift authorship if it happens. This should be condemned. The new director is better advised to source his own database.
The proper academic term for what your new lab director is asking for is "fraud." Of course, if he is demanding authorship in return for continued access to your data, then it is properly termed "extortion."

Such conduct should be reported to the department chair, the dean, and the university ethics committee. It is reprehensible and does not portend well for the future of your lab and its investigators.

Ownership and authorship are completely different entities. The problem lies in mixing them.

You can author a paper without owning the data, such as collaboration from another institution who owns the data, and you contribute to the analysis and intellectual development of the ideas in the paper. By the same token, just because someone co-authored a paper, in this case, does not own the data or have any rights to distribute the data without the consent of the collaborator, even though they both wrote the paper together.

And vice-versa, you can own the data without authoring the paper, such as you put the data in a publicly accessible database, and someone on another part of the world use those data to publish a paper; you are not entitled to the authorship of such unknown author. The owner of the data has the right to decide how to distribute them or protect them (but with or without the authorship rights, because authorship is what is derived from the processing/analysis of data but not the data itself.)

That is, authorship is "value-added" intellectual contribution/knowledge based on the data; thus the value-added entity does not equate to the raw data.

Another analogy is that if a PI moves to another institution, he/she usually takes the data with them, and most of the time you take the equipment with you, too, if they were purchased by your own grant. Most universities honor such transfer of ownership, and they almost always go with the PI who produced such data.

Ownership of Data — written by Denis English, Ph.D.

By intellectual property laws, which supersede, these data are owned by their discoverer. Some or most institutes have a POLICY that the data (and books) "belong" to the institute. They do not. They belong to the discoverer, or PI, or named PI unless that person was directed by another. The funding agency has no ownership interest, but may have claim to royalties. The property belongs to its owner; court fights have always sided on the side of the investigator in these cases and POLICIES are only that, and can never supersede the law.
Without intellectual contribution, authorship should not be granted.

A related problem is the "inflation" on the number of publications (and the amount of grant funding) expected to be promoted and receive tenure. As an assistant professor in 2010, I sure feel this pressure. At whatever institution you may be working, there are metrics to be met and expectations at research institutions are quite high.
**Intellectual Property**

**What Are the Rights of Co-Inventors?**
Expert Comments by Todd Deveau, JD

**Reader Question**

If I research one-half of a problem, a friendly PI in another institution researches the other half, and our efforts result in a patentable invention, which of us owns the intellectual property rights? Do either of our host institutions have a say in this?

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**EXPERT COMMENTS**

The short answer to the last question in most cases is Yes. Both institutions have a say — but there might be an exception if you are an undergraduate student.

If you are a PI at a research institution, it would be surprising if your institution did not have a technology transfer office and an intellectual property (IP) policy.

Your employment agreement very likely has either an inventions clause, providing that the institution or its technology transfer corporation or foundation owns any inventions created by you during your employment, or that your employment is subject to the institution’s IP policy that effectively conveys those same ownership rights to your institution. Most institutions (e.g., universities) publish their IP policy on the Web.

Meanwhile, the friendly PI at the other institution likely is subject to a similar employment agreement or IP policy. An exception could occur in the case of an undergraduate student, who typically does not have an employment agreement with the university and is subject to its IP policy only to a limited degree.

Assuming that you and your friendly PI both contributed to the conception and reduction to practice of the patentable invention (both steps being required under the U.S. patent law to create a situation of co-invention), then both you and your friendly PI are co-inventors.

As co-inventors, rights in and to this invention initially vest in both of you. But, because both of you are subject to an employment agreement or an IP policy providing that your respective institutions own the rights in and to your respective interests in this invention, each of your institutions has an ownership interest.

What is counter-intuitive under the patent law is that co-owners of an invention individually can do whatever they want with the invention without having to communicate, cooperate, or share revenues with a co-owner. Surprisingly, many co-owning institutions seem to have difficulty reaching an inter-institutional agreement controlling their respective rights, how the invention will be commercialized, and how any costs will be shared (such as those related to the patent application).
Comments by Todd Deveau, JD, partner, Thomas Kayden Horstemeyer & Risley, LLP, an intellectual property law firm in Atlanta.

READERS’ RESPONSES

written by labyrinth

An innovation that I and a fellow PI spent long hours working on was patented last year, and our two universities are now technically co-owners. I just found out that his university found a marketing niche for it and has been making a good deal of money from it over several months. You’d think they’d at least have had the courtesy to notify me — I just found out a couple of weeks ago. The law shouldn’t allow one party to just grab the money and not even notify me or my university.

written by pbock

What if people whose GENES have been patented sued corporations as “co-inventors” of DNA sequences? This might put a stop to many abuses.

written by Shocked

Startled at your last paragraph saying the “other university” which co-owns the invention has no duty to clear its plans or action with my university (also co-owner of my invention). This is exactly what happened to me, and I couldn’t believe it was legal. Do I, or does my university, now have any legal redress to get for ourselves 50 percent of the royalty monies the other university obtained without our knowledge? Doesn’t “co-inventorship” of the patent give me or my institution any rights? If not, what’s the point in even being listed as co-inventor? Is there a legal case or precedent on this point?

written by Dr Fred

A co-inventor is required to have contributed at least one claim to a patent for an invention. If both parties (i.e. the person who submitted the question and the friendly PI) were listed as inventors on the patent application as filed, they have both constructively reduced the invention to practice.
I think Mr. Deveau overstated the rights of individual inventors just a bit. As I understand it, any individual inventor can license a patent without consent from and without informing the other inventors, but only in a non-exclusive fashion.

Inter-Institutional Agreements — written by Tech Transfer

Hopefully your institution entered an agreement with the other institution. The terms of the agreements may vary. The prime scenario would be to assign one institution as the lead that seeks patent protection and licensing opportunities. Once the patent is licensed and legal fees are reclaimed, then the lead institution would then begin paying royalties to the secondary institution. Transparency is required (meaning the lead would keep the secondary apprised of all legal fees as they occur as well as the disposition of the patent throughout prosecution).

In other situations, the legal fees are shared equally during prosecution, and each institution is entitled to license the IP non-exclusively as they see fit, without sharing of royalties. In this case, if one institution is better at licensing than the other, the more successful institution will reap the rewards; and therefore their inventor will also reap the benefits.

I would suggest that PRIOR to conducting any research with PI's outside your institution, an agreement be in place that details how IP, licensing, and royalties will be handled. If each institution decides to handle their own licensing, make sure the agreement states that the inventors will share royalties regardless of which institution drafts the license!
Can PI Win Co-Author Credit Based on Ignored Verbal Agreement?

Expert Comments by Todd Deveau, JD

Reader Question

Two years ago, I agreed in a conversation with a researcher at another university that I would analyze the composition of some new compounds he created in return for being listed as a co-author of the scientific paper we expected would result. I sent him the results over a year ago, but have heard nothing since, despite my reminders. I was therefore shocked to see in the latest issue of our field’s journal that he has published the paper, including the analysis I made, but I’m not included as co-author nor even mentioned in the acknowledgments. I feel that my team and I deserve formal recognition for our work, as it will help justify the grant money we’ve spent. Do I have any legal redress? How should I proceed?

EXPERT COMMENTS

This question raises the issue typically referred to as the right of attribution or (more often outside the United States) “moral rights.”

There is no good avenue for legal redress on a national, or federal, level in the United States for this situation. At the U.S. federal level, moral rights were provided in the Visual Artists Rights Act of 1990 (VARA), which is part of the U.S. Copyright Law, 17 USC § 106A. The VARA grants rights of attribution and integrity to an author. These rights, however, are limited to works of “visual art,” defined as not including “any book, magazine, newspaper, periodical, database, electronic information service, electronic publication or similar publication” (17 USC § 101). Thus VARA does not cover this situation involving the publication of a technical or scientific paper.

Attempts have been made to enforce a right of attribution (co-authorship) under the U.S. Trademark Act (referred to as the “Lanham Act”) on the theory that use of a work without providing attribution or acknowledging authorship constitutes a false “passing off” or a “misappropriation” of the work as one’s own work in violation of the Lanham Act.

In June 2003, however, the Supreme Court interpreted the Lanham Act to deny false-attribution claims as to the origin of a “communicative product.” (Datastar v. Twentieth Century Fox, 123 S.Ct. 2041, 2003).

Attempts also have been made to claim a right of attribution through the laws of defamation, the rights of privacy and publicity, and a common-law doctrine of misappropriation, all generally without success.
If the chemical analysis you describe involves more than simply obtaining and presenting data obtained through running a scientific apparatus, and included commentary and evaluation of the data presented in word form, a claim might be made instead to copyright infringement for unauthorized use of such a write-up.

It is not clear, however, that the use by the fellow researcher of such a write-up would be “unauthorized” when it was provided to the fellow researcher with the understanding that it would be incorporated into the anticipated paper. Further, even if copyright infringement could be shown, the relief that could be obtained would be directed to monetary damages and/or an injunction against future reproduction and use of the write-up. Such remedies would not address the claim of attribution or correcting authorship.

Outside the United States, legal redress for a violation of a right of attribution or moral rights may be obtainable in countries such as the United Kingdom, Canada, Australia, and New Zealand.

There is another problem concerning this scenario. It may be questionable that, as a practical matter, you should be identified either as co-author or named in the acknowledgments. Questions have been raised in scientific communities concerning the number of authors on papers and who truly qualifies as an author. There appear to be no definitive guidelines for determining whether someone should be listed as an author on a scientific paper.

*The International Committee of Medical Journal Editors (ICMJE)* has stated that:

“Authorship credits should be based on 1) substantial contributions to conception and design [of the project], or acquisition of data, or analysis and interpretation of data; 2) drafting the article or revising it critically for important intellectual content; and 3) final approval of the version to be published. Authors should meet conditions 1, 2, and 3, is the ICMJE’s present definition (www.icmje.org).” (emphasis added).


The NIH in its *Guidelines for the Conduct of Research in the Intramural Research Program* states that “individuals who have assisted in the research by their encouragement and advice or providing space, financial support, reagents, occasional analyses, or patient materials should be acknowledged in the text, but not be authors.”

Someone providing a bench, microscope, or who donated part of their funds toward the research of others might not automatically be granted co-authorship under such NIH guidelines. Under the scenario presented in your question, an argument can be made that the work involving analyzing the composition of some new compounds created by the fellow researcher does not meet these standards or guidelines for authorship credit.

You state that the agreement with the fellow researcher was made in a conversation, as opposed to writing. It would have been better if this agreement had been reduced to writing, even if in the form of an e-mail, including acceptance by the fellow researcher of the terms that you be included as a co-author in the published paper. Then a written contract could be shown to exist. The failure to name you as co-author might then be shown to be a breach of that written contract. A remedy that is obtainable for breach of a contract is specific performance of the terms and obligations of the contract, which in this case might include being named as a co-author.
But even if a legal remedy were available, as a practical matter it may not be the best remedy. In this case, you might instead consider having your lab director or department head contact the lab director or department head at the fellow researcher’s university to discuss the question in a quiet and friendly manner.

Comments by Todd Deveau, JD, partner, Thomas Kayden Horstemeyer & Risley, LLP, an intellectual property law firm in Atlanta.

READERS’ RESPONSES

Professor of Medicine, Emory University — written by David Harrison

If true, this is an egregious infringement of research ethics. If the other investigator indeed published data that you obtained without acknowledging you as a source, this is equivalent to claiming that he/she was the source of the data, which is fraud. If you really have proof that things occurred as you indicate, you should contact the Dean of his/her medical school, and notify the journal. This could result in withdrawal of the paper, an internal ethics investigation, and perhaps sanctions from the NIH or other funding agencies.

Biomedical Researcher, forced out after discovering that the boss was fabricating data — written by Unemployed

David Harriston seems to be a couple of decades behind reality. About 20% of all biomedical papers fail to list all people who honestly contribute. Often it is someone who does a lot of the actual experiments (planning, experimental work, data analysis). Maybe this is done to make room for all the guest authors that need a share of the cake. Unless you are more senior than the person who stole from you, there is not a snowball’s chance that you can do anything about it. Welcome to the new world of science, where ethics is a dirty word.

Professor of Immunobiology, University of Arizona — written by Jeff Frelinger

Never ascribe to malice what can be explained by stupidity. The old saw is always right. I know that in my lab a post-doc wrote a paper without adding as an author someone who provided a critical mouse strain before she arrived. I caught it in preparation, but if I too had forgotten the other author would have been left off. Perhaps a query to the senior author before lawyers and deans are involved would not be amiss.

Research professor of Pharmacognosy, University of Panama — written by Mahabir Gupta

I think the attitude of the scientist who published the paper without acknowledging the work by another colleague shows a dishonest and unethical behavior. I think the affected part should address the issue to the journal.
editor indicating that the work reported has not been done by the author and provide proof of your communication to him when you sent the results.

Chief, Lymphoma Service MSKCC — written by Andrew Zelenetz

Though there may be no legal redress, you can write to the journal. I would send a certified letter detailing your grievance to the manuscript author with a request that an erratum be published in the journal with the correct authors. If that is refused, I would write the editor of the journal about your situation, provide the data to substantiate your claim, and ask the editor to issue an erratum with you as an author or withdraw the manuscript (not necessarily what you want if the data are correct). I would send a copy of this second letter to the chairman of the author’s department.

Professor and associate dean of academic affairs — written by Phalguni Gupta

If he can prove that his analysis has been included in the paper without proper acknowledgement, it calls for notification to proper school authority, editor of the journal and NIH, if necessary.

Professor of Journalism — written by Michael E. Abrams

I teach a communication law course and have also been in a situation where a work of mine was taken and the gist and original ideas used without credit. I could not mask my irritation and wrote the author, who claimed the publisher had through error left off his note of attribution. He said he would send a letter to be published in the next edition of the journal. I think the laws are loose in this area, as ideas do not fall under copyright law, but in the academy the recognition of work of others is essential to scholarship. In cases where authorship is denied a contributor, it is useful to remember that what is legal may not always be moral. Sometimes this is a matter of error or misunderstanding.

Not a fan of strictly legal interpretations... — written by Patric Lundberg

Trying to impose law on the unethical is a losing battle. Your verbal account of what the individual did with your analysis at meetings in your field will have a long-lasting effects on what the author who took your data can do in terms of future collaborations. Make sure you don’t exaggerate, though, as people who lack ethical backbones tend to be the first to scream “slander”...

Contacting the journal may or may not work. My experience is that journal editors do all they can to avoid having to retract or comment. Believe me, we tried, but until the original author did what we asked the journal to do, nothing came of it. The journal cares more about image that ethical behavior, no matter what their policy states.
By all means, e-mail that lead author and tell him/her that you want an answer by X date. If you do not get a response, email the department chair, then the journal editor, etc. See what happens.

Assistant Professor, Duke — written by Harrison Jones

If this is the complete story, there are many courses of action outside the legal arena (which in most cases is probably of much less consequence than the academic effects of such actions). Consultation with your chairman/supervisor, peers, the author of the published manuscript, the journal editor, and even the funding agency may all be appropriate to resolve this. This matter should be pursued vigorously if this is indeed the whole story.

Associate Dean for Research — written by Anonymous

You first need evidence that an agreement existed to be able to have any form of a grievance. E-mail, letters, etc. will suffice, but your word saying you had an oral agreement against his/her saying you did not would be a challenge for you to be successful with the journal or his/her department chair, dean, and university. I would first contact the author by e-mail, then certified letter if he/she does not respond, to see if a simple mistake was made. If you are not satisfied, the next step, again providing you have evidence, is to contact the journal with your grievance. That is the only real recourse you seem to have. I would also add that a case can be made that you did not qualify for authorship based on The International Committee of Medical Journal Editors which most biomedical journals use as a guideline and is very well accepted in the academy, but did qualify for acknowledgement.

Agree w Emory Prof. + also experienced fraud — written by Faculty in MD

I agree with the above comment from Emory University. See what evidence you have (must be some e-mails and Fed-ex receipts), notify the dean of research integrity and journal editor. As post-doc I have seen a senior collaborator/PI “adjusting” data. Recently I was booted off a PhD committee after questioning some of the data that were not supportive of the PI’s hypothesis. Even when things are in writing, e-mails, even MTA’s, some people will ignore it and take the credit for themselves. So much for research integrity.

Associate Professor — written by Henry Higgins

This is fraud, and the paper should be retracted. The reader’s question clearly stated that his analysis is included in the paper, but he is not cited as a co-author. My first response would be to demand an explanation from the corresponding author (he should have a short time to respond). If you are not happy with the result, you should write to the editor (I would demand a retraction) and to the department chair of the corresponding author’s
institution. Everything depends on how the corresponding author responds/cooperates and if you are happy with the outcome. Ultimately, the case can be reported to the Office of Research Integrity (http://ori.dhhs.gov/). A guilty finding will have serious consequences for the corresponding author.

Associate Prof — written by Prime investigator

Do you know the data that appeared was actually the exact data you provided? Do you know they didn't have another collaborator who provided data that was “better” and they went with that? Not a good thing, either, but slightly less egregious than what you described. If so, you should send the “collaborator” an e-mail, followed up with a formal letter, attaching copies of the communication that set up the initial collaboration, along with proof that the data originated in your lab (i.e., raw data, etc.). Both the e-mail and the letter should be cc’d to the person’s chairman, dean, and the journal in which it appeared. It is also worth considering notifying any grant agency involved. This is inexcusable, even if it was just an oversight. Your data was effectively stolen, and your own record of productivity decreased. An erratum correction will not do anything other than have your name associated with an erratum — your name will not be on the published article. These incidents need a hammer blow, not a gentle kick. There are too many honest, hard-working folks competing for limited funds and no good reason to not weed out the others.

written by Observer

My advice would be to simply call the collaborator and ask for an explanation of why your data is included in his/her manuscript without you appearing as an author as previously agreed. Most likely the collaborator will feel embarrassed and correct the situation (i.e., submit an erratum to the journal). It’s also possible that there has been a mistake in his/her or your understanding of what the verbal agreement was, but I doubt someone of reasonable intelligence would make such a mistake in routine matters in science. It’s also possible that the data used in the paper are not the exact same data you submitted, i.e., someone else had to re-do the work and had priority in authorship if it was performed with better instrumentation or done better overall. Most likely the simple explanation is that the collaborator was too busy and simply overlooked your inclusion as an author. This can easily happen. I have failed to acknowledge technicians who may have in the past made a construct and not acknowledged their work (although authorship of paper is not as trivial as that). I have sometimes been reminded by the first author to include another member of the lab as an author because of valuable contributions. It is very easy for a busy PI to forget or not even be aware on the level of work performed by different lab members, but this can all be corrected if an honest mistake has been made, which is what I suspect happened here. That’s why I’m recommending just pick up the phone and make a call.
Written agreements for these sorts of things rarely exist, as these collaborations are performed in good faith. If you ask a potential future collaborator for a contract sort of letter or e-mail, it just sends the wrong signals from the beginning.

If the omission were genuinely intentional, then you simply have to decide whether to chalk it up to experience or “get revenge” by calling the department chair, etc., but your own name would be co authored through that mud, too, so it may not be worth it. You are always free to tell your other scientific colleagues for what you think of him/her as a collaborator as long as you speak the absolute truth.

Professor of Medicine — written by Maria G Castro

I had a similar situation and the way I dealt with it is as follows: I wrote to the journal editor explaining the situation and sending him proof of my contribution to the paper. The editor withdrew the manuscript and in agreement with the senior author, he included my name as co-author.

Good luck, Maria

Professor Emeritus — written by Anonymous

I have been omitted from three publications in the past. In two of the cases, the omission was an oversight. I would therefore agree that the initial contact should not assume malicious intent to exclude the author. In one of the two cases of unintentional omission, this error was identified while the publication was in press, so the author byline on the final publication was corrected. In the second case, an erratum was published after publication of the original article. This proved to be helpful because the PubMed entry was revised to include my name as a coauthor; in addition, the erratum was cited in the PubMed entry for the original article. If there is malicious intent to exclude a co-author, I agree with aggressively pursuing the avenues of contacting the journal and department/dean. In the third case of deliberate omission that I experienced, I chose not to pursue a confrontational approach because I could not avoid continued contact with the other author, although I did as much as I could to distance myself from further collaborations with that investigator.

Professor of Ophthalmology — written by Douglas R. Anderson

If all events are accurately portrayed by your question, there is a problem with attribution. Having served on several editorial boards, there are some questions to ask about what constitutes co-authorship. In many of the journals with which I am familiar, it is expected that all of the named co-authors were in on the original planning of the study, had all data available to them so that they had opportunity to validate the analysis and conclusions, and
that they saw (and signed off on) the final manuscript, etc. Authorship is not only attribution, but also responsibility that the data and analysis are genuine and unbiased, etc., at least the part of the experiment in which you were involved if it was a true collaborative effort requiring background and resources of individuals from different areas of science. Sometimes you can't attest to the integrity of parts of the study outside your area of expertise, and that's OK, although it would be nice if somehow the readers can know the role that each person played (to get credit, and also to be held responsible for his portion of the work).

Nonetheless, if the agreement was that you would be a participating author, then the leader of the project in essence takes the responsibility to keep you in the loop about the project as a whole and provide you with a final manuscript for your approval (you don't want your name on a paper if you don't agree with how the data were interpreted and with the conclusions drawn). Failing that degree of involvement, because your contribution was a small proportion of the total effort, then in my view it should at least be mentioned in the materials and methods section or in the acknowledgements that the chemical characterization was kindly done by the collaborative effort of Dr. XYZ. Moreover, if the work was done in your lab supported by a grant, the title page should state that the work was supported in part by A, B, and grant R01-XXX awarded by NNN to Dr. XYZ.

So, one way or another, your participation was not recognized. You were not given credit. The authors lost the opportunity to have faith in the quality of that chemical characterization by knowing who did it, etc.

Now, what to do? Well, first, it seems to me a phone call or e-mail message to your colleague might be in order to find out what happened to the agreement that your participation would be acknowledged through co-authorship, or if the participation in the much larger project was not large enough for co-authorship, why you were not at least acknowledged. If he recognizes an error on his part, hopefully inadvertent, then discuss how to resolve the issue. Perhaps there will be soon a follow-up with further analysis of the same data, and you can be included as co-author with recognition in the materials and methods that you had performed the characterization of the molecules as reported previously (reference), and now further analysis of the data is being presented.

On the other hand, if his attitude is defensive and unfriendly, you can write a letter to his chairman. You can also write a letter to the editor (for publication) in which you state that while not mentioned, it was you who characterized the compounds and there is a slight error in the report with regard to the raw data, or in the way it was integrated with the other data, or in the way it was interpreted, etc. Such a letter to the editor is usually published, especially if the conclusions are affected, along with a public answer by the authors of the original paper. Your letter is a citable publication and gives reference to the original paper so scholars following the subject can find it with the knowledge that you contributed. The forgetful author will have the opportunity to write a reply that you won't see until it is published, so don't put anything in your letter that is open to criticism of not understanding the main points of the original work, etc.

Otherwise, getting into accusations of intentional fraud, etc., will just get mud on everyone. It would be better to move on. I have heard scientists who have had their ideas or even data stolen say, if X needs my ideas to write a paper, fine. I have plenty more he is not capable of coming up with.
Professor of Urology — written by Robert E. Hurst

I agree with everyone who says the first thing to do is to contact the senior author. I would advise both a phone call and an email, the latter serving as a record. If you do not receive satisfaction, then I urge you to pursue the matter vigorously and contact the editor, the other investigator's chair, your chair, and whoever supported the research. When contacting the editor, you can state that you may not be able to vouch for the scientific validity of the data in the paper because you were not consulted. All this presumes that you have evidence that you sent the data to the author. It is important to weed out those who lack ethics. Science requires a high level of trust, and I would not trust anything that a person with such poor ethics would publish. Also, assuming you can prove what you say, contacting other investigators in your field could ruin the other person's scientific reputation. Truth is a perfect defense against libel, but your announcement should be very carefully worded to state facts that can be demonstrated.

Assoc. Prof., U of Lisbon — written by Philip Gerrish

No action is required. Such people dig their own graves. Eventually, they will have no friends, and that isn't good in science. Friends are very important in science despite the common notion that science is cold and rational.

Professor of Reproductive Biology in Obstetrics & Gynecology, Washington University-St. Louis — written by Frederick Sweet

Here's a quote from the NIH Office of Research Integrity's Web site:

“As a general working definition, ORI considers plagiarism to include both the theft or misappropriation of intellectual property and the substantial unattributed textual copying of another's work. It does not include authorship or credit disputes.

The theft or misappropriation of intellectual property includes the unauthorized use of ideas or unique methods obtained by a privileged communication, such as a grant or manuscript review.

Substantial unattributed textual copying of another's work means the unattributed verbatim or nearly verbatim copying of sentences and paragraphs which materially mislead the ordinary reader regarding the contributions of the author(s).”

http://ori.dhhs.gov/policies/plagiarism.shtml

I imagine the NSF and other agencies handling federal funds subscribe to similar principles.

If I were the offended author, I'd begin by contacting the ORI, which will be happy to point him/them in the right direction for blowing the whistle on the perpetrators.

Stealing data and interpretation of the data is a form of plagiarism. It is certainly scientific misconduct.

Sticking one's scientific head in the sand is not always the best approach to dealing with misconduct. How on earth can the standards be enforced if everyone turns away from trying to improve the scientific community?
Assistant professor at prestigious tier one — written by Anonymous

When this happened to me, I first called the paper author and asked why my authorship had been omitted when she had promised it. I think it is only fair to give the author that opportunity, and sometimes it may save us from the embarrassment of jumping to conclusions. When she waffled and said she “forgot,” I let her know that I was very disappointed in her behavior since I valued my colleagues at their word and her omission was disappointing. I then wrote her an e-mail stating the same and cc’d her department head. I then wrote to the journal editor. Within a few weeks I had a written apology from the author and an erratum in the journal listing my authorship.

This may not have completely resolved the problem that had occurred but I bet the colleague never “forgets” again. BTW, I have seen her at conferences since and always treat her kindly. It is important to let the past rest and move on.

Former Department Chair — written by Dr. Fred

What was the actual contribution? Was it simply an elemental combustion analysis or spectroscopic analysis of several new compounds? Who did the work? Was it you personally or members of your team? First, complain to the author. If it was simply an elemental or spectroscopic analysis, you could ask the author to publish an erratum indicating that credit was inadvertently omitted and chalk it up to “a lesson learned.” If it was more than that, I would complain to the journal editor. Unfortunately, these situations arise often. Sometimes entire publications are ignored, sometimes a single author is given credit for the work of a whole team. It is a regrettable feature of the real world.

Head of Research, CTO — written by D.S.

Two points of view:

1) cultural/legal view: in Europe (in particular in Germany) a spoken word has the same power as the written word: giving a promise of being mentioned/authorship but not doing so later is a false statement which can be punished by law (criminal law: 3 months up to 5 years); but this “cultural agreement” might depend on the cultural/country background, which is different in other countries;

2) moral view: those “co-workers” will isolate themselves, as science is “self-sufficient” but needs communication of scientist — and in the long view nobody will work with those “co-workers,” nor they will be funded, and journals will refuse those authors in the future (if the journal editors got the relevant information); it’s like expressing scientific misconduct to the “co-worker,” which will be proofed. But independent of these aspects, the deceived person has to give evidence of the facts and should be “strong” for incoming attacks form other sides; otherwise nothing will happen.
Ethical, legal, and moral judgments aside, the collaborative process described above must have been documented with a protocol and material transfer agreement that should have been reviewed and approved by the research oversight committees at both institutions BEFORE the research was conducted and submitted for publication. If that did not happen then the ethical and moral infractions may have been facilitated by the overall lack of compliance. Perhaps it is time to have the publication reference and have this matter reviewed by a competent research compliance officer. Plenty of lessons to be learned.

Remember Watson and Crick? — written by Paul Chuba

Remember that Watson and Crick investigated diffraction analyses of deoxyribonucleic acid (DNA), done by Maurice Wilkins. DNA was already then considered to be the substance of which genes were made.

Watson and Crick used Wilkins’s data, part of which came from co-worker Rosalind Franklin, to create a three-dimensional model of the DNA molecule. The model included known facts, such as the chemical constituents (nitrogen bases, sugar, and phosphate), and took into account data from Wilkins’s X-ray diffraction experiments.

Watson and Crick continued — written by Paul Chuba

I do not remember seeing Wilkin’s or Franklin’s name on the paper or the Nobel prize.

Take it up with the journal and the author’s university — written by donotreply@yahoo.com

Same thing happened to me years ago. I contacted the provost directly and asked for an investigation. It was promptly dispatched to other faculty and administrators who sided with me after seeing all my dated notes and other proof I had contributed.

I also threatened to contact the journal and cause trouble with plagiarism. Some journals will ban individuals or entire universities from publishing for a period of years if plagiarism is established.

Re: Watson Crick — written by Dr. Fred

In 1962 James Watson (b. 1928), Francis Crick (1916–2004), and Maurice Wilkins (1916–2004) jointly received the Nobel Prize in physiology or medicine for their 1953 determination of the structure of deoxyribonucleic acid (DNA). Because the Nobel Prize can be awarded only to the living, Wilkins’s colleague Rosalind Franklin (1920–1958), who died of cancer at the age of 37, could not be honored.
The “guidelines for authorship” outlined above do not include “because I was promised” as a criteria. Journals, the NIH, institutions, etc. are becoming more and more critical of the justifications for all included authors. In my mind, it has not been clearly established that this investigator has earned authorship according to the guidelines above. One wonders, since the collaboration was initiated “two years ago” and the data sent “over one year ago,” if the authors of the paper had already obtained the data from a different collaborator who was able to perform the analysis in a faster time frame. This scenario does not absolve the authors from all wrongdoing, as it seems a professional courtesy call to the offended collaborator could have prevented unnecessary analysis, time and expense. This is just one possible scenario explaining the behavior of the authors. The bottom line is, until a direct inquiry is made with the corresponding author of the paper, every scenario (both legitimate and illegitimate) is pure speculation. Your best move is to first obtain an explanation from the authors of the paper. To involve authorities at the institutions, the NIH, and/or the journal without clear evidence of misconduct can be detrimental to your own career as much as your collaborator.

As others have noted, this happens very often and from a “legal” perspective (lawyers) as well as in practice it is a mess. However, the morals and practical redress side are clearer. The best practical redress is to contact the program officer at NSF, NIH, DOE, etc., who funded the work if the “submitting” author doesn’t cooperate. These agencies are very clear about ethics and research and will be very strong advocates for redress. Since research funded under a grant is via a federal agreement, there is a strong lever here. In fact, a pattern would likely get the “submitter” formally sanctioned or debarred by NSF (and if the university didn’t support it could in principle get the whole school debarred), etc., which would be a very strong penalty.

I agree legally and scientifically with Dr. Harrison. The statute of frauds requires contracts to be reduced to writing under some circumstances; this is not one of them, and a contract reduced to writing is not necessary for redress unless that contract falls under the auspices of the statute of frauds. This does not. The oral contract is binding in all states, and you have redress in state court for recuperation of your losses by denial of authorship agreed upon in this oral contract.
Prof./Investigator — written by Faculty of Pharmacy and Biochemistry, University of Buenos Aires

I underwent a similar situation during my post-doc term at the University of Toronto. I gave a scaffold made of a material that was part of my project to a PhD student to perform an assay that could have not been done with her scaffold due to mechanical constraints; mine was stiffer. The scaffold was used as a proof of concept and the paper was published in PNAS. My stuff was included in the revised version. In other words, my work was demanded to improve (substantially) the version and have the manuscript accepted. I was not even included in the acknowledgements. Absolutely ignored. On purpose. She just included my reference. From the current article, it seems that she reproduced my technique, and this is totally false. I sent a diplomatic e-mail to my supervisor and decided to give up to his apologies. I needed his recommendation more than anything else. The prize for her: she is now an assistant professor at the U of T. I agree: (1) Everything needs to be written and (2) I believe the person who is responsible for that is the main investigator. He should teach his students ethical behavior.
Your Electronic Data: Is It Credible Enough to Serve as Proof of Invention?

If you’re like many principal investigators, you and your technicians are storing a lot more data electronically, rather than on paper in the traditional Black Notebook. But can such digital data serve as sufficient “proof of invention” if you decide to apply for a patent on your breakthrough? In principle, through decades of case law, the answer is “Yes.”

But what specifically qualifies your data as this important evidence? Lisa Dolak, a patent attorney at Syracuse University, reviews three key requirements:

• It’s admissible. The courts and the U.S. Patent and Trademark Office say evidence consists of the inventor’s testimony and reference exhibits of three key elements of invention: conception (i.e., you thought of a novel invention), diligence (i.e., you document how you attempted to make your invention work), and actual reduction to practice (i.e., it works).

• It’s corroborated. This is evidence independent of the inventor’s personal testimony. With the Black Notebook, this often meant the “over-the-shoulder” test — a witness vouched for the inventor through direct observation of the experimental work and signed the notebook. More recently, courts have relaxed the corroboration requirement, but it is still true that an inventor’s testimony and records alone won’t suffice, so whether an inventor uses a Black Notebook or keeps electronic invention evidence, he or she should make sure the work and/or records are regularly witnessed.

• It’s credible. This simply means that the inventor’s story adds up — based on the admissible, corroborated evidence. For the Black Notebook, that meant the entries were created and organized in a credible way — bound notebooks, consecutively numbered pages, inked entries signed, dated and witnessed, no paper scraps, no gaps, mistakes crossed out, signed and dated, and the notebooks securely stored. For electronic data, the issue of credibility becomes more complex.

5 Key Questions to Ask

To determine if your electronic data is credible, as well as admissible and corroborated, here are some key questions to ask:

1. Are all entries electronically signed? Legally, signatures are not necessary, nor are they enough all by themselves. But signatures remain a good idea because they connect entries with the documentation author, who should be the inventor. These signatures should be prompt; delays hurt credibility.

2. Are all entries witnessed? Like the author’s signature, this is neither necessary nor sufficient on its own. But witnesses can strengthen your case as a whole, and the patent office looks at your case in its entirety. A witness’s
electronic signature corroborates your case, as long as it’s witnessed promptly and you have non-alteration safeguards in place.

3. Are the entries securely and promptly dated? Automatic time-stamping by your internal document management system and third-party “digital notary” and “digital surety” services can help give your dates credibility. Again, document and authenticate as quickly as possible. The date is crucial, because conception and diligent effort toward reduction to practice could be enough for you to show you invented first.

4. Are all data secure, while active and while stored? This lets the patent office know that the info was entered by the person who said he entered it and not by anyone else. Who can access these accounts? The ideal security system combines the three keys of security – something you are (biometrics), something you have (a physical key), and something you know (password). Try to use at least two of three, since all are vulnerable by themselves: Keys stolen/duplicated, passwords guessed and biometric interfaces misused (e.g., more than one person enters a fingerprint in a biometric fingerprint file).

5. Are all data safeguarded against alteration? This is where the Black Notebook has much more credibility. It’s usually fairly easy to spot alterations. But electronic data can be protected through digital signature, digital notary, and audit-trail technologies. These will all help establish that the information was protected.

That’s a tall order. That’s why about 70 percent of organizations use a hybrid model. They physically print out electronic data, have the author and witness apply a “wet” signature, and then store securely. That way, they have double the credibility when it comes time to take their case to the patent office – or court.

(Source: Lisa Dolak, patent lawyer, Syracuse University College of Law. See also FDA Regulations for Electronic Records, 21CFR11, April 1, 2009, and www.iphandbook.org.)
Keeping Sensitive E-Mail from Leaving Your Lab

A principal investigator studying airline-flight delays forwarded four e-mails from his work computer to a lobbying group. Attached were spreadsheets on surface delays, supporting data, and a summary report. The lobbyist's computer either was (1) hacked and the material stolen or (2) the mail was forwarded to several other organizations.

In either case, the e-mails ended up back with the PI's employer, who fired him.

This is the type of e-mail nightmare lawyers have been warning everyone about for years: E-mails can end up anywhere, and anything you put in them might as well be on the front page of your local newspaper.

*Lesson for PIs:* Remind your staff about the dangers of writing about lab results and anything else that the organization would prefer to remain within the institution. E-mails do in fact end up anywhere — even if the material is stolen.

7 protective measures

How can you keep sensitive e-mails from leaving your lab? Here are seven suggestions:

1. **Let people know if your organization monitors e-mail, IMs and other Internet activities.** The goal is not so much policing but a deterrence — a regular reminder makes people think twice about what they share that's work-related.

   You can monitor online communications conducted either on work computers or on a work network. But you must have a policy that says that e-mail is subject to monitoring. Workers must know this, however — legally it's called “notice” and usually defeats reasonable expectation of privacy in court.

2. **Let them know this means private e-mail accounts, too.** Courts have ruled that personal e-mail accounts such as Gmail, Yahoo, and Hotmail aren’t protected by an expectation of privacy when they are accessed at work. Most workers don’t realize this and act accordingly. But an institution can monitor any activity on its computer network.

3. **Make sure managers and supervisors don’t undermine the policy.** If a manager says, “No one will look at your e-mail,” that creates a legally nebulous area that lawyers love to exploit. The expectation of privacy issue comes back into play.

4. **If the stakes get high, it’s time to issue a new reminder.** In the case above, the company was facing opposition from lobbyists on a piece of national legislation. With the stakes that high, the organization should have reminded its staff to keep matters confidential, and about organizational monitoring of e-mail.

5. **Remind them of the dangers of hacking and forwarding.** Remind people that once an e-mail is sent, control is lost forever. You are completely at the mercy of the person's security procedures or anyone they send it to. People know this and do it anyway — but the occasional horror story, like this one, may give them pause.
6. **Let people know what’s confidential and not to be released via e-mail.** Sometimes people can claim ignorance about what's intellectual property, trade secrets, or other information which should not be released to anyone outside the organization. Let them know what can and can’t be released. And as much as possible, simply guard proprietary information by keeping within the smallest possible circle. *Note:* This includes e-mailing proprietary information to a home computer that may be accessible to several people, or info placed on flash drives that may be lost or stolen.

7. **Don’t forget the human element.** Policies, monitoring and horror stories only go so far. People still tend to think, “It won’t happen to me” or “I can trust the recipient.” Don’t forget to appeal to people’s sense of duty and responsibility to protect information, too.

Can I Stop the Media from Publishing Leaked Results of My Research?

Expert Comments by Karen Hersey, LLB, Stanley Kowalski, PhD, JD and more

Reader Question

I have been keeping some of my lab’s exciting research results confidential until I can announce them at the annual meeting of our specialty in six months. However, I now find my post-doc has been dating a local newspaper reporter and has told her the whole story. She and her editor want to publish this science news scoop right away, whether I cooperate or not. Do I have any legal power to stop them? What should I do? Should I alert any top brass on campus?

EXPERT COMMENTS BY KAREN HERSEY, LLB & STANLEY KOWALSKI, PHD, JD

Karen Hersey, LLB, is retired senior counsel for intellectual property at the Massachusetts Institute of Technology (MIT) and currently a professor of law and senior scholar in residence at Franklin Pierce Law Center, Concord, N.H. Stanley Kowalski, PhD, JD, is director of the International Technology Transfer Institute at Franklin Pierce Law Center and serves on the editorial board of the ipHandbook at www.iphandbook.org.

The answer depends on whether there’s a non-disclosure agreement (NDA). If not, you have no real legal power or authority to stop publication. However, if the university/PI and/or the post-doc have signed an NDA, you can stop this information “leakage” by notifying both the reporter and the newspaper as to the confidential, and protected, nature of the information. If the reporter and editor fail to desist, you can seek an injunction to stop them.

In the absence of an NDA, there still are at least three actions you can take:

1. Look into whether the post-doc’s actions would violate the university’s research policies/guidelines. His or her actions may constitute academic misconduct (although probably do not rise to the level of misconduct in science). In any case, the post-doc does not have authority to copy and distribute data that probably belongs to the school (although whether your institution has a data policy is another issue). You should, in any case, go to your department head or dean and the department head/dean needs to instruct the post-doc on how to properly manage university information.

2. The school should tell the newspaper that you and your laboratory people cannot and will not substantiate the story. Further, if written material has been handed over to the newspaper, the university can claim ownership and demand its return (unless it’s a state university and the state’s open-document laws don’t protect the information). Whether any written information is protected or not, the school should make sure the newspaper editor
knows that the research results are not ready for publication and that if the newspaper proceeds it will be publishing non-validated, unsubstantiated science from a secondhand, non-credible source (the girlfriend). Of course, you yourself are under no obligation to respond to any inquiries from the newspaper and, in fact, should not.

3. If you wish eventually to file a patent based on the information, filing a provisional patent application is one way to avoid losing a patent (a provisional application establishes priority of invention and keeps the results patentable in the event of subsequent public disclosure); but a provisional patent application won’t help the PI who wants to control and/or delay the publication of the research findings per se. Without an NDA, the best initial action would be to prevent publication in the first place, and the most prudent course might include filing a provisional patent application, depending on the nature of the findings. Clear and open lines of communication with the school’s technology transfer office (TTO) will be of enormous value to any PI facing such a dilemma. Get to know your TTO colleagues; they are there to help.

EXPERT COMMENTS BY REPORTERS COMMITTEE FOR FREEDOM OF THE PRESS

Lucy Dalglish is the executive director, Reporters Committee for Freedom of the Press, Washington, D.C.

The answer, in all likelihood, is No, you cannot block the media from publishing the information. That would be a prior restraint on publication. The U.S. Supreme Court has never upheld a prior restraint on the press. (Or anyone else, for that matter.)

However, if this were false information, you could sue for libel after the fact (of publication).

If the information were stolen by the reporter, you could bring theft charges after the fact (and likely do so even before it’s published, if you have proof).

If the information is a trade secret, your attorney could pursue legal action against the person who knowingly took information to which he or she was not entitled.

But if the reporter is the unwitting, lawful recipient of information (i.e., didn’t ask someone to steal it, didn’t steal it herself, or didn’t engineer the appropriation of the material in any way), there’s likely nothing you can do to the reporter or stop the publication.

The Supreme Court has hinted that the only time it might approve a prior restraint is in the most extreme circumstances, something that could result in physical harm to someone.

EXPERT COMMENTS BY THE NEW ENGLAND JOURNAL OF MEDICINE

Editor’s Note: Karen Pederson Buckley is the media relations manager of the New England Journal of Medicine, one of the highest-regarded periodicals in bioscience. It is famous for a very strict policy on prior
dissemination of key content from articles PIs hope it will accept and publish. In short, NEJM takes a dim view of any publicity prior to their publication of the item, and often turns down submissions that have somehow received advance spotlighting. (See its “Embargo Policy”)

**A Journal’s Policy**

Editors at the *New England Journal of Medicine (NEJM)* review the circumstances in cases such as this.

If the leak is not careless or deliberate, the editors are likely to publish the article. If it’s determined that the PI’s careless behavior led to the leak, the editors would probably pull the article and remember the case, should the PI submit a future manuscript.

These decisions are made on a case-by-case basis. Like all policies, there’s room for judgment and interpretation. Among the relevant considerations in deciding whether to pull the article (if it’s not already in print) and work with the PI again is the answer to such questions as: Who was at fault? How did the leak occur? Was the PI careless?

In this case, where a post-doc leaked a PI’s NEJM article manuscript to a paramour who’s a member of the press: If the PI left the manuscript laying around where anyone could have access to it, that would be careless behavior in the editors’ view.

**Bottom line:** NEMJ expects PI authors to secure their information until the embargo date for its publication.

**READERS’ RESPONSES**

Research Communications, University of North Carolina at Charlotte —written by James Hathaway

You probably don’t have any legal way to prevent the story from occurring since it was legitimately acquired through a legitimate source (your post-doc) who knew he was talking to a reporter. However, without your cooperation or the cooperation of anyone else from your lab, the reporter doesn’t have a very good story (unless they want to take your hostility to publication as sign that there is something suspect going on). A better tactic is to try talking to the reporter or the editor and pointing out that this will be a better news story once the results are announced (or, better, published in a peer-reviewed journal) and that you would be willing to give an early interview with the clear understanding that this is when the story will appear. A responsible newspaper should be willing to wait until then — among other things, to make sure that they are not over-hyping a research result. In the past, the reporter might have been eager to publish in order to avoid being scooped by competing papers. In today’s market, however, where even the largest research results often go without coverage at publication, the pressure to get the
scoop is considerably less. I would advise talking to your institution's media relations office and letting them handle the reporter's editor. They probably already have an established relationship and can work out an equitable solution.

Professor — written by Denis English, Ph.D.

I assume you are writing from a country outside the United States because you are apparently a lab director and as such a well-educated person. Every well-educated person in the United States knows, or should know, that you cannot stop the newspapers or anybody else from publishing anything they want to prior to publication. The well-known prohibition from stopping anything from being published resulted from an item in the U.S. Constitution often referred to as the First Amendment in the Bill of Rights. Anyone or any organization can publish anything they want. If what is published is false or damages you in some legally sustainable manner, you would be able to sue the newspaper after the publication appeared for the damages you sustained. You may even be able to get a judge to grant a temporary, very temporary, restraining order to hear your arguments. If the judge thought that the publication was probably going to damage you legally, he or she would not prohibit the publication but may warn your opponents that they may be liable for damages. Unless you left something out, you will sustain no legal injury from the news report. You cannot fire your post-doc for speaking out either, unless that was a written condition of his or her job description. The reporter is merely doing her job; reporters collect accurate and interesting information ANY WAY THEY LEGALLY CAN. Fortunately, no court can stop any newspaper in the United States from disseminating that information.

Professor — written by Pierre Mallia

Once this has occurred and a member of your team inopportune made a mistake — and we all learn from these mistakes — it may be worthwhile considering the damage you risk by not cooperating. Can we keep results confidential if they carry significant results? Can this be considered ethical? You may bargain with the editor and tell him that you want to make sure your results are valid, if this be the case, and offer him an interview. Another option is that you may actually comment, saying that this way to reveal results is not your way of doing things, that yes you do have results to publish which may still need confirmation, and that you will be going public on a certain date. This may even generate interest in your presentation.

written by Gossipmonger

The loose tongues in this case do not surprise me, only the subject. Most labs I have directed were “hotbeds” (some of you will get the pun) of rumor and gossip. Favorite topics: who gets what salary and who is dating whom.
“Research results” ranked dead last as a target of prurient interest. PS: why not mentor the post-doc to keep his mouth shut about results; he will certainly have to learn to do so if he ever signs a “confidentiality” agreement.

Rare Bird — written by Give thanks

Actually, I've found it so hard to find a date interested in discussing my research that I think the post-doc should be happy he stumbled upon one. The Hollywood ending: She gets the Pulitzer and he gets the Nobel.

Best practices for post-docs — written by Concerned researcher

I don't have legal advice but it seems the post-doc in question is more concerned about the paramour's career than his or her own. Leaking the information was simply bad form. Were I the post-doc I would worry about my reputation as a collegial member of my discipline. Personally, I would never work on any project with this type of person.

Research Lab Director — written by Neuroscientist

Any post-doc with an iota of common sense knows better than to talk with a reporter — even one he is dating. He was either stoking his ego or sabotaging the laboratory, as the news media are notorious for publishing anything and everything, even information that is harmful to an individual, a patent, or an organization. In this case, I would probably fire the post-doc on the spot, as he can never be trusted again.

Negotiations? — written by Biotech COO

We do not know how the leak happened. It might have been a lot more innocent than what the previous comments assumed. It could be an overenthusiastic: "I'm so excited, we just tested this new line of stem cells and were able to revert spinal cord injury in our mouse models. This will sure make an exciting paper!" And the girlfriend just took that to the bank. The fact that the PI is aware of the leak pre-publication suggests his post-doc might have realized the problem and tried to fix it.

We had a number of interactions with the media throughout the years and, usually, they much prefer a quality article and don't want to burn one of their potential sources of future good stories (unless this is a huge story and they are afraid of being scooped). Typically, we were able to negotiate an embargo on our own stories that partially leaked ahead of time, in exchange for a good interview and future exclusivity. We promised to talk only to them and to allow them to publish the story on the same day it is being released officially to the public, so they beat potential competitors to the punch (either the day we present the data or the day we send the official news release on the wire). We never had a journalist refuse. Also, if this is a local media, it is bad politics for them to anger one of the
local stars. Unless you burned that bridge already, I would try to negotiate (as some previous posters suggested) a
timing of the disclosure that would be more appropriate.

Provisional Patent Filing — written by Dr. Fred

If the work has commercial value, it is imperative that you file a provisional patent application as recommended
by Hersey and Kowalski or you will lose all foreign patent rights depending on what is disclosed. The U.S. rights are
safe for only one year from the disclosure, and the provisional patent application dies at the end of one year.

written by Blame the victim

Why is everybody blaming the victim--the post-doc. I defy any PI to say he/she has never engaged in "pillow
talk" with a "significant other" — especially if there had just been a significant breakthrough in the lab that day. No,
dear colleagues, the fault is not the enthusiastic post-doc's. He/she was betrayed by the poor ethics of the paramour
of the press. If the truth be revealed, I daresay we will one day discover there are even "groupies" who cuddle up to
Nobel Laureates — hoping to sell their story to British tabloids. Wake up; we live in a media age!

Boston titillator — written by Paul Revere

A friend of mine who worked at NEJM intimated the inner workings were a whirlpool of intrigue, gossip, and
hierarchy of secrets. So, the "exposed" post-doc should not feel so bad. One day, an ex-staffer of the Holy Journal
will write a tell-all, and then the linen will be hung out to dry.

Research Communications — written by PIO

Contact your public relations/public affairs person at the campus immediately. These are the people who should
know how to negotiate this with the appropriate editor at the newspaper and who, trust me, has probably managed
similar situations. They know the style of the newspaper, they know the reporters, they know the editors, and they
know what can and cannot be requested and even how to request it. It's what they do for a living.

Re-read the James Hathaway and Biotech COO entries above.

This is also a grand opportunity for you/other PIs and research deans to re-enforce to everyone in the lab
the primary rule of research communications: Do not talk about studies that have not been published. Not on the
elevator, not on a boat, not in a tree, not in a bed. There are limited exceptions (presentations at conferences, for
example) and even those have qualifiers when media might be present or if you receive calls from the media after
the fact. ■
Ruling Tightens Requirements to Secure Early-Stage Patents

If your research is aimed at commercializing an innovation, your success likely depends in part on securing a patent fairly early in the discovery process. For decades, principal investigators simply submitted manuscripts as patent applications — and patents often were granted for what amounted to little more than theories.

That has changed with a recent court ruling that patent applications must contain a written description of the invention — meaning you must actually have invented what you’re claiming to have invented. You can’t simply know that it will exist eventually.

“In the past 10 years, many PIs were just filing their manuscripts before speaking at a conference or online publication of their papers,” explains Sara D. Vinarov, PhD, JD, a patent attorney in the Chicago office of Quarles & Brady LLP.

“Usually, they had exemplified one or two target compounds that were representative of a genus that they later wanted to claim in a patent.” Now, though, “PIs will either have to wait until they have an adequate written description before filing an application or they will need to reasonably ‘predict’ what other compounds, peptides or genes could be representative of the genus they want to lay claim to,” says Vinarov.

The good news: That’s not impossible to do.

The case is Ariad Pharmaceuticals Inc. v. Eli Lilly and Co., No. 2008-1248 (Fed. Cir. 2010). In it, the court confirmed that patents must meet both written description and enablement requirements under Title 35 of the United States Code (patent law) §112 (1975), reports the law firm Bracewell & Giuliani LLP on its Web site.

“The inventors discovered a transcription factor called NF-kB [that] assists cells in surviving exposure to harmful extracellular elements,” the law firm notes. “An excess of NF-kB, however, can harm a cell. The inventors concluded that NF-kB could be artificially inhibited; [a]lthough the patent specification did not include any specific details, the patent was issued with broad claims reciting the step of ‘reducing NF-kB activity’.”

In 2007, a jury found that two of Lilly’s products infringed on that patent, but then an appellate court struck it down “for failure to meet the written description requirement.” On subsequent appeal, the court had to decide if “the patent statute contain[s] a written description requirement separate from an enablement requirement; and if there is a separate written description requirement, what its scope and purpose [are].”

The court, Bracewell & Giuliani note, “rejected the argument that the written description requirement is only for purposes of identifying what is to be enabled.” As far as scope, “the court stated that ‘the level of detail required to satisfy the written description requirement varies depending on the nature and scope of the claims and on the complexity and predictability of the relevant technology.’ The court refused to issue any bright-line rules.”

Says attorney Lindsay S. Adams, with New York firm Day Pitney LLP: “Stated otherwise, PIs need to show they actually invented what they claim is the invention. Wishful thinking won’t cut it. The problem for PIs is they want to publish results as soon as possible; however, the vast majority of the time, the invention has not been flushed out.”
Is there a way to meet the mandates of technology commercialization under the *Ariad* ruling?

“According to the court,” Vinarov points out, “patents ‘should not be awarded for academic theories, no matter how groundbreaking or necessary to the later patentable inventions of others,’ but rather to those who ‘conceive of the complete and final invention.’ Going forward, PIs will need to be cognizant that the written-description requirement remains in force, and that it will remain important to substantiate claims with a representative number of working and/or prophetic examples sufficient to demonstrate that the inventor actually invented the claimed invention.”

Such a determination of possession, she adds, should include:

- a reduction to practice;
- disclosure of drawings or structural chemical formulas;
- sufficient relevant identifying characteristics, such as complete structure, partial structure (functional domains), physical and/or chemical properties or functional characteristics when coupled with a known or disclosed correlation between function and structure;
- method of making the claimed invention;
- level of skill and knowledge in the art; and
- predictability in the art.

Vinarov offers these additional practice points for PIs to consider in response to the *Ariad* ruling:

- There should be claims of varying scope, including at least one “picture claim” directed to each explicitly disclosed embodiment. If broader generic claims are desired, disclose as many multiple detailed specific embodiments as possible. Clearly depict the claimed invention in drawings and/or sequence listings and/or descriptions of method steps and step components. If biological matter is claimed, make a deposit of said matter.
- Establish a checklist against which claims are compared for at least description, but preferably description and examples of all claimed elements, method steps and step components not known in the art.
- Consider filing provisional applications on initial findings and follow up with additional provisional applications with broader claims supported by additional disclosure so as to form an overlapping application “portfolio” that serves as the basis for non-provisional applications (rather than attempting to describe and claim everything in one application).
Don’t Equate Inventorship with Authorship
The PI’s Role in Deciding Whose Name Goes on Patent Application

Principal investigators often play a key informational role in the prosecution of patents, providing documentation of inventorship and helping resolve disputes — but, when it comes to determining inventorship, they can make their voice heard but shouldn’t expect to drive any decisions about whose names go on patent applications.

Inventorship on a patent application often is foreign territory for PIs. Determining who’s an inventor is nothing like deciding whose names go on a submitted manuscript, yet many PIs seem to equate the two, legal experts say.

“Inventorship is a legal question — not one of collegial or managerial convention,” explains Jim Baker, PhD, who as director of technology and economic development at Houghton’s Michigan Technological University works with PIs and patent applications every day. “The rules are determined by the Patent and Trademark Office (PTO), so institutional rules are neither necessary, appropriate nor functional,” he says.

Relying on procedures used in determining what author names go on a manuscript — more familiar territory for most PIs — just won’t work, Baker points out. “Often we are asked to follow scientific conventions for inventorship similar to what are used for authorship on manuscripts,” he explains. “While that may be considered professional courtesy, the consequences of inaccurately listing inventors — which, he stresses, include outright invalidation of the patent — are so extreme that we conduct careful diligence to evaluate the true list of inventors. These rarely match one-to-one with the listing of journal authors.”

David J. Aston, JD, a patent attorney with Peters Verny LLP in Palo Alto, Calif., notes that “all U.S. institutions and companies want inventorship to be correct; otherwise, the patent is invalid.” The PTO “merely follows the case law and statutes” regarding inventorship, Aston says. “The agency does not attempt to define, by agency rules, who is an inventor vs. who is merely a contributor and not legally an inventor. That is, the PTO has rules about naming all inventors, or changing inventorship, but not rules about what type of contribution makes one an inventor. That comes from statutory and case law, and, unless a dispute is raised, a patent application can easily go through examination and issue with the incorrect inventors named.”

And, Aston adds, “PIs are not given any particular recognition by the PTO, the law or even most university policies that I know of when it comes to inventorship.” The only real “rule” at most universities: “The attorney preparing and filing the application should name those, and only those, who qualify legally as inventors. As to PIs, the short answer is, ‘No, there are no rules about them.’”

PTO guidelines for determining inventorship — outlined in its Manual for Patent Examination Procedure — define “the threshold question” as “who conceived the invention,” Baker explains, adding that “unless a person contributes to the conception of the invention, he or she is not an inventor. Insofar as defining an inventor is concerned, reduction to practice, per se, is irrelevant.” That’s from Fiers v. Revel, 984 F.2d 1164, 1168, 25 USPQ2d
1601, 1604-05 (Fed. Cir. 1993). Keep in mind, Baker adds, that, under PTO rules, “one who suggests an idea of a result to be accomplished, rather than the means of accomplishing it, is not an co-inventor.” That’s according to *Ex parte Smernoff*, 215 USPQ 545, 547 (Bd. App. 1982).

Further, Baker notes, “an inventor is listed on an invention if he or she had an inventive contribution to a single claim, which could be one of many. If all the claims that a single inventor contributed to are not allowed, that person ceases to be an inventor.” That is, you only have to contribute to one allowed patent claim to be lawfully considered an inventor, but you must contribute to at least one claim allowed by the PTO after prosecution of the patent application.

**PI’s role: provide facts to counsel**

To further define the PI’s role, Baker explains “a person’s status as PI has nothing to do with inventorship. A PI is likely to participate as an intellectual leader on the project and therefore may be likely to fit within the legal definition of an inventor, but he or she must make an inventive contribution as defined by the PTO to be legally considered an inventor. Essentially, the PI’s function is to ensure that the legal counsel preparing and prosecuting the application has all relevant information regarding who contributed what intellectually and practically to conceive and demonstrate ... the invention.”

The PI can do that by assisting in the retrieval of laboratory notebooks and coordinating communication among project participants and between project participants and either the institution’s technology transfer office or legal counsel.

Adds Aston: “I believe that it is the PI’s job to report inventions made under a grant to the funding agency as part of a close-out report or the like. However, that does not mean that the PI is necessarily an inventor. One has to look at the facts of each invention, in particular as it relates to the original research plan.”

Of course, disputes occur, and PIs will want to make sure they play an appropriate role in settling them. “If a PI questions the listing of an inventor on a patent application he or she is participating in, the PI should advise the legal counsel of those concerns and the basis for them,” Baker advises. “If there are concerns about retribution, that often can be done discreetly.”

Of course, Aston points out, those operational rules “do not address the situation where the lowly post-doc, who is the true inventor, does not want to complain or contest the joint inventorship question, or, conversely, the egotistical post-doc who thinks it was all her idea.”

**Patent Law**

**It’s My Invention; Shouldn’t My Name Go on Patent Application?**

Expert Comments by Sara V. Vinarov, PhD, JD

**Reader Question**

My department chair insisted the patent application be in his name. But I’m the PI who came up with the idea and ran the experiments. How can I get proper recognition?

**EXPERT COMMENTS**

This is a multi-faceted question and can be answered in a couple of different ways depending on whether you (“who came up with the idea and did the experiments” to reduce the idea to practice), were or were not named as an inventor on the patent application when it was filed with the U.S. Patent & Trademark Office (USPTO).

(1) If the department chair was listed on the non-provisional application as a first-named inventor and you were not listed as an inventor, although you “came up with the idea and did the experiments” to reduce the idea to practice, then if the patent issues with claims to which you contributed, the patent will be invalid and unenforceable in a court of law.

For the sake of argument, I will presume that the patent application is still pending at the USPTO (i.e., has not yet issued into a patent). If this is the case, the inventorship can and should be corrected under 37 CFR section 1.48 to add your name — providing the error was made without deceptive intent.

In the process of determining correct inventorship, if it is determined by the patent agent/attorney that the department chair did not contribute to the subject matter of any of the claims pending in the application, she/he should be removed as an inventor on that application.

I am sure that the intellectual-property (IP) managers and/or patent attorney working for your research institution recognize that inventorship is a legal question based on factual evidence, determined by a patent professional. It should not be influenced by office politics or academic politics (supervisors taking credit for the inventions of subordinates), because this can jeopardize the validity of the patent.

Therefore, if you are concerned that you have not been given proper recognition for your inventive contributions to the claims in the patent application, I suggest that you, at least, confidentially bring this issue to the attention of the IP managers and/or patent attorney working for your research institution.

(2) If the department chair was listed on the application as a first-named inventor, and you were also listed as an inventor (even though not first named), then legally you have the same rights in the invention as the department chair.
The first-named inventor does not have any more rights to the patent than the other inventors. According to law, all inventors have an equal share regardless of how much or how little they contributed.

For example, if an application has 20 claims, and you contributed to 19 claims and the chair contributed to 1 claim, both of you are entitled to be inventors on the application.

If the patent attorney determines that the department chair has not contributed to any of the claims, then inventorship must be corrected, which eventually leaves you as a first-named inventor. Otherwise, the order in which names are listed does not legally matter, because each inventor owns an indivisible interest in the patent — unless all the inventors assign their rights to the research institution for some type of consideration, in which case the assignee owns it.

However, if you really believe for a variety of reasons that you should be listed on the patent as the first inventor, I suggest you discuss this with the IP managers and/or patent attorney working for your research institution. They may be sympathetic to your cause and be willing to pay the costs of re-submitting the formal paper work (such as the Declaration and Application Data Sheet) with the USPTO, listing you as the first inventor.

The declaration is a signed/dated document that identifies each inventor by full name, address and country of citizenship. This may help you get the status and recognition that you seek in a patent that issues.

Comments by Sara D. Vinarov, PhD, JD, patent attorney with Quarles & Brady LLP, Chicago.

READERS’ RESPONSES

Professor, Dept. Molecular and Cellular Biology, Baylor College of Medicine — written by David D. Moore

It would be a very serious mistake to go forward with this patent application if he did not contribute to the actual invention, since naming an incorrect inventor is clear grounds for invalidating a patent. Patent inventorship is very different from authorship on a manuscript, and a clear explanation of the distinction and the importance of this issue can be found here: http://www.stoel.com/showarticle.aspx?Show=1786

Professor, U of MN, Radiology — written by Bruce Hammer

I agree with Moore. Adding a person who did not intellectually contribute to the patent is reason for patent invalidation. Conversely, omitting an inventor’s name from a patent disclosure/application will result in patent invalidation. Larger universities have a Patent & Technology Office, which in theory should vet the application/disclosure and remove unwanted parasites.
written by Junior Edison

You guys sound lucky. On our campus we PIs must deal with a Patent/Technology Office that is very timid to question any names submitted as inventors, plus is slower than molasses in filing and following up applications for patents.

Sr. R&D Engineer — written by Mark Emamian

If the idea came from a PI and an engineer designed and made it to work, should the engineer technically be named as a co-inventor?

written by RKS

I agree that submission of a patent that has incorrect declaration of inventors will simply invalidate a patent and this should be corrected immediately. I am surprised that a department head would not already know this unless the institution concerned is very small and not used to dealing with this issue.

There is a way to deal with the example cited above where 19 of 20 claims can be attributed to one of two inventors. Although the patent is technically owned outright by the university and both inventors have equal rights to the patent, as at most universities, the policy is to distribute a portion of the income back to the inventors (typically from 20% to 50%). This does not have to be split equally between two (or more) inventors if the inventors can agree to an uneven split based on their individual contribution to the claims...The best time to do that is before any royalties, etc. appear. People tend to be least aggressive when negotiating “potential gains.” For most patents on which I’m an inventor, I take the lion’s share (since the ideas were mostly mine). However, I always share inventorship with the students and even technicians who contributed to some of the ideas during execution of the research, even if they only had minor ideas. This allows me to recruit their time in helping in the execution of the patent application (at least liaising with the patent attorneys). Students and technicians are delighted to be listed as inventors on patents and are happy not to argue taking a minor portion of any royalties. Some may say that this too is not a legal way of assigning inventors, but I think it is arbitrary and a matter of perspective as to how important a contribution is to the final success of a body of work in a patent, especially if any contribution to any single claim on a patent qualifies one to be listed as a co-inventor with equal rights to the patent.

President/CEO — written by Ellen Shepherd

When businesses pay for the work that is done with the express purpose of obtaining patents, are the patents issued in the name of the business, or is it expected the inventors sign a document first which will require them to assign the patent to the company? If the latter, does the company then have to ‘share’ the patent?
In response to Ellen’s question:

To my knowledge, private (including publicly traded companies) will almost always have their employees sign a document assigning all patents to the company. The company generally does not have a policy or obligation of sharing the income from the patent with the employee, even though they (employee) are the inventor (they have been paid in salary, benefits, etc). The first part is true generally for universities, i.e., the patent is assigned to the university and they too have no obligation to share any income. However, they usually have a policy to share income with the inventors. This makes sense since, without some incentive, inventors at universities would have nothing more to gain than burden in filing patents on behalf of the university.

Los Angeles area institution — written by Budget-Strained PI,

My current research, which I conceived of and shepherded, is being written up an “invention.” But the campus patent woman says we have to list about 15 people as “inventors” — even the lab tech!! I don’t mind all those names hitchhiking on what I discovered, but do they have the right to share in any royalties my invention earns?

More info — written by OldTechie

1. Being listed as an inventor requires participation in the inventive process. A technician who is paid a salary and did what they were told is not legally an inventor.
2. As RKS noted in response to Ellen, most employment contracts require assignment of inventions with no specified benefits. The inventor remains listed as the inventor regardless of who “owns” the patent.
3. As pointed out, whether one is first or last on a patent is immaterial as to benefits EXCEPT for academics, the first inventor is assumed to be the driving force and usually receives more academic recognition.
4. Hard to fathom a department chair who started this....

Owner CAA Engineering — written by GAC

With over 55 issued patents and a former GE patent board chairman, I agree with most of the other comments. The name on the issued patent should be the one who contributed first and most to the invention. Off-the-wall ideas and suggestions without material contribution (analysis and experimentation) are acceptable for listing as co-inventors – but there is always a principal inventor. The company who sponsors the invention should provide something of value to all the inventors – or they may find their employment agreement to be worthless. In 1989, a former clerk for Sears, Roebuck & Co. settled his dispute with the company over profits from a popular socket
wrench he invented in 1964. Peter Roberts of Tennessee was 18 years old when he invented a quick-release wrench that eventually sold by the millions. Roberts, now 44, last week settled an $8.2 million patent-infringement case that alleged Sears had cheated him out of his rightful royalties.

VPR — written by David

In order to defend and substantiate a patent, the inventor(s) must be able to document the substantive contributions made to the patent claims. It sounds as if the department chair in this case is carrying out an outdated, but sometimes still invoked, policy that usually applied to publications, that the department chair always gets his/her name on the paper, even if there was no contribution at all. Honorific authorship of any kind should be a thing of the past. But with a patent, “honorific” authorship will simply invalidate the patent and hand the idea over to others. This department chair needs to have a reality session with a knowledgeable patent attorney, and perhaps the head of tech transfer or the CEO who could see a potential revenue generator for the university go down the drain because of the ego and ignorance of a departmental chair.

@Ellen — written by Tech Transfer

1. Under the employment law of the state, the company may be required to share a portion of the royalties from any IP with the inventors. Federally sponsored research also requires a benefit for the inventors as well as offering licensing of the technology to a small business to support economic development.

2. In the USPTO, only natural persons are allowed to apply for patent applications. Therefore, the patent will actually issue in the name of the inventors, not the owners. If an assignment of patent rights is timely filed, the ownership may be printed on the face of the issued patent.

In foreign countries, however, the owner may apply for a patent and receive the patent in their name. The names of the inventors will also be listed on the patent.

Although order of names on a patent is not the same as authorship, it is common practice to order the inventors according to contribution. The reason for ordering is the patent will as “Smith et al.” and it is generally desired that the first named inventor be the lead inventor.

In cases where multiple PIs of equal stature have contributed, placing the names in alphabetical order is accepted or even by institutional ranking.

@Ellen - Sponsored Research — written by Tech Transfer

Companies who sponsor research at universities are not entitled to ownership of the intellectual property. UNLESS they have contracted the university to test a product, in which case, they have given a PI a series of steps to complete and are asking for a report on the findings.
In the event that the faculty member should devise a way to make companies’ IP work better, the faculty member (i.e., the university) retains ownership of the IP developed by faculty member.

Any company who is sponsoring research at the university should have a detailed Sponsored Research Agreement that includes a subsection on Intellectual Property.

Most universities will offer the company the “first right of refusal,” which allows the company to review the IP for licensing purposes prior the university offering the IP for sale to others.

In other cases, a non-exclusive/exclusive domain specific license may accompany any sponsored research. However, the university retains ownership of any and all intellectual property generated by its employees.
Can a Social Media Message be “Disclosure” That Torpedos Your Patent Application?

Because a patent cannot be issued to you if “prior art” already exists on your discovery, it’s possible that your own words — if descriptive enough — could be used by a patent examiner to deny your patent application, says Edward Ergenzinger, an intellectual-property attorney who runs a private IP practice in Raleigh, N.C.

Many PIs and their helpers often use social media sites (Facebook, Twitter, MySpace, etc.) to share with friends and colleagues questions, comments, and perhaps some brief findings involving their work. But beware that, if you share too much, what you reveal might be deemed sufficient to cross the threshold for “prior art.”

Your IP risks

In this social media era, PIs need to double-check that crucial IP doesn’t become public, potentially making years of hard work subject to challenge when the time comes to file for a patent. Here are five key concepts to keep in mind when assessing potential IP leaks:

1. **When IP leaks, there’s no getting it back.** Leaked IP becomes what’s known as prior art, i.e., public information. That’s true even if the information is stolen. You can go after the thief for damages, but that doesn’t change the IP’s status as prior art, making it no longer patentable.

2. **IP is leaked through publication.** “Publication” means the information is disseminated and accessible, not just printed. This can include social media posts, e-mails, conference presentations, and even research papers put in the library or on FTP servers: All can potentially leak IP and ruin your patent application. Ergenzinger counsels anyone making conference presentations to remember that, not only conference handouts, but publicity posters written in sufficient detail can constitute disclosure.

3. **In the United States, publication starts a ticking clock.** If info gets out – accidentally, intentionally or nefariously – you have one year to file your application with the patent office to retain your rights. Elsewhere in the world, you lose your IP rights at the moment of disclosure.

4. **Publication means more than off-hand remarks.** Disclosure means a person” of ordinary skill in the art” could make or use your invention based on what’s been said. Courts have held that abstracts written for academic publications are not always complete enough to trigger disclosure and be declared prior art, but sometimes they have. It’s a case-by-case situation.

5. **The “point of novelty” is the crucial secret.** That’s what distinguishes your device or invention from whatever has come before. If leaked info isn’t novel, but a mere feature, your IP rights remain in force. Limit access to this information whenever possible to those who must know.
The key risk in social media

Remember that explanation requires time and length. To reach the legal threshold of disclosure, you’d have to explain the point of novelty in an invention in sufficient detail that someone else in your field could make or use it. But “tweets” and Facebook updates limit users to a few sentences. It would be a struggle to explain an invention that briefly.

“It’s possible that someone who set his mind to it could run a series of tweets or status updates, but unlikely,” says Ergenzinger. Off-hand or careless status updates or tweets are unlikely to disclose your IP in sufficient detail to wreck a future patent application.

“Simpler inventions such as mechanical devices require less disclosure than scientific research, such as biotech or pharmaceutical inventions,” explains Ergenzinger. “A skilled inventor can read about a mechanical invention and imagine how to put it together. But with inventions flowing from scientific research, you really need to carry out the experiments. It’s a lot more complicated to describe.”

Not a green light

That doesn’t leave lab staff off the hook.

“I would still counsel folks not to use those outlets for describing what they’re up to, even if they don’t describe their research in enough detail to trigger the prior-art doctrine,” says Ergenzinger. Reason? “It’s opening a can of worms. In discovery, litigators could potentially request Facebook and Twitter account information, regardless of the privacy settings. Whether they would succeed or not, we don’t know.”

A special caution about Facebook and e-mail; They also let users post notes, which can be much longer. “A Facebook note is like posting on a Web site or a publication,” says Ergenzinger. That offers Facebook users potentially enough space to disclose the point of novelty in sufficient detail that someone could understand and replicate it.

The same goes for e-mail, which allows users as much space as they need to publish the details of their work. That can potentially trigger a prior-art claim.

Five ways to protect IP

To protect your IP from social media and e-mail leakage, Ergenzinger suggests the following:

1. **Remind staffers to keep work-related Facebook posts and tweets general in nature.** One day a litigator could ask for Facebook, Twitter and e-mail account information during discovery. That’s a hassle no one needs.

2. **Counsel staffers not to use the notes function in Facebook to describe their work.** They should also avoid posting detailed information about their research, especially anything related to the point of novelty, on any Web site, such as blogs. Too many details could result in accidental disclosure.

3. **If a staffer thinks he or she has disclosed priority info, they need to tell you right away.** Get the technology transfer office in the loop. They can help you understand whether the disclosure has caused a loss of rights or trig-
gered a post-disclosure, one-year time clock for filing the application. “It would be expensive to go through a patent application and years of time and money and have to defend this patent in court because one of these prior-art issues was raised,” Ehrenzinger says.

4. Remind staffers not to communicate their work via e-mail outside their research group or the technology transfer office. If they communicate with colleagues outside the research group, they need to keep details as general as possible.

5. Keep the tech transfer office in the loop for any work-related electronic communication outside the group, just in case. This also applies to any publication or conference presentation.

Intellectual Property

Does a Poster Alone Count as ‘Public Disclosure’ Under Patent Law, or Must There Be Handouts, Too?

Expert Comments by Howard Rockman

Reader Question

Some colleagues of mine seem to have what might be called “presentation eagerness.” They want to offer their findings publicly as soon as possible. As a result, we often have “poster sessions” and lectures that are open to the public. Does a poster alone count as “public disclosure” for purposes of patent law, or do PIs trigger public disclosure only when they offer handouts, too?

EXPERT COMMENTS

If you have a poster or several posters that the public can readily access and see, the courts might regard that as a public disclosure. That would start the one-year clock for you to file a patent application.

The final determination of whether it's public disclosure often is a very fine line and each case is different, so a PI should consult his or her attorney or technology-transfer office for specifics of their particular case.

But here is an example that provides a guideline: A lecture is not a publication. However, if every time you give a lecture you put it on a CD-ROM, that is publication of the work and would count as public disclosure. In such cases, the poster session would be a public disclosure.

Here’s an option: If you as a PI want to have a poster session, instead of inviting the public, invite only select people to the lecture. And use a non-disclosure agreement that says that all information will be kept confidential and won’t be disclosed or used for your own benefit.

Another option is to file a provisional patent application with the patent office before the session. That establishes a priority date.

An effective general outline for the provisional application would be: The PI would explain what the problem is, how the prior art has failed to solve the problem, and how he or she will solve the problem. That should help protect their intellectual property – but again, consult the technology-transfer office for the specifics.

Expert comments by Howard Rockman, a Chicago-based patent attorney, intellectual property management consultant, author and lecturer. He has more than 40 years of experience in patent and IP issues.
READERS’ RESPONSES

Patent Attorney — written by Bruce Dowsing

While I agree with most of what Mr. Rockman has said, there are a couple of points I would like to add. A lecture can be a publication in the sense that it is a public disclosure. Therefore, in the absence of a confidentiality agreement, the disclosure could trigger the grace period (in the USA) to file a patent application. The real question about whether the disclosure is a problem is whether it is an enabling disclosure (one that is sufficient for another to reproduce the invention). For example, if a specific nucleotide sequence was essential in a method to identify a particular type of cancer and the disclosure was based around the screening method and data (but excluded the particular probe sequence), this would not be a publication of the invention, as nobody could replicate the invention without knowledge of the nucleotide sequence. Thus, there are ways of publishing data on posters and in lectures that do not disclose the invention. One other point is that the grace period to file a patent application after disclosure of an invention is only available in very few countries (not at all in Europe and most of Asia). Therefore, if the invention is of high value and Europe and Asia are commercial targets for the invention, it is essential to have the poster or lecture screened by a tech-transfer office or patent attorney before disclosure, because the grace period in the USA (and Australia) will not save the patent elsewhere. Mr. Rockman is correct, good practice is to notify the relevant IP manager as soon as an invention is identified so that issues of public disclosure (whether by peer-reviewed publication, poster, or lecture) can be effectively managed and the invention can be protected appropriately.

Patent Agent — written by Neil Lupton

My understanding is that the standards for public disclosure against one’s own applications (poisoning one’s own well, as it were) may be more demanding than the standards against a third party’s application. One would certainly be expected to know about one’s own presentations and to know that the public had been present. In that context, it can be argued that one would have the obligation to disclose such a presentation under 37 CFR 1.56. The options suggested by Mr. Rockman are prudent. In contrast, one cannot reasonably be expected to know of a presentation made by another person which is not indexed and not searchable. It is difficult to see how an examiner would become aware of such a presentation made by a third party or how a court would consider it third-party prior art.

MPEP 2128.01 states (among other things) “Even if access to the library is restricted, a reference will constitute a “printed publication” as long as a presumption is raised that the portion of the public concerned with the art would know of the invention.” This is part of the reason for the statement that one’s presentation is more of a burden to one’s own application than to third parties.
VP for Research — written by David Felten, MD, PhD

Most poster presentations for major (or even small specialty) meetings are published in the form of "abstracts," even if only a small reproduction of the poster itself. I believe that the best test of public disclosure is whether a non-disclosure agreement was required for others to evaluate the data and results of the poster. If not, then it starts the clock ticking. If any attendee at the meeting, including faculty, students, vendors, and administrative help, can wander past the posters and take notes or even photographs of the poster, then it should be considered a public disclosure.

written by Observer

A standard practice in my lab is to attach a one-page document to a manuscript and submit a provisional. This is a relatively low-cost procedure. It gives one about 30 months to file a PCT so in the meantime one can generate more data and discuss in public if one wishes. I'm of the opinion that if you believe your work has sufficient potential commercial value worthy of patent protection, then best to file the provisional before any public presentations including posters, talks, etc. Delaying presentation by a few months in order to submit the provisional first is not that much of a sacrifice to make to let the rest of the community know about your work.

Former Department Chair — written by Dr. Fred

The real issue here is whether the inventor is an academic primarily interested in establishing or enhancing his or her record of achievement or whether the primary interest is ensuring the possible future commercial viability and patentability of the invention. If the former, then naturally there is a major interest in establishing priority and an early disclosure in a presentation together with an abstract is a desirable approach. If, on the other hand, patentability is important, then any disclosure is dangerous. There was a case several years ago where a member of the audience at a lecture took extensive notes that were widely circulated within his company. Even though the published abstract was only a limited disclosure, the accompanying lecture was more detailed and the note-taker got it all down. In the resulting litigation, the court held that the circulated notes represented a public disclosure. Global patent protection is crucial for commercial viability, and a prior public disclosure will make it impossible. Trying to ensure that a disclosure is non-enabling can also be a trap if a competitor argues that the disclosure plus other prior art results in enablement. Trying to protect the work by filing a provisional patent application can be effective, but one has to ensure that the provisional provides an antecedent basis for ALL of the claims of the future regular patent application. This may be difficult to do in an early stage of the research.
Professor — written by Pierre Mallia

Look at it this way: If you don’t want it to be valid for patent purpose, and therefore not to count as public disclosure, then someone may legitimately “copy” the results. In my humble opinion, even if one goes only for science, it is still public disclosure. In this case it was actually presented to the public.