

Alison Lakin, RN, LLB, LLM, PhD,
Paula Hoffman, PhD and
Marilyn Coors, PhD

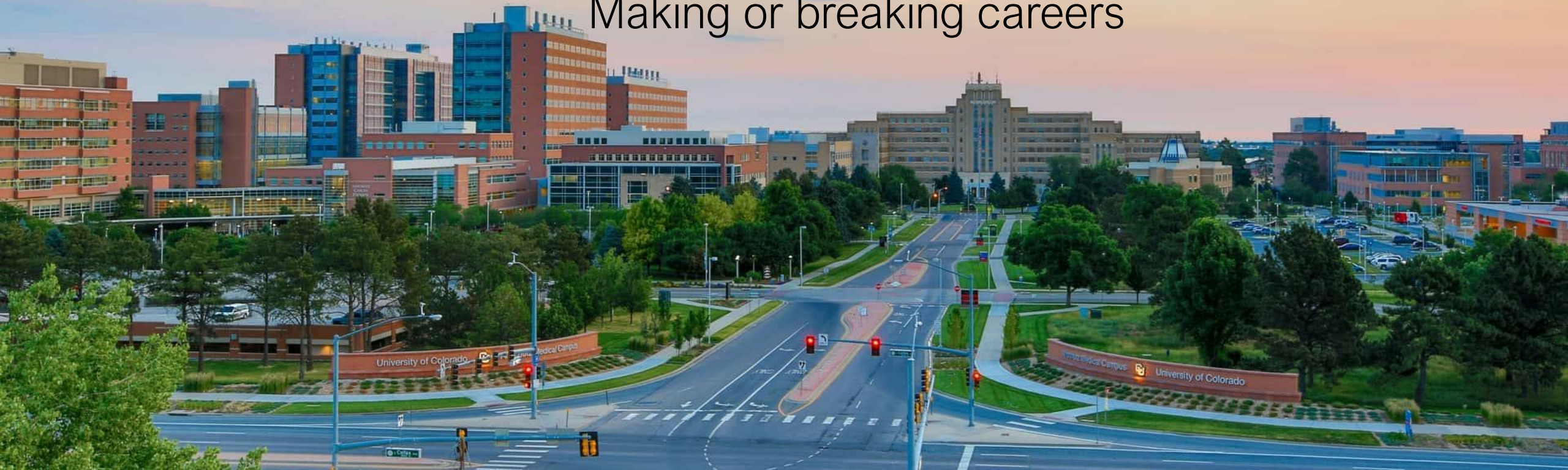


University of Colorado **Anschutz Medical Campus**

Responsible Conduct of Research

Authorship and Publication

Making or breaking careers



Housekeeping

Zoom Etiquette:

- Silence personal devices.
- Stay muted when not talking.
- Set up in a quiet location.
- Remain attentive. Avoid checking email/phone/web.
- Use the Chat function to ask questions or get technical help.
- Use your full name, not an alias.

Receiving credit for attendance:

- To satisfy the [NIH Requirement for Instruction in the Responsible Conduct of Research](#), the following are required in order to receive credit for attendance:
 - **Attend the full 90 minutes of the training.** Attending any 8 out of the 9 RCR seminars we offer will satisfy the NIH requirement.
 - **Keep your video camera on throughout the session.** NIH requirements for RCR training specify face-to-face discussion.
 - **Participate interactively throughout the session.** Participate in discussions, respond to polls, and sign the attendance sheet (link will be distributed in the Chat).

Poll: Who is the audience?

- 1. Select your primary university position or affiliation:
 - PI/Faculty
 - PRA/Researcher
 - Study Coordinator
 - Regulatory/Admin Support
 - Student/Trainee/Post-doc
 - Other
- 2. Are you primarily working on campus or remotely/from home?
 - On campus
 - Remotely

Why is authorship important?

- Indicates who conducted the research, who should get credit, and who is responsible.
- Contributes to prestige, grant funding and promotion and tenure.



How do you decide?

Authors are usually listed in their order of importance

What does that mean?

- Designation *first or last* author carries special weight
- Corresponding or Primary Author assumes responsibility for all aspects of a publication
- Senior authors “generally direct, oversee, and guarantee the authenticity of the work reported”.

McKneally M Put my name on that paper: reflections on the ethics of authorship. J Thorac Cardiovasc Surg 131: 517–519, 2006

What are the criteria for authorship?

1. Substantive Contribution:

- Conception and design
- Acquisition of data
- Analysis or interpretation of data



Writing Criteria (cont.):

1. Draft or critically revise manuscript
2. Provide final approval for published version
3. Agree to be accountable for certain or all aspects of the work.



*ICJME criteria requires all 4 conditions detailed above be met

- Criticized as vague and ambiguous, and not uniformly followed.
- NATURE: does not impose an order on list of authors, but encourages a statement of actual contribution.
- Academic Medicine: requires all authors to be familiar enough with the entire manuscript to take public responsibility.

*ICMJE – International Committee of Medical Journal Editors

What about these individuals?

How would you handle the following?

- Person who provided the funding
- Provided the space
- Provided technical assistance
- Provided administrative assistance
- Provided the data
- Statistician
- Acclaimed in the field



Author or Acknowledged?

- Made substantial contribution but did not meet the criteria for authorship
- Implies endorsement of data and conclusions

Multi-Collaborator Research and Authorship

- Translational Research
- Genome-wide association studies and other “omics” studies
- Biobanks

An integrated encyclopedia of DNA elements in the human genome.

ENCODE Project Consortium, Dunham I, Kundaje A, Aldred SF, Collins PJ, Davis CA, Doyle F, Epstein CB, Frietze S, Harrow J, Kaul R, Khatun J, Lajoie BR, Landt SG, Lee BK, Pauli F, Rosenbloom KR, Sabo P, Safi A, Sanyal A, Shores N, Simon JM, Song L, Trinklein ND, Altshuler RC, Birney E, Brown JB, Cheng C, Djebali S, Dong X, Dunham I, Ernst J, Furey TS, Gerstein M, Giardine B, Greven M, Hardison RC, Harris RS, Herrero J, Hoffman MM, Iyer S, Kellis M, Khatun J, Kheradpour P, Kundaje A, Lassman T, Li Q, Lin X, Marinov GK, Merkel A, Mortazavi A, Parker SC, Reddy TE, Rozowsky J, Schlesinger F, Thurman RE, Wang J, Ward LD, Whitfield TW, Wilder SP, Wu W, Xi HS, Yip KY, Zhuang J, Bernstein BE, Birney E, Dunham I, Green ED, Gunter C, Snyder M, Pazin MJ, Lowdon RF, Dillon LA, Adams LB, Kelly CJ, Zhang J, Wexler JR, Green ED, Good PJ, Feingold EA, Bernstein BE, Birney E, Crawford GE, Dekker J, Elinitzki L, Farnham PJ, Gerstein M, Giddings MC, Gingeras TR, Green ED, Guigó R, Hardison RC, Hubbard TJ, Kellis M, Kent WJ, Lieb JD, Margulies EH, Myers RM, Snyder M, Stamatoyannopoulos JA, Tennebaum SA, Weng Z, White KP, Wold B, Khatun J, Yu Y, Wrobel J, Risk BA, Gunawardena HP, Kuiper HC, Maier CW, Xie L, Chen X, Giddings MC, Bernstein BE, Epstein CB, Shores N, Ernst J, Kheradpour P, Mikkelsen TS, Gillespie S, Goren A, Ram O, Zhang X, Wang L, Issner R, Coyne MJ, Durham T, Ku M, Truong T, Ward LD, Altshuler RC, Eaton ML, Kellis M, Djebali S, Davis CA, Merkel A, Dobin A, Lassmann T, Mortazavi A, Tanzer A, Lagarde J, Lin W, Schlesinger F, Xue C, Marinov GK, Khatun J, Williams BA, Zaleski C, Rozowsky J, Röder M, Kokocinski F, Abdelhamid RF, Alioto T, Antoshechkin I, Baer MT, Batut P, Bell I, Bell K, Chakraborty S, Chen X, Chrast J, Curado J, Derrien T, Drenkow J, Dumais E, Dumais J, Duttagupta R, Fastuca M, Fejes-Toth K, Ferreira P, Foissac S, Fullwood MJ, Gao H, Gonzalez D, Gordon A, Gunawardena HP, Howald C, Jha S, Johnson R, Kapranov P, King B, Kingswood C, Li G, Luo OJ, Park E, Preall JB, Presaud K, Ribeca P, Risk BA, Robyr D, Ruan X, Sammeth M, Sandu KS, Schaeffer L, See LH, Shahab A, Skancke J, Suzuki AM, Takahashi H, Tilgner H, Trout D, Walters N, Wang H, Wrobel J, Yu Y, Hayashizaki Y, Harrow J, Gerstein M, Hubbard TJ, Reymond A, Antonarakis SE, Hannon GJ, Giddings MC, Ruan Y, Wold B, Carninci P, Guigó R, Gingeras TR, Rosenbloom KR, Sloan CA, Learned K, Malladi VS, Wong MC, Barber GP, Cline MS, Dreszer TR, Heitner SG, Karolchik D, Kent WJ, Kirkup VM, Meyer LR, Long JC, Maddren M, Raney BJ, Furey TS, Song L, Grasfeder LL, Giresi PG, Lee BK, Battenhouse A, Sheffield NC, Simon JM, Showers KA, Safi A, London D, Bhinge AA, Shestak C, Schaner MR, Kim SK, Zhang ZZ, Mieczkowski PA, Mieczkowska JO, Liu Z, McDaniell RM, Ni Y, Rashid NU, Kim MJ, Adar S, Zhang Z, Wang T, Winter D, Keefe D, Birney E, Iyer VR, Lieb JD, Crawford GE, Li G, Sandhu KS, Zheng M, Wang P, Luo OJ, Shahab A, Fullwood MJ, Ruan X, Ruan Y, Myers RM, Pauli F, Williams BA, Gertz J, Marinov GK, Reddy TE, Vielmetter J, Partridge EC, Trout D, Varley KE, Gasper C, Bansal A, Pepke S, Jain P, Amrhein H, Bowling KM, Anaya M, Cross MK, King B, Muratet MA, Antoshechkin I, Newberry KM, McCue K, Nesmith AS, Fisher-Aylor KI, Pusey B, DeSalvo G, Parker SL, Balasubramanian S, Davis NS, Meadows SK, Eggleston T, Gunter C, Newberry JS, Levy SE, Absher DM, Mortazavi A, Wong WH, Wold B, Blow MJ, Visel A, Pennachio LA, Elnitski L, Margulies EH, Parker SC, Petrykowska HM, Abyzov A, Aken B, Barrell D, Barson G, Berry A, Bignell A, Boychenko V, Bussotti G, Chrast J, Davidson C, Derrien T, Despacio-Reyes G, Diekhans M, Ezkurdia I, Frankish A, Gilbert J, Gonzalez JM, Griffiths E, Harte R, Hendrix DA, Howald C, Hunt T, Jungreis I, Kay M, Khurana E, Kokocinski F, Leng J, Lin MF, Loveland J, Lu Z, Manthavadi D, Mariotti M, Mudge J, Mukherjee G, Notredame C, Pei B, Rodriguez JM, Saunders G, Sboner A, Searle S, Sisu C, Snow C, Steward C, Tanzer A, Tapanan E, Tress ML, van Baren MJ, Walters N, Washieti S, Wilming L, Zadissa A, Zhengdong Z, Brent M, Haussler D, Kellis M, Valencia A, Gerstein M, Raymond A, Guigó R, Harrow J, Hubbard TJ, Landt SG, Frietze S, Abyzov A, Addleman N, Alexander N, Alexander RP, Auerbach RK, Balasubramanian S, Bettinger K, Bhardwaj N, Boyle AP, Cao AR, Cayting P, Charos A, Cheng Y, Cheng C, Eastman C, Euskirchen G, Fleming JD, Grubert F, Habegger L, Hariharan M, Harmanci A, Iyenger S, Jin VX, Karczewski KJ, Kasowski M, Lacroute P, Lam H, Larnar-Vincent N, Leng J, Lian J, Lindahl-Allen M, Min R, Miotto B, Monahan H, Moqtaderi Z, Mu XJ, O'Geen H, Ouyang Z, Patacsil D, Pei B, Raha D, Ramirez L, Reed B, Rozowsky J, Sboner A, Shi M, Sisu C, Slifer T, Witt H, Wu L, Xu X, Yan KK, Yang X, Yip KY, Zhang Z, Struhl K, Weissman SM, Gerstein M, Farnham PJ, Snyder M, Tennebaum SA, Penalva LO, Doyle F, Karmakar S, Landt SG, Bhavania RR, Choudhury A, Domanus M, Ma L, Moran J, Patacsil D, Slifer T, Victorsen A, Yang X, Snyder M, White KP, Auer T, Centarin L, Eichenlaub M, Gruhl F, Heerman S, Hoekendorf B, Inoue D, Kellner T, Kirchmaier S, Mueller C, Reinhardt R, Schertel L, Schneider S, Sinn R, Wittbrodt B, Wittbrodt J, Weng Z, Whitfield TW, Wang J, Collins PJ, Aldred SF, Trinklein ND, Partridge EC, Myers RM, Dekker J, Jain G, Lajoie BR, Sanyal A, Balasundaram G, Bates DL, Byron R, Canfield TK, Diegel MJ, Dunn D, Ebersol AK, Ebersol AK, Frum T, Garg K, Gist E, Hansen RS, Boatman L, Haugen E, Humbert R, Jain G, Johnson AK, Johnson EM, Kutayvin TM, Lajoie BR, Lee K, Lotakis D, Maurano MT, Neph SJ, Neri FV, Nguyen ED, Qu H, Reynolds AP, Roach V, Rynes E, Sabo P, Sanchez ME, Sandstrom RS, Sanyal A, Shafer AO, Stergachis AB, Thomas S, Thurman RE, Vernot B, Vierstra J, Vong S, Wang H, Weaver MA, Yan Y, Zhang M, Akey JA, Bender M, Dorschner MO, Groudine M, MacCoss MJ, Navas P, Stamatoyannopoulos G, Kaul R, Dekker J, Stamatoyannopoulos JA, Dunham I, Beal K, Brazma A, Flicek P, Herrero J, Johnson N, Keefe D, Lukk M, Luscombe NM, Sobral D, Vaquerizas JM, Wilder SP, Batzoglou S, Sidow A, Hussami N, Kyriazopoulou-Panagiotopoulou S, Libbrecht MW, Schaub MA, Kundaje A, Hardison RC, Miller W, Giardine B, Harris RS, Wu W, Bickel PJ, Banfai B, Boley NP, Brown JB, Huang H, Li Q, Li JJ, Noble WS, Bilmes JA, Buske OJ, Hoffman MM, Sahu AO, Kharchenko PV, Park PJ, Baker D, Taylor J, Weng Z, Iyer S, Dong X, Greven M, Lin X, Wang J, Xi HS, Zhuang J, Gerstein M, Alexander RP, Balasubramanian S, Cheng C, Harmanci A, Lochovsky L, Min R, Mu XJ, Rozowsky J, Yan KK, Yip KY, Birney E.

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PMID: 22955616 [PubMed - indexed for MEDLINE]





“You should spend the next week typing down names of all co-authors on your paper.”



What do you do if you disagree?

- Try to negotiate with PI and/or collaborators
- Write out contribution and have the PI affirm
- Discuss with faculty advisor / mentor
- Refer the issue to the authorship dispute committee at ResearchEthics@ucdenver.edu More information at: <https://cctsi.cuanschutz.edu/resources/ethics>

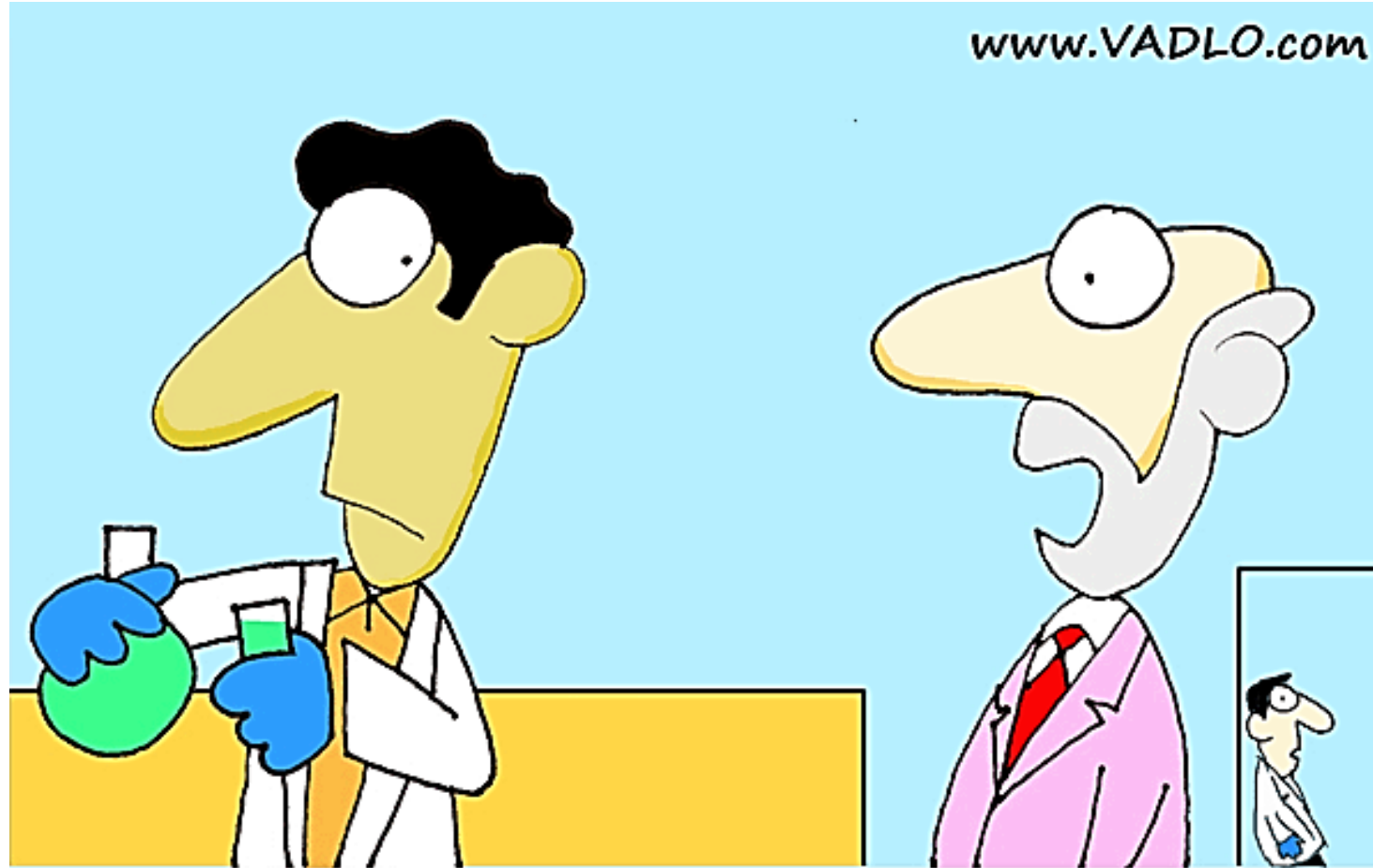
How to avoid disputes

1. Do not be lured into just any collaboration
2. Decide at the beginning who will work on what tasks
3. Stick to your tasks
4. Be open and honest
5. Feel respect, get respect

Vicens Q, Bourne PE. Ten simple rules for a successful collaboration. PLoS Comput Biol 3: e44, 2007.



6. Communicate, communicate and communicate
7. Protect yourself from a collaboration that turns sour
8. Always acknowledge and cite your collaborators
9. Seek advice from experienced scientists
10. If your collaboration satisfies you, keep it going



“No, it’s my wife’s turn to be the first author
on **your** paper.”

**Sign the Attendance Sheet now by
clicking the link in the Chat.**

Case 1: The postdoc

Bob Powell, a postdoctoral fellow in biochemistry, has just completed a manuscript detailing the results from the first project in which he has taken a leading role. The focus of his project has been to discern the ways in which humans metabolize sulfites, a class of chemicals commonly used to preserve wines and dried fruits. Although he had developed the rough outlines of the project on his own, he owes much to individuals both inside and outside his lab. The assistance he received from others includes the following:

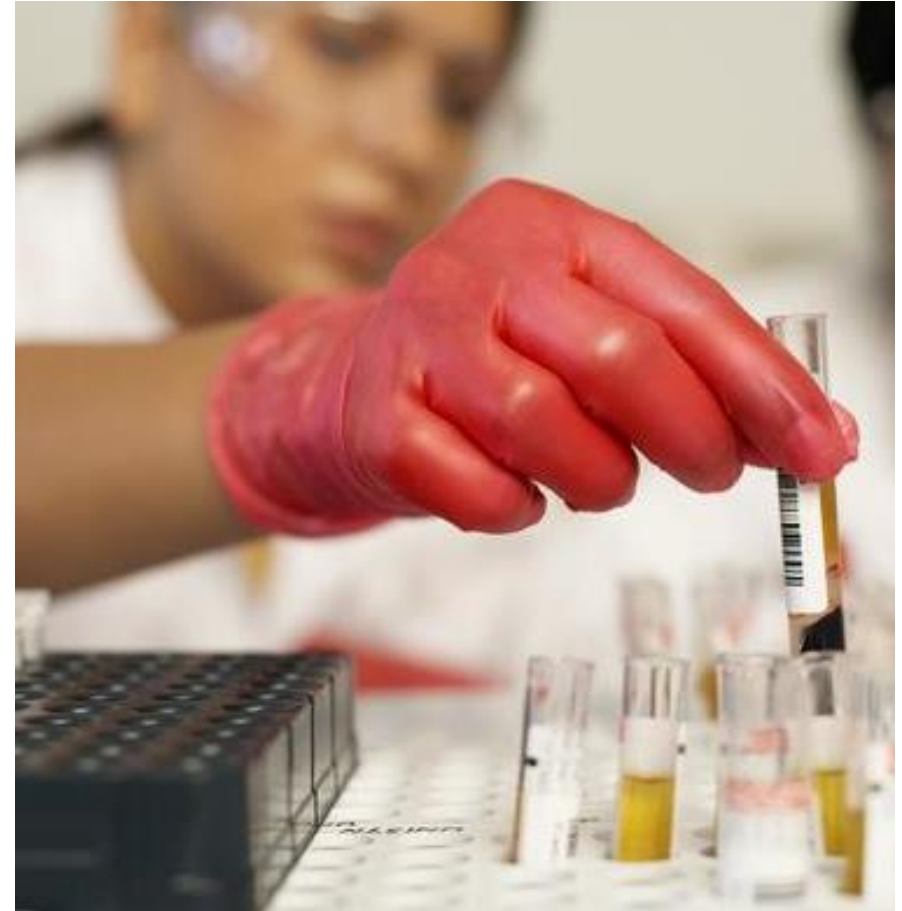
A colleague at another university, a toxicologist specializing in food additives, shared with Bob his previous work on the in vivo activity of sulfites, information that allowed Bob to choose the ideal animal model for the experiment--the Abyssinian field mouse.



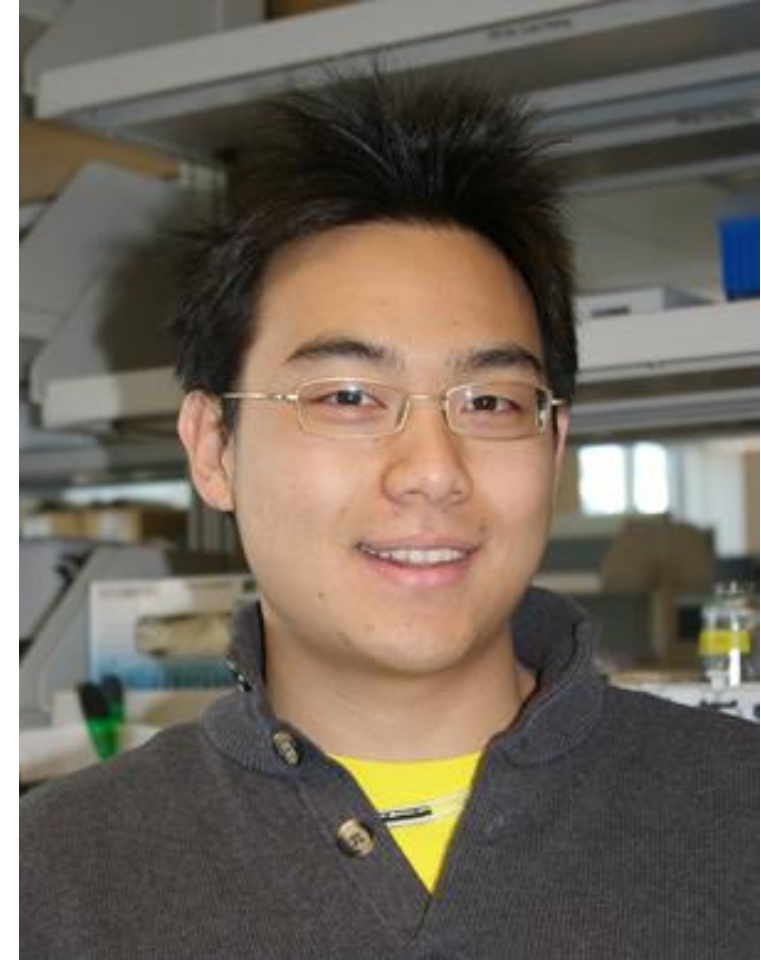
A friend of his, who happened to be a wildlife specialist, provided Bob with much advice on rearing and maintaining a colony of Abyssinian field mice such that he would have a stable pool of animal subjects.



A highly experienced technician in the lab gave Bob advice on modifying an assay he had been using, which finally allowed him to successfully measure sulfite metabolites in mouse urine. This technician also assisted in writing up the methods section of the paper.



The number of assays that Bob had to conduct was quite sizable and more than he could manage on his own, given other demands of the project. Thus, an undergraduate college student collected most of the urine samples and conducted the assays yielding the data.



Finally, a senior researcher in a neighboring lab who took an interest in Bob's career offered to review the initial drafts of Bob's paper. By the end of the writing process, this researcher had helped Bob outline the paper, suggested a few additional experiments that strengthened the paper's conclusions, and made a number of editing changes in the penultimate draft that enhanced the paper's clarity.



Case 2: Professor on Sabbatical

Dr. Jonathan Perry, a tenured professor, used his sabbatical to visit the laboratory of Dr. Brian Chandler, a widely published and respected senior scientist. During his stay in Dr. Chandler's lab, Dr. Perry hoped to learn certain techniques of molecular biology that he would employ in his own research. To afford Dr. Perry this opportunity, Dr. Chandler assigned him a leading role in a new project that the lab was undertaking. After seven months, laboratory work on the project was completed, and Dr. Perry returned to his own institution to begin work on a paper to report the final results. Ultimately, many drafts of the paper were sent back and forth between laboratories until Dr. Perry received the penultimate version from Dr. Chandler's lab. On this version, a new name, J. B. Martin, Ph.D., appeared among the authors listed. Dr. Perry had never met Dr. Martin, never worked with him on any technical aspect of the project, and had never heard his name or ideas mentioned in the laboratory meetings in which the project was planned or the results discussed.

Dr. Perry called Dr. Chandler and questioned the addition of Dr. Martin as an author on the manuscript. Dr. Chandler stated that, due to prior collaborations, it was a longstanding policy to include Dr. Martin on all publications coming out of Dr. Chandler's laboratory. Dr. Martin's laboratory had a reciprocal agreement, he added. Dr. Perry stated that he did not feel that Dr. Martin was a qualified author on this particular paper since he had not made a significant contribution to the work being published. Dr. Chandler replied that Dr. Perry did not have the right to question the policy of a laboratory in which he had worked as an invited guest. Dr. Perry maintained his position that Dr. Martin did not belong as an author on the paper and further stated that if Dr. Chandler insisted on including Dr. Martin's name, then, as first author, Dr. Perry would not allow the paper to be submitted. Dr. Chandler responded, "Well, you can withdraw your name, but the work was done here in my laboratory and we plan to submit the paper for publication."

Plagiarism Defined

- Plagiarism is the appropriation of another person's ideas, processes, results, or words without giving appropriate credit.

Technology to Reduce Plagiarism



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BY LEO FORBES

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PAGE: 1 OF 2

A Natural Setting
A History of Exploration and Settlement in Yosemite Valley

Yosemite National Park is a United States National Park spanning eastern portions of Tuolumne, Mariposa and Madera counties in east central California, United States. Although not the first designated national park, Yosemite was central to the development of the national park idea since its first discovery by non-indigenous people in mid-nineteenth century. Yosemite Valley has held a special, even religious, hold on the American conscience because its beauty makes it an incomparable valley and one of the grandest of all special temples of Nature.

While Yosemite holds a special grip on the western mind, perceptions about its Valley have evolved over time due to changing politics migration




Plagiarism in grant proposals

A full professor asked a colleague for a copy of a proposal that had received federal funds. The colleague, thinking the request was for informational purposes only, provided a copy. The borrower then lifted sections verbatim, put them in a new proposal.

Is this a problem?

Detection

- Plagiarism-detection software
-  Google™
- Keen memory of scientists

Self-plagiarism

The researcher is obliged to cite his published work, whether paraphrased or taken whole. Self-plagiarism is defined as reusing one's own work that has been submitted previously as an assessed item for another publication.

Self-plagiarism is more than recycling one's work. It can be perceived as an attempt to deceive editors, reviewers, and readers, "This happens when no indication is given that the work is being recycled or when an effort is made to disguise the original text." While some may argue that it is not possible to steal from one's own work, others feel that only original written material does not have to be cited.

(Hexam, I. (2005). Academic Plagiarism Defined. Retrieved on July 17, 2006, <http://www.ucalgary.ca/~hexham/study/plag.html>.)

Questions?





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THANK YOU