

Science . . . Who Is Driving and Where Are We Going?

Chair:

Richard K Koehn
University of Utah
Salt Lake City, Utah

Panelists:

Jeffrey Botkin
University of Utah
Salt Lake City, Utah

Mark Skolnick
Myriad Genetics, Inc
Salt Lake City, Utah

Steve Jacobsen
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Salt Lake City, Utah

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Texas A&M University
College Station, Texas

Multitudes of people worldwide make science their business, yet most of these people will never meet each other or know of each other's work. It is probably safe to assume, however, that all scientists—from laboratory technicians to laboratory directors—have an interest in where science as a whole will head in the future. What that future will be and how we get there was the focus of this session.

A common theme was that science is driven not by a who but rather by a what—funding. Richard K Koehn, vice president for research at the University of Utah and chair of the session, pointed out 2 distinct ways in which funding has begun to shape how research institutions and its members approach questions. The first is corporate

involvement in university research. “The fraction of research that has been supported by nonpublic funds . . . has been growing ever so slightly over the last 10 to 20 years”, Koehn said. “Second, the federal government impacts the direction of science by virtue of the funding mechanisms available”, he said.

Steve Jacobsen, chief executive officer of Sarcos, Inc in Salt Lake City, followed by emphasizing how important funding is to the process of science. “Even though you may consider yourself fairly pure, you have to go get the resources to do the fundamen-

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tal things you like to do”, Jacobsen said.

An issue that already has begun to surface is how scientists will address confidentiality of patients in publishing data. Koehn described it as the conflict between the need to keep personal medical information private and the need for researchers to have access to this kind of research.

Jeffrey Botkin, associate professor of pediatrics and biomedical ethics at the University of Utah, said that such issues as tissue banking and publication of sensitive material present dilemmas for researchers who must attempt to maintain confidentiality. Tissue banks are an important resource for genetics researchers, but confidentiality laws regulating access to genetic material are under nearly continuous review. “Likewise, the publication of pedigrees can reveal potentially identifying information into scientific journals”, Botkin said. Consent for

publication of this sort of material continues to be an issue.

Such problems present interesting questions for the future. But as more groups work together to answer these questions, collaborative efforts become increasingly important. Collaborations will increase in frequency and efficiency in the future, Botkin said. “We’re going to see an increasing number of individuals from a variety of different disciplines who are going to focus their interests and areas of expertise on the scientific process, including the scientific communication process”, he said. Jacobsen emphasized that collaborations will be integral to advancing science. “How people work together to do things involves a lot of characteristics that can’t all be stored in one person’s head”, he said.

Mark Skolnick, executive vice president of Myriad Genetics, Inc in Salt Lake City, said that the scientific communication process will be important to the future of science. “We have to communicate to each other as scientists, communicate to each other as physicians, and . . . communicate to the lay public”, he said. Skolnick also listed technology, media, patents, prestige, and public opinion as drivers of the scientific process.

Ultimately, however, science itself will probably determine future directions and the role of technology impacts the direction science takes, Koehn said. “A question arises, we focus on the question, scientific research is mobilized, and the effective discovery is a dominant force. Science opens up questions for investigations for which there previously were no avenues.”

