

The inside track from academia and industry

Talents and technologies

Scientists need to concentrate on ways to capitalize on their intellectual property.



Michael Alvarez

Few would argue with the idea that the fundamental role of universities is education; since 1088, the University of Bologna in Italy (the oldest such institution) has been in the business of educating students and awarding degrees. But in today's world the role of universities has expanded, and their relationship to global labour and industrial markets is more immediate and direct.

In some cases, companies search universities far and wide for specific technologies, whereas in others they are interested in acquiring the skills of well-trained scientists through employment — grabbing the goose, not the golden egg. As demand for these valuable commodities has increased, offices have evolved that support the licensing of technologies and the career development of talented scientists.

Technology-transfer offices are common at research universities worldwide, but faculty and trainee knowledge of their location, function, scope and scale sometimes lags behind. This is unfortunate, because these offices can introduce scientists to opportunities for collaboration and alternative career pathways.

Even scientists without plans to patent and commercialize their research or collaborate with companies can benefit from exposure to such offices.

Although many scientists may work with industrial interdependencies in mind, a deeper understanding of both the academic and industrial sides of these relationships can highlight the value of supporting such interactions.

These may not be beneficial to a particular research project, but such visibility can help faculty members provide effective

guidance for their trainees.

For instance, how does a researcher know whether or at what stage a particular discovery satisfies the criteria for being both patentable and patent worthy? And, if a given university has decided those conditions have not been met, what other options are available to the scientist who wants to patent or commercialize a process or product based on their technology? The field of intellectual-property (IP) management is complex, and researchers should consult experts, sooner rather than later, to help determine the best options for a given innovation or discovery.

First, it is important to know when, how and in what instances technology-licensing offices should be consulted before the need arises. This prepares scientists to recognize circumstances that might warrant the use of such offices. Early consultation also affords familiarity with the commercialization process, which can help generate ideas and approaches to science, and perhaps applications that a researcher might not have considered.

In addition, awareness of how tech-transfer offices work can lead to greater understanding of where and how scientists are employed in the exchange and transfer of technologies, and can provide more clarity about the vague idea of 'going into industry'. This knowledge may be useful to young scientists exploring career options, a great way to gain exposure in various positions both in academia and in companies and government agencies that actively license university-based technologies.

Many scientists may think that professional careers in IP are limited to attorneys, or that they need formal legal training to contribute in this arena. In fact, these domains are open to professionals from diverse

scientific, technical and business backgrounds, and are not limited to law firms or tech-transfer offices.

In technology-based corporations, many departments, such as R&D, marketing, legal and finance, work together to develop, manage, research, evaluate, acquire, protect and license technologies or other forms of IP. Success depends on these activities, and there are many rewarding roles for

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scientists across this spectrum.

As for career centres, they have long existed in most US universities, serving both undergraduates and alumni. For graduate researchers, however, such facilities are fairly new, perhaps because the belief has been that these trainees would follow in the footsteps of their advisers and take up faculty positions, perhaps without fully understanding the alternatives available to them.

Combining career education with research or clinical training ensures that both the graduate and postdoctoral experiences are technically sound, and that trainee scientists understand their full range of career options. Having knowledge of where and how both technologies and talents are being used leads to a greater sense of the potential of each. And as our understanding of tech-transfer offices and career centres expands, so too does our ability to derive returns on our investments in research and training. ■

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