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Innovation to Impact: How Universities Launch Ideas Out of the Lab and Into the World

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The Adventures in Learning Science Pub concluded its fall season on December 3, 2024, in Galligan's Pub, with a presentation about how innovations and inventions developed in the university setting are transferred into real-world applications. Kim Rosenfield, J.D., Director of Tech Transfer at Dartmouth's Office of Entrepreneurship & Tech Transfer, led the discussion.

In most colleges and research universities, the launch of ideas from the lab into the world is done with the help of a technology transfer office (TTO). The TTO acts as a facilitator assisting in the hoped-for licensing, productizing, or commercializing of promising ideas, including pharmaceutical discoveries or engineered product improvements, often protected by a patent.

TTO staff help researchers, faculty, students, and others find suitable investors or partners, help plan and develop agreements among the parties to protect the know-how, and ensure that the financial agreements are well understood and in place. The TTO also helps sort out ownership rights, including associated patents and the allocation of future profits.

Dr. Rosenfield shared stories about successful technology launches her office has helped facilitate. For example, a Dartmouth faculty member and a graduate student discovered or identified bio-medical solutions in their SARS virus research that enabled a successful COVID-19 vaccine. With the help of the TTO, this discovery paved the way for vaccine manufacturer Moderna to be at the forefront of the first widely available vaccines that helped reduce the mortality rates of the COVID-19 pandemic. The Dartmouth team's work brought significant financial rewards to all parties. Perhaps more importantly, this type of work yields a social and medical benefit that ranks in the highest of all echelons of achievement!

Dr. Rosenfield described nuances in patent rights and timing, copyright protection, and trade secrets. She explained that the framers of the U.S. Constitution recognized the importance of protecting inventors. For example, Article 1 allows Congress the power to grant patents and copyrights to promote science and the arts." While U.S. legislation protects entities in the U.S., and U.S. and European countries abide by mutual treaty agreements, other countries may violate or ignore the spirit of patents.

Faculty and researchers often need to be better versed in laws, partnerships, funding, and the many facets of business relationships. The Technology Transfer Office provides invaluable resources that allow the promotion of ideas while protecting the parties from unwelcome consequences.

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