

**ASPIRE 2017 Schedule Syllabus and Speaker Bios**

**Course Directors:**

Michael Villalobos, PhD, Manager, Biotech Licensing, Vanderbilt Center for Technology Transfer and Commercialization

Tom Utley, PhD, Licensing Officer Vanderbilt Center for Technology Transfer and Commercialization

**Course Description:** Commercialization of basic and applied research has become an increasingly important element of the mission of most US universities and academic medical centers. Commercialization of academic innovations enables the flow of resources to develop new and improved products for public benefit, contributes to local economic growth and creates new high value employment opportunities. The need for scientists to understand the fundamentals of technology protection and commercialization to be competitive for Government, foundation and industry funding is rapidly growing, and is a necessity for entrepreneurial researchers interested in working with technology-based new ventures. For those scientists looking for alternative careers to academia, this course will provide a foundational understanding of commercializing early stage technologies.

- I. Societal impact of technology commercialization
- II. Federal statutes covering ownership and commercialization of university inventions
- III. Intellectual property fundamentals
- IV. The academic technology commercialization process
- V. Translational research and early stage product development
- VI. Entrepreneurship and technology-based new venture creation
- VII. Sources of funding available to academic researchers and entrepreneurs

**Learning Objectives:** At the conclusion of the class, students will be able to differentiate between ideas and inventions, and will be able to apply basic assessment principles to determine commercial feasibility of new innovations. Students will also be familiar with basic corporate and transactional documents, such as balance sheets, cap tables, term sheets and licensing agreements. Students will also be able to identify sources of early stage technology development and be armed with the means to pursue non-traditional funding sources.

This module will be broken down into 2 sections:

Section A: Technology Transfer, September 26-October 17

Section B: Entrepreneurship, October 17-November 17

Registration can be for Section A, Section B, or for both Sections for a combined 7 sessions.

**Schedule:**

Section A 9/26/2017	Evolution and Impact of Technology Commercialization – Mike Villalobos <ul style="list-style-type: none"> <li>· History of the technology transfer</li> <li>· The evolution of the laws that shape the industry</li> <li>· Technology transfer as an economic engine</li> <li>· Societal impact of academic inventions</li> </ul>
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Section A 10/03/2017	An Intellectual Property Primer – Tom Utley <ul style="list-style-type: none"> <li>· Types of intellectual property</li> <li>· Patent process</li> <li>· Ownership of IP</li> </ul>
Section A 10/10/2017	Intellectual Property 2.0 – Tom Utley <ul style="list-style-type: none"> <li>· Patent prosecution timeline and costs</li> <li>· US vs Foreign</li> <li>· Case studies for business strategy</li> </ul>
Section A&B 10/17/2017	Technology Commercialization 101 – Jody Hankins <ul style="list-style-type: none"> <li>· Academic commercialization strategies</li> <li>· Role of translation research</li> <li>· Early-stage product development</li> </ul>
Section B 10/24/2017	Funding a startup company – Kelley Dantoulis <ul style="list-style-type: none"> <li>· Methods for funding a startup company</li> <li>· Differences in sources of funding</li> </ul>
Section B 10/31/2017	Start-up company considerations – Mark Harris <ul style="list-style-type: none"> <li>· What it’s like to start a company</li> <li>· How your role and responsibilities change as your company grows</li> <li>· What traits and abilities are necessary to be a successful entrepreneur</li> </ul>
Section B 11/07/2017	FDA considerations – Axel Strombergsson <ul style="list-style-type: none"> <li>· Introduction the FDA structure and what it regulates</li> <li>· Basics for device, apps, diagnostics and therapeutics</li> </ul>

**Presenter Bios:**

Mike Villalobos, PhD

Michael is the manager of biotech licensing within the CTTC and is responsible for commercializing life science technologies. Prior to joining CTTC, Mike managed the commercialization of pharmaceutical, biotechnology, diagnostic assay and medical device technologies for The Cleveland Clinic and prior to that for Purdue University. Prior to his career in licensing, he was a Senior Process Scientist at Abbott Laboratories where he oversaw the manufacturing of diagnostic assays for human blood borne pathogens.

Michael has a background in the life sciences, which includes a bachelor’s degree in Microbiology from the University of Illinois - Urbana and a Ph.D. in Molecular Biology from Loyola University Chicago. He is a member of the Association of University Technology Managers and the Licensing Executives Society.

Tom Utley, PhD

Tom is a life sciences licensing officer within the CTTC where he has an active role in managing technologies from the time of disclosure throughout their life and have front-line responsibility for drafting and negotiating a variety of agreements. Tom is also the faculty advisor for the Life Science Tennessee Academic Alliance. Prior to joining CTTC, Tom was a post-doctoral fellow at Vanderbilt University in Jeff Conn’s Laboratory within the Center for Neuroscience Drug Discovery where he performed in vitro compound characterization as well as high-throughput screens for GPCRs.

Tom has a diverse background in life sciences, which include a bachelor’s degree in Biochemistry from the University of Illinois at Urbana-Champaign, and a Ph.D. from Vanderbilt University in Microbiology

and Immunology. He is a member of the Association of University Technology Managers, and a registered US patent agent.

#### Jody Hankins, PhD, MBA

Jody is a life sciences licensing officer within the CTTC and is responsible for evaluating the patentability and market potential of life science technologies. Prior to joining CTTC, Jody was an intern at the Office of Technology Development at the Penn State College of Medicine. Jody has experience across the spectrum of translational medicine, which includes work in an academic research laboratory, a contract research organization, a pharmacy, and direct patient care.

Jody received a B.S. in Biochemistry from West Chester University, an MBA from Penn State University, and a Ph.D. from the Department of Pharmacology at the Penn State College of Medicine in Hershey, PA. Jody is a member of the Association for Women in Science (AWIS), and served on the executive board of the Capital Area Beekeepers' Association in Harrisburg, PA.

#### Kelley Dantoulis, CVA

Kelley Dantoulis joined CTTC on March 1 as the Manager, New Ventures. In that capacity, she supports entrepreneurship and new venture activity with respect to Vanderbilt technologies. Prior to joining CTTC, Kelley worked with Silicon Valley Bank's Venture Lending Group in Atlanta providing growth capital to early stage companies funded by top-tier VC's. She has been active in the innovation ecosystem mentoring startup companies on investor readiness, business plans and operational efficiency. Kelley is a senior banker and a certified valuation analyst.

#### Mark Harris, PhD, MBA

Mark founded NextGxDx in 2010 to bring efficiency to the genetic testing market. He has over 15 years of experience in molecular biology, technology commercialization, and executive leadership. Today, as Chief Innovation Officer, Mark leads a dynamic team of software engineers, data scientists and clinicians to advance the company's product suite and outline its roadmap for the future.

Deeply involved in the entrepreneurial ecosystem, Mark has been a mentor for several accelerator programs and an advisor for startup companies and investment groups. He frequently speaks at healthcare, genetics, and technology industry events.

In 2010, before founding NextGxDx, Mark worked for Athena Diagnostics, leading a team that designed one of the first implementations of a Next Generation Sequencing platform for a commercial lab. He earned his PhD in Cancer Biology and a Master of Business Administration from Vanderbilt University.