

ASPIRE 2018 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 and introduce you to many individuals in the local area who have made the transition from science to an alternative career and their experience.

- 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: This course has been split into two modules to allow flexibility if students are more interested in only a subset of topics. However, at the conclusion of the full course, 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. *Additionally, each speaker will describe their background, their career path as well as what individual characteristics they believe make someone successful in their field.*

Module A – Intellectual property focus

Schedule:

<p>9/25/2018 4:00-5:00pm Light Hall 439</p>	<p>Evolution and Impact of Technology Commercialization – Mike Villalobos</p> <ul style="list-style-type: none"> · History of the technology transfer · The evolution of the laws that shape the industry · Technology transfer as an economic engine · Societal impact of academic inventions
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10/02/2018 4:00-5:00pm Light Hall 439	An Intellectual Property Primer – Tom Utley <ul style="list-style-type: none"> · Types of intellectual property · Patent process · Ownership of IP
10/09/2018 4:00-5:00pm Light Hall 439	Intellectual Property 2.0 – TBD <ul style="list-style-type: none"> · Patent prosecution timeline and costs · US vs Foreign · Case studies for business strategy
10/16/2018 4:00-5:00pm Light Hall 439	Technology Commercialization 101 – Jody Hankins <ul style="list-style-type: none"> · Academic commercialization strategies · Role of translation research · Early-stage product development

Module B – Startup company focus

Schedule:

10/16/2018 4:00-5:00pm Light Hall 439	Technology Commercialization 101 – Jody Hankins <ul style="list-style-type: none"> · Academic commercialization strategies · Role of translation research · Early-stage product development
10/23/2018 4:00-5:00pm Light Hall 439	Funding a startup company – Kelley Dantoulis <ul style="list-style-type: none"> · Methods for funding a startup company · Differences in sources of funding
10/30/2018 4:00-5:00pm Light Hall 439	Start-up company considerations – TBD <ul style="list-style-type: none"> · What it's like to start a company · How your role and responsibilities change as your company grows · What traits and abilities are necessary to be a successful entrepreneur
11/06/2018 4:00-5:00pm Light Hall 439	FDA considerations – Ken Holroyd <ul style="list-style-type: none"> · Introduction the FDA structure and what it regulates · Basics for device, apps, diagnostics and therapeutics

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, a registered US patent agent, and a Certified Licensing Professional (CLP).

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, 2016 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 eco-system mentoring startup companies on investor readiness, business plans and operational efficiency. Kelley is a senior banker and a certified valuation analyst.

Ken Holroyd

Kenneth J. Holroyd, M.D., MBA is Medical Director for the Center for Technology Transfer and Commercialization, and also holds appointments as Assistant Vice Chancellor for Research, and Associate Professor of Anesthesiology and Medicine. Joining Vanderbilt University in 2005, Ken is on the Board of Directors of Cumberland Emerging Technologies, the Tennessee Technology Development Corporation, Informatics Corporation of America (ICA), Acutech, digiChart, and Friends in Global Health. He is past Co-Chair of the Public-Private Partnership Committee of the National Institutes of Health's Clinical and Translational Science Award (CTSA) Program. At Vanderbilt his clinical practice of medicine is in Anesthesiology. Ken was in the biopharmaceutical industry for seven years, at Magainin Pharmaceuticals and Genaera Corporation, where he was Executive Vice President and Chief Operating Officer. Previously he was a faculty member at the University of Pennsylvania and at Johns Hopkins University, where his research interests included the genetics and molecular biology of asthma. Ken received his residency training in internal medicine and in anesthesiology at Johns Hopkins Hospital and

University, and in pulmonary medicine at the National Institutes of Health. Johns Hopkins University awarded him the M.D. degree in 1984.