

Biomedical Innovation & Commercialization course

FEBRUARY 18th – 20th

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A workshop covering drug development in academia with the purpose of linking COH research and innovation with commercialization

BIOMEDICAL INNOVATION & COMMERCIALIZATION (BIC) COURSE

February 11, 2021

4:00 pm to 4:30 pm

Course Overview, Information Material

February 18, 2021

10:00 am to 10:30 am

Introduction and Morning Session Overview

Dr. Ildiko Csiki and Dr. Steven Casper

Dr. Ildiko Csiki, Chief Commercial R&D Officer. In her role at COH, Dr Csiki is leading the R&D Hybrid strategic initiative and overseeing the RBD and OTL functions. She is an oncologist and industry executive with 20+ years in various executive leadership roles including C-level across academia (U Penn), large pharma (Merck, GSK) and small biotech (Inovio, Sensei Bio) leading large cross-functional drug development teams from pre-clinical through Phase III.

10:30 am to 12:00 pm

Biotechnology case study: Sirtris Pharmaceuticals

We will discuss the early development of a well-known and controversial start-up company focused on commercializing scientific discoveries involving the sirtuins. Topics include the process of commercializing science, how early stage bioscience companies link early technical milestones to venture capital funding, market assessment concepts, and alliances between early stage biotechnology firms and large pharmaceutical companies.

Dr. Steve Casper

Henry E. Riggs Professor of Management and former Dean of the Riggs School of Applied Life Sciences at KGI. Dr. Casper conducts research and teaches courses in the areas of biomedical commercialization, the biotechnology industry, and international business. He has published numerous articles and a book on the biotechnology industry and was a Fulbright Research Scholar to Canada.

12:00 pm to 1:00 pm

Lunch Break

1:00 pm to 2:00 pm

Working Group (Part 1)

Faculty participants will work in small groups to develop ideas on how their research might become commercialized. At the end of the course, one representative from each group will present a commercialization opportunity analysis to members of the Commercialization Advisory Panel for discussion.

2:00 pm to 2:30 pm	<p>Designing Research to Attract Partners</p> <p>Dr. John Williams</p> <p><i>Professor in the Department of Molecular Medicine. Dr. Williams was the Co-Founder and Scientific Advisor of Xilio (Akriveia) Therapeutics, Inc. and of Meditope Biosciences, Inc. He is also the Co-Director of Drug Discovery and the Director of the X-ray Crystallography Core at COH.</i></p>
2:30 pm to 3:00 pm	<p>Industry and Academia Partnerships</p> <p>Walter David</p> <p><i>Director of Research Business Development at COH. Walter David came to COH after working as Director for Vertex Pharmaceuticals and Sr. Manager for the pipeline strategy and portfolio management team at Amgen. He specializes in business development, strategic marketing, portfolio/compound strategy development, portfolio prioritization, translating competitive insights into implications for R&D, and influencing/aligning stakeholders.</i></p>
3:00 pm to 3:15 pm	<p>Coffee Break</p>
3:15 pm to 3:45 pm	<p>Short Overview on the COH Drug Development Model: IDDV</p> <p>Dr. Christoph Pittius</p> <p><i>Senior Vice President, Research Business Development. Prior to coming to COH, Dr. Pittius served as VP and Head of Transactions, Business Development, Global Product and Portfolio Strategy at AstraZeneca and as Executive Director, Business Development and Licensing at Novartis Oncology and at Boehringer Ingelheim. Dr. Pittius leads the partnering and licensing activities with Pharma and Biotech at COH as well as our integrated Drug Development Venture (IDDV).</i></p>
3:45 pm to 5:15 pm	<p>Industry and Academia Scientific Panel Discussion</p> <p><i>How to make academic innovation attractive to potential commercial licensees such as startups, existing biotech and pharma companies</i></p> <p>Moderator: Dr. Sunil Sharma (Deputy Director Clinical Science, T-Gen)</p> <p>Members: Dr. Larry Couture (CEO and entrepreneur, multiple companies), Dr. Nikki Lin (Director of Entrepreneurship and Commercialization, UCLA Magnify Incubator), Dr Leonard Rome (Distinguished Professor of Biological Chemistry & Associate Director of the California NanoSystem Institute), Dr. Alan Horsager (Entrepreneur and Director of LA BioSpace). Dr David Bearss (Director U2TAH Therapeutic Accelerator, Utah). Dr. David Whelan (Chief Executive Officer, Bioscience LA).</p>

10:00 am to 10:30 am

Introduction to business models

Topics include value chains, bioscience business models, and strategies companies use to capture value from innovations.

Dr. Steve Casper

10:30 am to 12:00 pm

Biotechnology case study: Abgenix

We will explore business model and partnership choices facing an early stage company commercializing monoclonal antibody technology. The session will include a breakout group focused on evaluating partnering opportunities using qualitative and quantitative criteria.

Dr. Steve Casper

12:00 pm to 1:00 pm

Lunch Break

1:00 pm to 2:45 pm

Introduction to Intellectual Property (CRISPR-Cas 9 case study)

The session will introduce key concepts relating to intellectual property, drawing upon a case study exploring how faculty and universities have developed strategies to commercialize gene editing technology.

Dr. Joel West

Professor of Innovation and Entrepreneurship at KGI. An internationally known and NSF-funded researcher on innovation management, Dr. West teaches business courses in business strategy, innovation management, and intellectual property at KGI. Dr. West has been invited to speak at industry and academic events on six continents. He is particularly known for his work on open innovation, which includes being co-editor of Open Innovation: Researching a New Paradigm (Oxford, 2006) and New Frontiers in Open Innovation (Oxford, 2014).

2:45 pm to 3:00 pm

Coffee Break

3:00 pm to 3:30 pm

Managing Intellectual Property

Dr. Sangeeta Bardhan-Cook

Executive Director, Business Innovation. Key member of the strategy vertical with extensive experience in business development within biotechnology, pharmaceutical, legal and finance industries. During her career at COH, Dr Bardhan has structured over a dozen of exclusive license and related agreements for early-stage biotechnologies during her time at COH. She has

authored multiple publications related to best practices for scientific translation and licensing.

3:30 pm to 4:00 pm

Licensing Technology Opportunities

Dr. George Megaw

Vice President Business Innovation. Executive with 17 years of experience in nonprofit technology transfer with multiple institutions internationally. During his career at COH, Dr. Megaw has overseen the expansion of licensing and patenting activities that has led to COH receiving significant licensing revenue and subsequent clinical development of assets.

4:00 pm to 5:30 pm

Entrepreneurship Advisory Panel

Focused on faculty that have engaged in entrepreneurship.

Moderator: Dr. Harlan Levine

Members: *Dr. Arthur Riggs* (Chair in Diabetes & Drug Discovery and Director of the Diabetes & Metabolism Research Institute), **Dr. Mark Davis** (Professor of Chemical Engineering, Caltech), **Dr. Christine Brown** (Deputy director of T Cell Therapeutics), **Dr. Anna Wu** (Professor and Chair, Department of Immunology), **Dr. John Williams** (Professor and Core Director), **Dr. Yuman Fong** (Chairman, Department of Surgery), **Dr. Linda Malkas** (Professor of Molecular Oncology and Dean of Translational Science).

February 20, 2021

8:00 am to 9:45 am

Market Assessment

This interactive session will introduce concepts that can be used to assess the attractiveness of biomedical innovations from a marketplace perspective. We will discuss market sizing, forecasting, and pricing methodologies.

Dr. Scott Motyka

Director of Business Development and Technology, Covenant Health Network. Dr. Motyka until recently worked as a marketing professor at KGI, winning the institution's "teacher of the year" award twice. He is an expert on market research, pricing, and consumer behavior, and has published articles in leading marketing journals including the Journal of Academy of Marketing Science and Journal of Consumer Psychology.

9:45 pm to 10:45 pm

Working Group (Part 2a)

Ideas/proposals emerging from faculty working groups will be revised and finalized.

10:45 pm to 11:10 pm

Break

11:10 pm to 12:00 pm

Working Group (Part 2b)

One representative from each group will present to members of the scientific panel for evaluation and discussion.

12:00 pm to 1:15 pm

Commercialization Advisory Panel

Focused on improving the partnership between the faculty and the commercialization group, fostering an industry mindset, and generating proposals with commercialization potential that could be suitable for IDDV consideration.

Moderator: Dr. Csiki

Members: *Dr. Steve Rosen (Provost and Chief Scientific Officer), Dr. David Horne (Vice Provost and Associate Director of BRI), Dr. Larry Kwak (Deputy Director, Comprehensive Cancer Center), Dr. Debbie Thurmond (Director of the Diabetes & Metabolism Research Institute), Dr. Ajay Goel (Professor and Chair, Molecular Diagnostic and Experimental Therapeutics), Dr. Eduard Kim (Physician-in-chief at COH, Orange County).*

1:15 pm to 1:30 pm

Concluding Remarks

Dr. Csiki