

The Business of Innovation

**Winston-Salem, NC
Innovation Quarter**

**June 20, 2023
9:00AM to 3:00PM**

Registration: www.sbt-dc.org/the-business-of-innovation

Topics Covered

- ~ SBIR/STTR Program Overview ~*
- ~ NC - Specific Funding Resources ~*
- ~ Equity Capital – Angel Funder Insights ~*
- ~ One NC Small Business Match and Incentive Programs ~*
- ~ Legal Considerations of Setting up an Innovation Business ~*
- ~ Accounting Set-up and Management ~*
- ~ Patent Landscape Analysis Service ~*
- ~ Logistics of University / Business Collaborations ~*
- ~ Success Stories from Local Innovation Businesses ~*

Session Sponsors



**North Carolina
Biotechnology Center®**



The SBTDC is a business and technology extension program of the UNC System and is funded in part through a Cooperative Agreement with the U.S. Small Business Administration

AGENDA

June 20, 2023

- 9:00 – 9:15** **Kick-Off**
Nancy Johnston, NC Biotechnology Center
Chris Veal, SBTDC
John Ujvari, SBTDC
- Funding an Innovation-based Business - Non-Dilutive R&D Capital:**
- 9:15 – 9:40** **SBIR/STTR Federal R&D Programs**
John Ujvari, SBTDC
- 9:40 – 10:00** **North Carolina Biotechnology Center Funding Programs**
Kyle Bartholomew, NC Biotechnology Center
- 10:00 – 10:15** **NC IDEA Funding Programs**
Allan Younger, NC IDEA
- 10:15 - 10:30** **Break**
- 10:30 - 11:00** **Follow-on Funding – Dilutive Capital**
- Business Development and Planning:**
- 11:00 – 11:25** **Legal Considerations of Setting up an Innovation-based Business**
Will Joyner, Kilpatrick Townsend
- 11:25 – 11:50** **Accounting / Grants Management**
Lauren Joyce, HPG
- 11:50 – 12:15** **Patent Landscape Analysis**
Cynthia Reifsnider, Innovate Carolina
- 12:15 - 1:15** **Lunch and Key Note**
Dave Kaiser, NC Office of Science, Technology and Innovation
- 1:30 – 2:15** **Navigating Tech Transfer in Academic Environments**
David Winwood, Wake Forest Innovations
- 2:15 – 3:00** **Local Innovation Success Story Panel**
Moderator – Nancy Johnston, NC Biotechnology Center
Elemance, Scott Gayzik
Plakous Therapeutics, Michael Berger
AxNano, Alexis Carpenter
Novex Innovations, Jerry Barker

Speaker Bios

Alexis Carpenter

AxNano

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Alexis Wells Carpenter, PhD is Chief Innovation Officer at AxNano, a cleantech venture studio that develops and scales innovative solutions to restore clean water. Dr. Carpenter has overseen the transition of AxNano's first commercial product: a controlled release oxidant, RemRx[®] CRP, for groundwater remediation. She is leading AxNano's expansion into PFAS treatment and detection technologies. Since joining AxNano as the first FTE in 2015, Alexis has secured >\$4.8M in nondilutive R&D contracts to support technical derisking of the AxNano technology portfolio. She has also lead expansion of the AxNano team, with a particular interest in supporting underrepresented individuals in the technology/environment/entrepreneurship space. Dr. Carpenter has a BS in Chemistry from Virginia Tech, PhD in Inorganic Chemistry from UNC-CH, and PostDoc in Environmental Engineering from Duke University. AxNano utilizes a

design thinking approach for technology commercialization, conducting parallel testing of technical hypotheses and business assumptions that are essential to bring high impact solutions to market.

Allan Younger

NC IDEA

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Allan works for NC IDEA, a private foundation committed to supporting entrepreneurial ambition and economic empowerment in North Carolina. He is the Senior Director of Programs and leads the Foundation's programmatic priorities and partnerships. He is a true champion of entrepreneurs and values the power of community in leading equitable economic development. He serves as a member of the NC IDEA Senior Leadership Team in charge of overseeing all programs that provide education, training and mentoring for individuals seeking to start and grow companies in North Carolina. He leads program development, management and evolution for all entrepreneur programming; including the Foundation's NC IDEA LABS customer discovery initiative, programmatic support for NC IDEA MICRO grant recipients and deployment of the Ice House curriculum through NC IDEA MINDSET. Allan also oversees coaching and mentoring and support NC IDEA's ECOSYSTEM partners who do

so likewise. In the local community, Allan serves on the boards of the Winston Salem Foundation, HUSTLE Winston Salem, Emancipation Association, LIFE Winston Salem, and the Winston Salem/Forsyth County Utilities Commission. He is also a life member of Alpha Phi Alpha Fraternity, Inc.

Chris Veal

NC SBTDC



Chris Veal is the Triad West Regional Service Center Director for the North Carolina SBTDC. Based at Winston-Salem State University, he rose to this position after eight years as a Technology Commercialization Counselor with the same organization. Chris oversees regional SBTDC initiatives of business counseling, training, and university faculty and student outreach in the Greater Winston-Salem area. Also, Chris works with statewide program directors to facilitate targeted SBTDC initiatives in the area. With over 25 years of management experience in private industry and government, including two entrepreneurial ventures, Chris is well equipped to address the issues facing small businesses. He also spent some time as an engineer, which provides a technical element to his experience. Chris' experience has been in a variety of industries, including textiles, aviation/airport management, photography, and construction.

Chris earned a Bachelor of Science in Textile Engineering from Georgia Tech in 1994, an Associate Degree in Aviation Management in 1999, and a Masters in Business Administration from Wake Forest University in 2003. The blend of technical and business backgrounds through his education and work experience enhances his ability to assist companies in and around the City of Arts and Innovation.

Cynthia Reifsnider

Research and Impact Team, Innovate Carolina

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Cynthia (Cindy) is Director of Data and Partnership Strategy for Innovate Carolina at the University of North Carolina at Chapel Hill. She oversees the Patent Landscaping and Market Research Service, for which she is the lead patent researcher, and assists researchers and entrepreneurs in developing patent strategy. Cindy also manages Innovate Carolina's databases for startup metrics (to track progress of the commercial and social success of University-born firms) and for program operations/evaluation (with program applications, workflow automation and evaluation metrics). She has broad subject matter expertise across business and sciences. She

is knowledgeable in multiple types of information research and analysis, including patents, scientific/technical literature, business and markets. Cindy holds a master's degree in information science from UNC-Chapel Hill and a bachelor's degree in meteorology from UNC-Asheville. Previously, Cindy worked at the UNC Frank Hawkins Kenan Institute of Private Enterprise, Hewlett-Packard, and Virginia Tech University (working with Virginia's Center for Innovative Technology), where she also supported R&D and commercialization efforts for new business creation.

Dave Kaiser

NC Office of Science, Technology and Innovation



Dave Kaiser is the Deputy Director for the North Carolina Board of Science, Technology & Innovation, which is staffed by the Office of Science, Technology & Innovation in the North Carolina Department of Commerce.

In this role, Kaiser manages research projects, policy analysis, and programmatic functions, writes reports, articles, and issues press releases on innovation opportunities and activities across the state, and collaborates and fosters partnerships in support of North Carolina's efforts in the recruitment and retention of high-growth, innovative companies statewide. Kaiser also directs conferences, workshops, and task force meetings organized by the Office. He is also responsible for the management the social media campaign for the Board of Science, Technology, & Innovation.

Previously, Kaiser was a research economist at RTI International, where he conducted and managed research projects and site visit research teams, and oversaw the budget and contractual requirements for major Federal projects. His work at RTI International has been published in several academic journals and government reports. Prior to working at RTI International, Kaiser was a Research & Policy Analyst at the Ewing Marion Kauffman Foundation, where he supported research and programmatic efforts on entrepreneurship, innovation, and economic development. He has served as an evaluator for the University of North Carolina at Chapel Hill's eMBA Soft Launch Program and as a Phase II reviewer for the National Science Foundation. He currently serves on the Board of Directors for FIRST North Carolina, a nonprofit organization created to inspire youth in North Carolina to pursue further studies and careers in science and technology and to help students acquire the knowledge and skills needed to compete in the technologically-driven global economy; on the Board of Advisors for the Kenan Fellows Program for Teacher Leadership, which addresses the critical need for high-quality professional development for educators and is the largest STEM-focused teacher leadership program in North Carolina; and is a mentor in the LaunchAPEX program. He is a 2020 recipient of the 40 Under 40 Leadership Award by the Triangle Business Journal.

Trained as an economist, Kaiser has a B.S. and an M.A. in economics from Nebraska Wesleyan University and the University of Nebraska-Lincoln, respectively. He and his wife, Kristin, live in Apex and have two young children.

David Winwood

Wake Forest Innovations

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David is a Registered Technology Transfer Professional with over 26 years of experience managing commercialization activities in universities. Before these university appointments, he served in research, business development, and company leadership roles in startup businesses, with an emphasis on fundraising and corporate partnership development. David's experience in academia and the private sector includes basic research, business development, company formation, licensing and management of university intellectual property, technology-based economic development, and related issues.

Since 2014, David served as a Specialist Reviewer for the Congressionally Directed Medical Research Program and previously as a reviewer for the Research Competitiveness Program of the American Association for the Advancement of Science (AAAS).

During his university technology transfer career, he has focused on public policy issues: served on the Executive Committee of the Washington, D.C.-based Council on Governmental Relations (COGR) and made an invited presentation on patent reform matters to the U.S. Senate Committee on Small Business and Entrepreneurship.

At Wake Forest Innovations, his goal is to enhance our capacity to add value and impact to Wake Forest research by moving basic research discoveries to partners who will transform these inventions into beneficial products and services, thereby improving quality of life.

Jerry Barker

Novex Innovations

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Jerry's experience as a leader was forged through years of owning and operating multiple businesses across diverse industries. These experiences have shaped his perspective on both being part of and leading high performing teams. An entrepreneur with years of experience launching and managing successful startups, he is recognized for his integrity and strong strategic and tactical leadership. During his career, he has gained over 20 years of biologics laboratory experience and technical expertise. He has deep and varied experience in medical device design, development and commercialization. His expertise spans strategy, business development, market access and commercialization.

In 2014, Jerry launched Novex Innovations, a Contract Development and Manufacturing Organization (CDMO) focused on bridging the gap between discovery and patient care by facilitating the translation from research to commercialization. Novex offers development and manufacturing services across multiple divisions – including Pharmaceuticals, Biologics, Medical Devices along with Logistics encompassing both product distribution and inventory management.

Novex services are far reaching with clients spread across the country and around the globe. In 2022, Novex Innovations supported development and manufacturing for clients as far away as Germany and Japan and supported studies in the Ukraine, Moldova, Czech Republic, Taiwan and Greece. In just a few short years, Jerry, along with the support of the team at Novex, have grown the company from a small three-person start-up to an international organization with a proven track record and significant experience in navigating highly sophisticated FDA and regulatory environments and establishing themselves as a CDMO market leader.

John Ujvari

NC SBTDC

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John Ujvari the director of the Technology Commercialization program at the NC SBTDC and statewide SBIR/STTR Program specialist. Based at the University of North Carolina - Chapel Hill, John works with clients on the effective use of non-dilutive federal funding toward the commercialization of innovative technologies. His work has been recognized at both the state and national levels. As a frequent guest speaker, training program coordinator and business advisor, he has helped to guide clients with innovative technologies through significant fund raising and commercial successes since 2001.

John also founded and continues to lead the SBTDC's Technology Commercialization Graduate Summer Consulting program. This unique program has placed nearly 200 graduate business students from top tier universities with close to 400 early stage, commercialization-driven high tech companies in NC. John earned his MBA degree from Wake Forest University's Babcock Graduate School of Management with a concentration in entrepreneurship and received a BS degree from the University of Virginia.

Kyle Bartholomew

North Carolina Biotechnology Center

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Kyle Bartholomew is a Director of Investments with the Emerging Company Development team at NCBiotech. In this role, he identifies and evaluates promising early-stage life science companies for NCBC loans. Kyle provides business strategy support to portfolio companies to help them raise follow-on investment capital and grow their business in North Carolina.

Kyle has more than 10 years of experience in the life sciences as a scientist, licensing professional, and business strategist. As a Commercialization Manager in the Office of Technology Commercialization at UNC-Chapel Hill Kyle worked to translate novel discoveries and inventions from UNC research into products that improve human health.

Subsequent to his time at UNC-Chapel Hill, Kyle worked as a management consultant in the life sciences industry advising companies on topics such as commercial opportunity assessment, pricing and market access, and therapeutic portfolio optimization.

Kyle earned his Bachelor of Science in Medicinal Chemistry from the University of Missouri-Columbia, and a Ph.D. in organic chemistry from the University of Virginia. He also performed postdoctoral studies at North Carolina State University.

Lauren Joyce

Hughes Pittman and Gupton

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Lauren has 15 years of experience in public accounting. She joined Hughes Pittman & Gupton, LLP in January 2006 and became a partner in 2016. She was previously with the regional firm, Feeley & Driscoll, LLC, working in the Boston office as an in-charge healthcare auditor. Lauren manages the Firm's Equity Solutions team which provides outsourced stock option administration, consulting, and reporting for both public and private companies. She is Director of Audit Services and works with a variety of clients in the knowledge-based and CleanTech industry as well as companies with government grants and contracts. Her experience in these industries includes attestation engagements, business consulting, transactional analysis, and preparation for and compliance under SOX.

Malay Shah

VentureSouth Piedmont

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Malay Shah is a seasoned investor with specific expertise in alternative assets, including early-stage ventures, private companies and real estate. Malay co-leads VentureSouth Piedmont, part of the VentureSouth network of over 450 angel investors spanning the Carolinas. He has raised and managed private equity funds investing in startup companies, residential real estate and commercial real estate. Malay's experience includes roles in management consulting, project management, product marketing, policy development and corporate finance. He holds a BSE in Biomedical and Electrical Engineering and MBA, both from Duke University.

Michael Berger

Plakous

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Plakous Therapeutics is a human biologics company that has developed a patented, birth tissue derived, acellular platform biotherapeutic for the prevention of the rare pediatric disease, Necrotizing Enterocolitis (NEC). NEC afflicts roughly 6% of the 50,000 babies born annually in the U.S weighing less than 3lbs. and carries a 30% mortality rate.

Michael Berger, PhD is Senior Product Development Engineer at Plakous. He earned his BS and PhD in biomedical engineering from Virginia Commonwealth University focusing on stem cell differentiation, biomaterial characterization, and manufacturing process evaluation for orthopedic and dental applications. In his training, he served as a graduate student fellow in the Office of Technology Transfer at VCU, evaluating patentability and market opportunity for disclosed technologies from VCU Health and the College of Engineering. He serves as head of the R&D lab in Winston-Salem, NC.

Nancy Johnston

North Carolina Biotechnology Center

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Nancy Johnston serves as the executive director of the Piedmont Triad office for the North Carolina Biotechnology Center, a role that has placed her at the center of life sciences technology-based economic development for over a decade. In her role, she connects needs with resources, promoting NCBiotech's core programs to help create an ecosystem conducive to biotechnology research, business, education, and strategic policy.

She is known as an experienced strategic communication and collaborative relationship building executive; a trusted connector in the entrepreneurial start up community; and an advisor on talent and workforce development. Johnston serves on a variety of international, national, and regional advisory boards and committees. Her career spans 20 + years of experience in industry, academia, and non-profit organizations. Her research park experience provides a unique perspective to the region, which is home to two developments.

She was recently honored by regional leaders with the 2022 Biotechnology Community Leadership Excellence award at Triad BioNight and recognized as a 2022 Triad Business Journal Power Player. She is also a past recipient of the TBJ's Outstanding Woman in Business award. Johnston earned her MA from High Point University, BA from Liberty University; and is a Leadership North Carolina (Class XXIV) alum.

Scott Gayzik

Elemance

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Dr. Gayzik earned his BS and MS from Virginia Tech and his PhD from Wake Forest University in Biomedical Engineering in 2008. His interests span multiple areas in injury biomechanics including morphometrics, the development of physical surrogates, and the many applications of computational human body modeling. Dr. Gayzik is currently an associate professor at the Wake Forest University School of Medicine and the Virginia Tech - Wake Forest Center for Injury Biomechanics. He is the technical lead of the Full Body Models Center of Expertise of the GHBMC. He currently serves on the International Research Council on the Biomechanics of Injury (IRCOBI) and the board of directors of the Association for the Advancement of Automotive Medicine (AAAM). He has published extensively in the field, and his work has been recognized for

excellence at the Stapp Car Crash Conference, Society of Automotive Engineers, and AAAM.

Will Joyner

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Will Joyner is an attorney and partner with Kilpatrick Townsend & Stockton LLP, a full-service law firm with over 600 lawyers in 23 offices around the world, including three offices in North Carolina (Winston-Salem, Charlotte and Raleigh). Will's legal practice focuses on business law and corporate transactions, including entity formation and structuring, investor financing transactions, commercial contracts, and mergers & acquisitions. Will has over 25 years of experience working with a broad range of clients across all industries, from technology and biotech start-ups to large public companies and major institutions. Will received his undergraduate degree from Princeton University and his JD and MBA degrees from Wake Forest University.