established NCBW as one of seven BioNetwork centers. Click dashed-line entries for more info BioNetwork supports the mission of the North Carolina Com-Rellevile CC Co-hosted 78 state educators at Washington munity College System aligning world class workforce training Community College Summit 2006 and education to biotechnology and life science industries. Program featured in the industry i its second IT Showcase School

NCBW

Visit to Forsyth Tech Biotechnology December 2010 Visiting Forsyth Tech. Presider Workforce nip in renewing American scientific education,

MiraCosta International Society of Pharmaceutical Engineers supports design onstruction of 3500-sq.ft, facility - opens to classes in November April 2010 MetLife recognizes NCBW National Community College Excel-Biogen Idec, Genentech recognize MCC's dedicated, immersive environment for training established for biotech compani ence competition, with \$20,000 award.

and support new faculty and remodel of facility to donate unused equipment for March 2006 NCBW team presents at League for Innovations conference in Atlanta use in high schools April 9. 2006 Community College Bio-fuel laboratory techniques and fundamental scientific processes developed for teachers Program at BIO 2006 in Chicago of two new Anaheim. Honorable Mention award to

armaceutical

Standards at NBC2 working

and educators in Indianapolis

en short courses develor

classroom, or in a biotech

company lab facility

June 19, 2005 NCBW presents at BIO 05 in

Flaine Johnson NSF Bio-Link Chair

`February, 2006 NCBW presents at

Philadelphia Dr Sonia Wallman co-chair with

vmposium on - Workforce Innovation

group meeting of industry

Selected as national model for Bioreactors purchased through grant, community college - industry pegin to be used for training, pilot partnerships in biotechnology by 80L fermenprojects needed by industry the US Dept of Education 2006 2005

journal: BIO-IT World j in the nation 2006

evelopment Model for Skill Standards

and Curriculum published 2005

At the IT Convergence Zone: A Rapid

Development Model for Skill Standards

Resource for Community and Technical

Colleges published 2006

2005 with more than \$1 million in state-of-the-art equipment

Great Bay CC First in the nation Biomanufacturing Apprenticeship program begins First BIOMAN 06 national Jan. 31. 2005 Northeast conference organized by

Dr. Sonia Wallman

July 24-28, 2006

internships and "hands on experience"

Biopharmaceutical Manufacturing Industry consensus with industry Wake Forest Institute of Regenerative _____ - delivered on campus, in the

March, 2006 North Carolina Governor Michael Easley

Nev: Recombinant DNA Technology cours opens new technology building at Forsyth Tech, new developed for R&D labs experimenting in biotechnology lab space, state-of-the-art equipment nucleic acids, cloning, stem cell research

Informatics

Bioprocessing

NCBW | National Center for the Biotechnology Workforce June 28, 2004 President's High-Growth Job Training Initiative grant for Forsyth Technical CC in partnership with four

other community colleges around the nation develop the National Center fo the Biotechnology Workforce (NCBW) March 1, 2007 Piedmont Triad BioNight recognizes NCBW - Russ Read: excellence in community service

May 6-9, 2007 NCBW presents "Faces of Success" at Community College Program at BIO 07 industry convention in Boston8try, tours of Biogen Ideo Targacept, Tengion, Wake Forest Institute

in partnership with Alamance Community College and Bio-Link. February 5- 6, 2008 NCBW hosts nationwide DOI

bioscience WIRED - Workforce Innovation in Regional Economic Development -conference in Winston Salem.

Tracking program begins to keep graduates connected

processing & Biomanufacturing Training in partnership with BioNetwork NO community college biotech training system Focus for first Resource Line -Tracking Trends in Biotechnology Workforce newsletter.

October 17-19, 2007 Piedmont Triad Fly-In hosts 24 high school biotech teachers from around the country, tours of Bioger Idec, Targacept, Tengion, Wake Fores stitute in partnership with Alamance

Visit us at www.biotechworkforce.or

October 2008 Agreement with the North Carolina Community College System
October 2012 NCBW at Forsyth Tech awarded a Department of Labor grant of nearly \$15 million to unite twelve high-performshareholders to develop core, industry-recognized skill sets in bioscience. High-growth industries required clearly defined skills to keep up with increasing global competition. Working together. bioscience "industry-recognized" credentials were created.

> October 2013 Report from the Community College Program at global BIO convention in Chicago. November 2013 TAA c3bc presentation to BIO Ohio on increasing need for workers in new, overlapping spheres of emerging technologies.

Forsyth Tech partnership as finalist in to the Triad Biotech Alliance on community college, work-December 2013 Biosciences Talent Required - a lecture duplicated nationally. force board and company partnerships working to meet industry employment needs June 2014 Biosciences Industry Fellowship funded by NSF-ATE, selected

producing modules for use in classrooms. YouTube Link July 11-13, 2006 NCBW team presents at DOL Workforce Innovations Conference, Anaheim Honorable Mention award to

March 2012 National Meeting with Manufacturing Institute, Bio-Link, NBC2, Medical Devices Educational Consortium, industry, college reps

December 2013 A special edition of

look at the nation-wide programs

of the TAACCT c3bc

Forsyth Tech's biotech IMPACT

magazine features an illustrated

teachers gathered for a program with visits to NC Biosciences enterprises.

ning (TAACCCT) program c3bc launched at Biotech Place in Winston-Saem. Goals - funded by the DOL grant - are to: improve workplace training through cruitment testing, aptitude assessment, course redesigns, better outreach and e retention; introduce portable, industry-recognized credentials into training; community college capacity for education that meets employer needs; add inastructure and build internships. Twelve partners are concentrated into four hubs: Learning Technologies Hub

Accelerate completion time through improved prior learning assessment removal of institutional barriers and new, technology enhanced instructional materials City College of San Francisco Forsyth Technical Rowan Cabarrus Hub lead institution, pilots

2014

• March 2014 Forsyth Tech leads

\$15M effort to build new biotech

learning model. (Triad Business

nuary 2013 The Trade Adjustment Assistance Community College Caree

Hub lead institution, also home of the NSF national Bio-Link center. a modular learning lab, with addresses lack of industry-recognized assessments conducted and credentials, works to harmonize skill Biomanufacturing Hub

Develop new biomanufacturing courses, credentials New skill standards; stackable, latticed credentials will and teaching materials in partnership with industry. help trade-impacted workers get high-wage, high-skill jobs Montgomery County Hub lead institution, also home Hub lead institution coordinates of NSF biomanufacturing cen Medical Device companies, trade orter NBC2, leading campaign to ganizations, community colleges and St. Petersburg

more stakeholders to develop skill set

jobs involved in biopharmaceutical development

PDF report available here: CCP@BIO 14

matrices in five functional areas.

c3bc National Meeting: Consensus by hubs reached in Skills

Standards session to identify, select and draft key activities of core critical work functions common to all bioscience industries into a single document. Bio-Link has a page on skills standard work done to date - "Finding alignment"

Gardner Carrick of NAM referred to work February 2015 c3bc national meeting in in skills and manufacturing in other industries at the Manufacturing Skills Standards Council web site. Other topics included: innovative ways to assess prior learning: strategies for Work-

force Investment Boards: plus a look at

Michael Avers addresses talents required

for biotech jobs, including a video about

June 2014 Community College Program at BIO PowerPoint presentation by Russ Read: Bench to Bedside shows many

March 2015 presentation to NC Academy of Science at Wake Forest Biotech Place

October 21-23, 2015 Biosciences Industry Fellows Program presented at NSF ATE Principal

Medical Devices Hub the library of modular teaching "granules" being built to share through the new online Salt Lake Ci Sept 2014 Tech Council Meeting a PowerPoint presentation by Russ Read &

alumni: YouTube Link

March 26-28, 2014 DOL TAACCCT Dec 2014 presentation to the NCBC Piedmont Friad Biotechnology Advisory Committee, including a Learning Skills Lab video: YouTube Link

Feb 2015 new IMPACT magazine focuses on c3bc program **Deliverables**: upgrades in equipment, training capacity, and standards in core skills working with partners in all hubs across the nation.

nationally- recognized, standard educa-

2015

tion pathways.

in Winston-Salem, NC on "Innovation in Investigator's Meeting in Washington, DC.

- Building the Manufacturing Talent Pipeline" Winston-Salem NC to grow bioscience training for Trade Adjustment Assistance displaced workers and others. April 2015 c3bc Medical Device Hub national meeting to develop core skills for June 2016 c3bc National Meeting June 4-5.prior

to June 6 presentation at the BIO International Convention in San Francisco. . June 2015 Community College Program at New partnership with NIIMBL - the Nationa BIO in Philadelphia including "Faces of Suc-Institute for Innovation in Manufacturing cess. "CCP@BIO 15 (PDF report) Biopharmaceuticals. www.NIIMBL.us

October 12-15 2015 c3bc (TAACCCT) Annu June 2016 Core Skills Standards for Bioscience al Meeting, dedicated to common standards echnicians published by c3bc. Cick box for full report. and increased training, held at Forsyth Tech.

2016

June 2016 c3bc Medical Device

Skills Standards published

Click box for full report.

SciTech Lecture Series

clobrating a milestan

2009-2019

November 2019 Dr. Brenda Summer

Director of Workforce Programs, NCBIC

Improving Soft Skills to Thrive in the

August 2016 Impact Magazine charts the journey Nov 2015 new SciTech Ideas in Action puband accomplishments of the c3bc TAACCCT grant. ation documents the first seven years of the which grew from 12 colleges to 172 industry. Forsyth Tech professional lecture series with academic and workforce partners across the U.S. links to YouTube videos and other resources.

nuary 2016 Russ Read, NCBW Executive Director 'tools to sharpen skills with classes for Forsyth Tech gave this presentation at the 103 Indian Science Constudents, biotech employees, plus rentable space. gress at the University of Mysore, India June 2017 Bioscience Industrial Fellowship Project March 2016, c3bc National Advisory Council (BIFP) cohort presentations. You Tube Link

leeting in Research Triangle Park in North Carolina

experiences of the first four Bioscience Industrial ellowship Project cohorts. June 2016 Biosciences Industry Fellowship NSF-ATE teachers program with visits to NC Biosciences January 2018 NCBW named one of ten finalists r prestigious Bellwether Award at Community College Futures Assembly.

> May 2018 Natural Discoveries, a drug discovery novel compound discovery company, joins the National Center for Biotechnology Workforce (NCBW) lab as its first laboratory tenant.

May 2018 \$579,961 Skills for Biomedical Emerging Technology Applications

(BETA) NSF grant awarded to NCBW to define workforce skills technicians

devices and tissue engineering, "Employers need technician-specialists who

September 2020 Dr. Laura Kavanaugh, Senior

September 2020 Dr. Paul Allaire, CTO, Rotor

University & Adjunct Faculty, Forsyth Tec

Computational Biologiist at Syngenta on

Science Career -- From Johson Space

Center to Syngenta" YouTube Link

Career Options YouTube Link

Hearts" YouTube Link

will need for manufacturing jobs in high-growth intersections of biomedical

understand more," says Russ Read, principal investigator. "Working

together, we will define these skills." Learn more.

NCBW Skills Development Lab provides specialized

June 2017 Impact Magazine focuses on the

New BETA Skills partnerships with Advanced

June 2018 The 5th annual Bioscience Industrial Fellowship Project (BIFP) service in the North Carolina Community College cohort gathers eleven exemplary instructors from across the U.S. Regenerative Manufacturing Institute (ARMI) and RegenMed Development Organization (RemDO)

2018

VY TECH IVy Tech Community COLLEGE Bloomington IN

Forsyth Tech

for hands-on experiences that connect teaching to skills. YouTube Link on student success in college and in the labor market. on-site job experiences.

January 2019 Dr. Janet Springs, with 22 years of System, becomes president of Forsyth Tech, focusing provided cohorts with hands-on

NSF-ATF DUF Program

Kathy Bakhit, FdD

Co-Principal Investigato

College of the Canvons

Santa Clarita, CA

Deb Newberry MSc

Co-Principal Investigator

Newberry Technology Associates

MEDICAL ALLEY

Newberry Technology Associates Burnsville, MN

∠SoCalBio

Southern California

30 industry, academic, and institutional partners who have

2019

2020

March 2020 SoCalBio College of the Canyons and the Alfred E. Mann Institute for Biomedical

April 2022 Dr. Erin Falco, Principal

Company Success"

Cultural Exchange"

December 2018 Forsyth Tech President Gary Green retires. Across 17 years he added new curricula,

campaigns. Dr. Green led the school to evolve into a national model for biotechnology, cybersecurity

led more than \$100 million in facilities expansions and raised more than \$33 million in significant capital

October 2021 Dr. Todd Smith, CTO,

Chain" YouTube Link November 2021 Dr. Jacob W. Surratt. Provost and Chief Academic Officer, Forsyth Tech Community

College on "Career Opportunities and the December 2021 Aden Dauchess and Dhani Biscocho

Technology Associates "Nano- biotechnology or Bionanotechnology: What's in a Name?

Professor, Wake Forest Institute for Regenerative New?" YouTube Link

April 2021 Kristin Stumpf Lab Technician Wake Forest Institute for Regenerative Medicine "Science Career: From Forsyth Tech opportunities to enhance their lives. Employers and industries in the region gain a skilled work force they can count on thanks to excellent training programs Dr. Green helped to create. March 2022 Selena McHone Senior Clinical Specialist at VIZ at and Melissa

Smith, FT MRI Program & 2022 NC Faculty

Member of the Year "Careers on the Cutting

Edge: Medical Imaging Meets Artificial

August 2021 Dr. Mark Shaefer, Executive Director and Clinical Lead. Antivirals at HengRui USA on ""My PharmD Career in the Biotech Industry" YouTube Link

November 28-29, 2018 The BETA Skills National Advisory Council,

Led by NCBW, the BETA Skills project will work through four nodes to

identify BETA skills and to build regional and national ecosystems.

Russ Read

Principal Investigator

NCBW at Forsyth Tech

Community College.

Sengyong Lee, PhD

Co-Principal Investigato

Ivv Tech Community College

representating industry, education, and workforce, meets in Winston-Salem.

September 2021 Bernard Siegel, Executive Director of the Regenerative Medicine Foundation and Dr. Garv Green, Chief Workforce Development Officer at the Wake Forest Institute for Regenerative Medicine on Regenerative Medicine and Workforce Development

Director, Digital World Biology on "Cyberbio Supply

Interdisciplinary Science of Kinesiology" YouTube Link

Carolina Biological Supply Company on "Learning" Bacterial Transformation with the Carolina Biotechnology Simulator" YouTube Link January 2022 Dr. Tracy Criswell Ph.D., Associate

Medicine "Tissue Engineering and Regenerative Medicine: What is It How Does it Work and What's February 2022 Robert Elliot. Founder of The

Farming" YouTube Link to WFIRM Lab Technician" YouTube Link

and motorsports technology education. With his goal to align programs with changing economies, the college is achieving high student success and completion rates. Individuals gain educational

February 2023 Dr. Steven R. Bauer of REMDO and WFIRM and former Chief

Investigator, Virtue Labs and Bill Jacobser Head of Operations Virtue Labs on "Virtue Labs: How Teamwork Grows Career and

September 2022 Dr. Gretel Mara Hunzicker, Fulbright Scholar and Professo at the Institute of Basic and Applied Sciences, Universidad Nacional de Villa Maria (UNVM) Argentina "Developing a Globally-Educated Workforce Through

October 2022 Dr. Jason Gagliano, Kara Libby, and Michaela Romero "Quantitative Time of Flight (QTOF)"

June 2023 Forsyth Tech Grad Jordan November 2022 International student Yosauri Fernandez-Figuereo and WFIRM's Dr. Gary Green "From Forsyth Tech Biotech Grad to WFU PhD Candidate"

Forsyth Tech biotechnology program graduate on her life-changing "Care ransition – Furniture Industry to BioPharma" YouTube Link January 2023 Dr. J. Donald deBethizy

discusses his experiences with Biotechnology in North Carolina and his current role as a Board Director at Argenx i Copenhagen, Denmark. You Tube Link

December 2022 Kathy Proctor, 2010

College convened twenty-three biotech companies, educators June 2020 IMPACT Magazine tracks and workforce organizations to identify critical BETA skill sets for technicians working at the interface of regenerative June 2019 The sixth Bioscience Industry Fellows (BIFP)

> ■ June 2020 The first version of BETA Skill sets is published in Impact Magazine indicators, and fourteen critical soft skills.

August 2020 NCBW receives a supplemental BETA Skills grant fr he NSF to focus on Cyberbiosecurity. The project will develop and ovide professional development opportun-ities for instructors, c ulum based on cybersecurity requirements for medical device d manufacturing practices (GMP), and update current skill tandards to incorporate cyberbio requirements.

for Biotechnology Workforce (NCBW), the Analytical Molecular

Biotechnology Program hold a joint board meeting via ZOOM.

Skills Development Lab (AMSDL) and the Forsyth Tech

November 2020 NCBW develops BETA GMP course in

the development of specialized BETA skill sets, regional ecosystems and new courses that technicians will need to fulfill evolving roles in the rapidly changing and convergent biomedical device industry.

-- nine key technical areas with forty-plus related performance ski

2021

cooperation with the Capstone Center of Bio Network.

June 2020 Forsyth Technical Community

College, home of the National Center for th

Biotechnology Workforce, marks its 60th

Workforce, the SBDC and the Analytical &

September 2020 BETA Skills National Advisory

Committee representing education, workforce

activities, and to review new BETA skill sets.

September 2020 Carolina Knowledge Center

launches the "Biotech Careers Virtual Event

a series of interactive, expert-led profession

development sessions for teachers to help then

teach concepts and skills involved with topics

October 2020 Russ Read, NCBW Executive

Director and Dr. Jason Gagliano, Coordinator for

Development Lab present virtually at the virtual

"Skills for Biomedical Emerging Technology

"Using High-Resolution Mass Spectrometry

Clinical Trials course for colleges and STEM

to develop skills in collaboration with industry

testing, genomic research, a) å ÅRNA

NCBW's Analytical & Molecular Skills

Applications (BETA)" and

NSF-ATE PI Conference:

seguencin* E

and supporting partners meets virtually on

September 17th for updates and insights o

Molecular Skills Development LabÈ

October 2021 Triad Today Show features NCBW's national partnerships with U.S. employers and colleges to develop innovative technical training programs and the growth of the Triad region's June 2023 Organized by InnovATEBIO and the National Science biotechnology sector. YouTube Link

August 2021 With a \$441K grant from the National

Regenerative Medicine (WFIRM) REMDO Forsyth

Science Foundation. Wake Forest Institute for

Tech/NCBW and Simon G Atkins High School

launch RegeneratOR workforce training network

2022

January 2022 Forsyth Tech/NCBW collaborates with olleges in California, Washington, Pennsylvania, and Massachusetts in National Institute for Innovation in Manufacturing Biopharmaceuticals (NIIMBL) funded project to develop the first Skill Standards and riculum for Cell-based and Gene Therapies

February 2022 Forsyth Tech/NCBW, UNG Greensboro, Genome Insight, and the Veteran's Far of NC team up with BioMade to inspire students by making cutting-edge nanobiotechnologies available ir classrooms and labs. Meet the fellows and host companies here.

2023

Norkforce (NCBW) received a \$79,738 supplement to its NSF ATE BETA Skills Grant to provide professional development for community college deans and senior administrators to better understand the converging biosciences environment.

June 2023 NCBW, in collaboration with the Kansas-based Bioscience Core Skills Institute, launched a week-long in-person professional development program to introduce and pilot new BETA Skills micro-

May 2023 The National Center for the Biotechnology

Foundation, the first-of-its-kind Envisioning the Next Bioscience Workforce Summit drew 250 thought leaders and practitioners from industry academia and government to explore how to develop a workforce that will maintain US leadership in all phases of bioscience



July 2023 Five community college faculty members from across the U.S. completed NCBW's immersive ght-week professional development fellowship

October 2009 National Center for the Biotechnology Workforce Launches SciTech Ideas Lecture Series

2013

October 2009 Amy Greeson R. Ph., Producer. Healing Seekers "Medicine and Indigenous Healing Traditions"

November 2009 Dr. Ski Chilton, Founde Gene Smart "Genetics, Diet and Chronic February 2010 Dr. Kevin Conley.

Forsyth Tech Nanotechnology Program "The

April 2010 Judith and Dr. Tom Ginn

World of Nanotechnology"

008 final report on first three

years of NCBW (pdf)

March 2010 Chris Sowers, Forsyth Tech Biotech Instructor 'Why Conjurer's Nut?"

2009 2010 2011

Forsyth Tech, "Health Issues in Rural Kenya" September 2010 Dr. Frank Torti, Wake Forest Baptist Medical Center "Advancing Cancer Treatment through Technology Innovation"

October 2010 Dr. Mark Wainberg, McGill University "Twenty-Five Years of HIV Research Benefits on Laboratory Technology and Human Health"

November 2010 Steven Burke, NC Biofuels Center" Biofuels Across the Landscape'

January 2011 Dr. Anthony Atala, Wake Forest Institute for Regenerative Medicine egenerative Medicine: New Approaches to February 2011 Dr. Frank Carver, Forsyth

Tech "Environmental Health Science Curriculum Development in Liberia" March 2011 Dr. J. Donald deBethizv. CEC Targacept "The Targacept Story: From the September 2011 Nancy Johnston Piedmont Triad Office, NC Biotech Center Catalyzing Regional Strengths to Support Bioscience Job Growth

November 2011 Dr. Carol Strohecker

February 2012 Dr. Steven B. Mizel

Inventions" YouTube Link

and Beyond" YouTube Link

"From Forsyth Tech to Medical School

Vinston-Salem State University From Mount Pharmacology to Shores of Biotechnology: A Wellcome

Center for Design Innovation "The Importance of Design in the Winston-Salem Community"

January 2012 Dr. Tim Bertram, Tengion Regenerative Medicine – Growing Todav Tomorrow and the Future" YouTube Link

Vake Forest School of Medicine and Reward." YouTube Link Bruce Kaylos, NCBIO "Vaccines: Why March 2012 Jerry Barker CEO Ocular

Systems Inc. "An Eye Toward Innovation" YouTube Link September 2012 Doug Drabble Director of BioNetwork, "Career Success in Life

Sciences" YouTube Link October 2012 Charles W. Calkins, Attorney and Partner Kilpatrick, ownsend & Stockton, LLP, "The Changing Landscape of Intellectual

roperty Protection for Biotechnology Curriculum: YouTube Link lovember 2012 Adesanmi Ojo MD

YouTube Link

March 2013 Dr. Christy Shaffer, Hatteras Discovery "My Journey as an Entrepreneurial Scientist, CEO and Investor" YouTube Link

stack credentials and access

Journal report)

local career paths.

September 2013 Dr. Fric Tomlinson, Chief Medical Center and President of WELI's Innovation Quarter, shared innovations and ollaborations in medical devices, protein drugs and mobile apps.

'Chemistry of Teams"" YouTube Link January 2014 Gwyn F. Riddick. Agricultural otechnology Center "A Race Against Time

low Biotechnology is Transforming Our Largest Critical Industry." YouTube Link February 2014 Dr. Stephen A. Hill, CEO of Targacept, spoke on "Biotech: Risk and

March 2014 Paul Kortenaar PhD Exec Dir of SciWorks science museum Education for Innovation" YouTube Link

June 2014 Celeste Carter, National Science Foundation Program Director "NSF - ATF Grants and Funding

Fulbright Scholar, "Integrating of Emerging

October 2014 Dr. David McNelis LINC. Chapel Hill "Our Renewable Energy Future"

Fellowship Ten participants from six states funded by an NSF-ATE award, visited NC Bioscience colleges, labs and companies. YouTube Link

October 2013 Dr. Roger

Criminal Justice Program "CSI In The Real World." YouTube Link

Opportunities"for Biotech Training" September 2014 Ray Cadmore, Australian

echnology into Community College

November 2014 Biosciences Industry

January 2015 Dr. Ana S. Iltis, Director, WELL Center for Bioethics, Health, and Society "Identifying, Managing, and Communicating Research Risks" February 2015 Anthony Atala M.D., Director

Wake Forest Institute for Regenerative Medicine in conjunction with the 2015 National c3bc Meeting. YouTube Link March 2015 Jennifer Bryant. Forsyth Tech

September 2015 Barbara A. Pisani, D.O. Baptist Medical Center "Young at Heart" YouTube Link

October 2015 Dr. Norma V Quiñones Global Quality Training and Development at Forsyth Tech Biotech Department Biogen "My Journey from Higher Education to the Biopharmaceutical Industry" YouTube Link

CEO, NC Biotechnology Center presented Healing, Fueling, and Feeding the World: The January 2016 NCBW Executive Director Russ Read, shared experiences as a speaker "A Passage To Biotech in India" at the 103rd India

Science Congress at Mysore University His visit

included an address by the Prime Minister of

Workforce presentation. YouTube Link

India and a welcome reception for his Bioscience

November 2015 Doug Edgeton, President &

February 2016 Roland Johnson March 2017 Dr. Amy Greeson. "Exploring the Founder and CEO of Piedmont World for Novel Medicinal Compounds and Pharmaceuticals & Animal Health "A Innovator in Animal and Human Health YouTube Link March 2016 Dr Travis Russell

is Used" You Tube Link Chernobyl - Past, Present & Future YouTube Link September 2016 Patti Shugart, COO,

October 2016 Dr. Ski Chilton. Professor. Wake Forest School of Medicine "Inflammation Nation & The Rewired Brain" YouTube Link

Corporation "Update on Carolina Liquid

Chemistries YouTube Link

November 2016 Barry Slowey President and Vihur Surti Cook Medical Endoscopy Division "Medical Device Development" YouTube Link December 2016 Alan Beard Chair

YouTube Link January 2017 Kim Westmoreland. KeraNetics "Confessions of a Serial Entrepreneur" YouTube Link

February 2017 Dr. Gregory Kucera,

Professor, Hematology and Oncology,

Forest School of Medicine

"KPC-34 - a Co-Drug Combining a DN

Damaging Agent with a Targeted

Therapy" YouTube Link

for Education" YouTube Link October 2017 Jason Gagliano & Malaysia Christian "How the Analytical and Molecular Training Lab at Innovation Quarter Professor. Forsyth Tech "A Visit T

> ongevity Fund, "Using Biological Research educe or Reverse the Effects of Aging and January 2019 Bob Haack MBA on ase Longevity" Planet's Finite Water Resources and the

February 2018 Dr. Michael Batalia. Co-Founder, WideEv3D "Adventures inhttp:// online.anyflip.com/pebj/evek/mobile/index.html nnovation from Laboratory Bench to the "Stratosphere" YouTube Link March 2018 Norman Fraley co-lead faculty

in Science of Sustainability at Wake Forest University "The Physical and Chemical Properties of Smoke" YouTube Link April 2018 Dr. Rohan A. Shirwaiker Associate Professor & Faculty Scholar, Fitts Department of Industrial & Systems

YouTube Link September 2018 Ken Lane, experienced computer software expert "How To Achieve The Right Balance Between Humans and Machines To Optimize Outcomes" YouTube Link

October 2018 Jeff M. Sands. MD. Professor of

hysiological Insights into Novel Therapies for

Nephrogenic Diabetes Insipidus" YouTube Link

Medicine and Physiology Emory University

Engineering, NCSU "3D Bioprinting =

Materials + Manufacturing + Medicine.

November 2018 Andrew Hebard, President, Technology Crops International, "Omega's From Soil to

Oil" focused on Ahiflower® Oil.

""How Climate Change Affects the

Century" YouTube Link

prevention. YouTube Link

April 2019 Dr. Hariom Yadav.

Molecular Medicine. Wake Forest

A Goldmine of Therapeutics and

health ailments" YouTube Link

September 2019 Dr. Tracy Criswel

School of Medicine on "Age and Sex:

Implications for Regenerative Medicine

Assistant Professor, Wake Forest

Applications" You Tube Link

YouTube Link

YouTube Link

December 2018 Dr. Gary Green, October 2019 Doug Price MA president and President, Forsyth Tech Alexis Gabard MS MBA director Clinical Ink "Creating The Innovation Workforce" on "The Ingredients for Innovation in Clinical YouTube Link Research" YouTube Link

Need for New Technologies to Im-prove Bioscience Workplace" YouTube Link the Aging Water Infrastructure" December 2019 Dr. Bryant M Moore, Directo YouTube Link of Strategic Partnerships, UNC Office of February 2019 Jennifer Byrne, Javara echnology Commercialization Research on "A View of the Clinical The Necessary Interdependency Betwee rials Enterprise in the Twenty First Basic Research and Novel Healthcare

March 2019 Dr. Simon Selwood o January 2020 Dr Daniel J C Herr SoBran Bioscience on: "Consumer Professor, The Joint School of Nano-science and Nanoengineering Decisions," how genomic medicine "Convergence in the Era of Intelligent and personalizes treatment and increases Cognitive Assistants" YouTube Link February 2020 Jennifer Anderson, VP Client

Products" YouTube Link

Services Delivery, Intellect Resources School of Medicine on "Gut Microbion "CyberBio in Healthcare" YouTube Link Biomarkers of Aging Related Metabolic March 2020 Donald McCov STFM education Disorders" to prevent treat and/or cure consultant, Donald McCov and Associates "Stepping into the Biotech Future with Augmented and Virtual Reality" YouTube Link

April 2020 Dr. Amy Greeson, Founder and

Natural Healing" YouTube Link

CEO, Natural Discoveries Inc. "Pharmacy and

April 2021 Tandeka Boko NC STFM Advisor/ Navigator, with STEM Fellows Patricia Springs, and Maria Saucedo Lopez "NC STEM Iliance" YouTube Link

YouTube Link

May 2021 Justin Campbell, WEIRM Cell Culture Tech. Bob Adams, Lab Manager, Nanotech Labs and Sean Killebrew, Instructional Technology Specialist, Forsyth Tech CTL "Science Careers: Military Vets on Career Building Experiences" YouTube Link

September 2020 Dr. R.B. D'Agostino Jr. & Dr. Lucy D'Agostino McGowan Wake Forest Father-Daughter Biostatisticians Discuss

Bearings Solutions and WFU Engineering Adjunct Professor "Evolution of Mechanical October 2020 Dr. Deanne Cranford-Wesley YouTube Link Director of Cybersecurity, NC Central

CyberBiosecurity" YouTube Link November 2020 Dr. Ronald Keenev. President Pharmaceutical Medicine Associates, Inc. "Mentors and Mentoring YouTube Link

January 2021 Dr. Matthew Carter, Vice President, Cook Medical on "Skills and the Future of Work" YouTube Link March 2021 Deb Newberry, CEO, Newberry

Veteran's Farm of NC on "Nanobiotechnology ar Veteran Farmers: Changing Lives and the Future of

educators. They identify critical BETA skill sets for biomedical and bioelectric employers.

April 2019 NCBIO, NCBW and Durham Technical Communication

professional development cohort of 11 college and advanced

nigh school program instructors from the U.S., Jamaica, and

ober 2019 The National Center for the Biotechnology a

prsyth Tech is awarded \$535,297 as part of a \$7.5 million

National Science Foundation grant led by Austin Commun

education center and network that will address the rapidly

prowing need for highly skilled technicians in biotechnology

the U.S.-celebrated it's 35th Anniversary on November 5th. 201

November 2019 Impact Magazine

recognizes six years of success for

the Bioscience Industry Fellows

Project and the role of more than

College for InnovATEBIO, a new national biotechnology

medicine and biomedical devices.

rinidad and Tobago. You Tube Link

the Cellular and Tissue Therapy Branch (CTTB) at the FDA talks with Russ Read about developing evaluation July 2020 Forsyth Tech President Janet N. Spriggs hosts U.S. Secretary of Labor Eugene protocols and policy in emerging areas of cellular therapies and regenerative Scalia and U.S. Representative Virginia Foxx medicine. YouTube Link who visit the National Center for Biotechnolog

March 2023 As a military veteran, and graduate of Forsyth Tech's Broadcasting roduction Technologies Program, Sean Killebrew discusses how working at the CTLE influenced his career. YouTube Link

March 2023 Jennifer Coulombe, V.P. of

Industry Partnerships and Continuous Innovation at Forsyth Tech. and Russ Read discuss how Forsyth Tech's culture of continuous improvemen benefits students and industry. like genetic testing DNA analysis COVID-19

Link talks about her role as manufacturing supervisor for biotechnology company, ProKidney, her academic and career path, and how lab skills impact patients' lives YouTube Link

SciTech Lecture Series on YouTube HERE

Browse the entire

May 2020 NCBW's Analytical & Molecular Skills Development Lab (AMSDL) receives an NSF grant to purchase a high-resolution mass spectroso (HRMS) instrument for hands-on development of May 2021 NSF Bioeconomy Distinguished advanced lab skills in collaboration with industry.

Lecture Series "Scoping and Educating the Dynamic Biotech Workforce" features nnovATEBIO Principal Investigators Dr. Linne Fletcher, Russ Read, and Dr. Thomas Tubon.

June 2021 Pete Pellerito (BIO). Russ Read (NCBW), Lori Lindburg (California Life Sciences), and Rvan Helwig (TEConomy) Workforce Trends Report at the 2021 Virtual BIC

June 2021 NCBW conducts two virtual BETA Skills Professional Development bootcamps for U.S. college instructors and STEM teachers BETA CyberBio Security (June 28-30) and BETA Skills (June 9, 15, 16).

une 2021 InnovATEBIO launches year-long Bioscience Leadership Institute (BLI) ofessional development program led by Co-Pls Russ Read (NCBW) and Dr. Thomas Tubon. July 2021 IMPACT

> ICBW's SciTech Lectur Series which has inspire and educated 3800 students and community members with 75+ loca national, and international speakers for twelve years.

October 2021 NCBW leads Industry Listening Session on bioscience skills and needs. orkforce diversity strategies, and internships

other partnering opportunities. isit us at www.biotechworkforce.org for more National Center for the

Biotechnology Workforce updates!

BCSI Biotechnology Workforce (NCBW) at Forsyth Tech receives a \$ 112,834 grant from NSF-ATE to develop and introduce BETA Skills micro-credentials in partnership with the Bioscience Core Skills Institute of Kansas (BCSI).

June 2022 Fleven college and K-12 instructors from nine states complete NCRW's first in-person BETA Skills Professional Development Program at Forsyth Tech on June 19-24, 2022.

Development program at the Joint School of Nanoscience and Nanoengineering (JSNN) in Greensboro, North Carolina



April 2022 The National Center for the

June 2022 NCBW holds BETA NanoBio Professional

June 2022 NCBW hosts twentyfive community college and K-12 bioscience instructors from through- INNOVATERIO out the U.S. for the final phase of the year-long InnovATEBIO Leadership Institute (BLI).

July 2022 Russ Read travels with education, industry, and BioMADE government leaders on BioMADE's nationwide site tour to assess U.S. bioindustrial manufacturing workforce



Biotechnology Workforce (NCBW) at Forsyth Tec awarded \$115,989 from NSF-ATE for an in-depth ellowship program to meet demands for vorkforce-ready biotech professionals.

program showcased at NSF 5–28, 2022 Grand America Hotel poster session.

ATE 2022 HI-TEC Conference

November 2022 The National Center for the