

Lessons Learned during the Bioscience Industry Fellowship Program

Terry Howerton

Atkins Academic & Technology High School

Winston-Salem, NC

The Program

The **2018 Bioscience Industry Fellowship Program** was hosted by the National Center for the Biotechnology Workforce and funded by an NSF-ATE grant (#1304010). Participants resided in Winston-Salem but traveled throughout North Carolina as they did hands-on activities in community colleges and visited several bioscience companies, research centers, and educational programs. The goal of the program is for the participants to explore how the curricula that they teach match with the skills needed

Community College Bootcamps

We did hands-on activities at the following:

National Center(NCBW) Lab—basic lab skills and research

Forsyth Tech Community College— PCR and gel electrophoresis to identify PTC tasters

Rowan-Cabarrus Community College—analytic chemistry on peppers

BioNetwork-Wake Tech Community College—down stream processing and **gowning**

Alamance Community College—Cell Culturing

Guest speakers

Jason Gagliano of the NCBW spoke on bioinformatics

John Merrill of Gateway University Research Park spoke on economic development

Robert Reh fuss of Bucks County Community College, PA spoke on drug development and decisions

Nancy Johnston of the North Carolina Biotechnology Center spoke on leadership qualities

Michael Batalia, Wide Eyed Technologies spoke on technology transfer and intellectual property

Winston-Salem

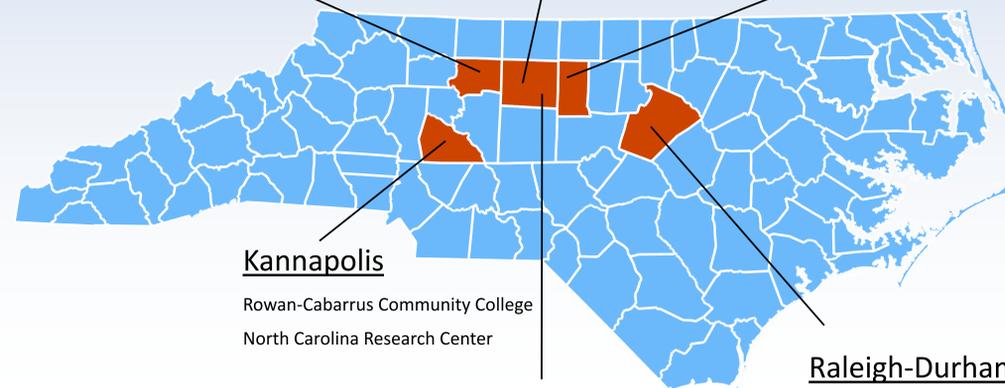
Forsyth Tech Community College
National Center for the Biotechnology Workforce(NCBW)
Wake Forest Institute for Regenerative Medicine

Greensboro

Joint School of Nanoscience and Nanoengineering
Carolina Liquid Chemistries
Piedmont Animal Health

Burlington

Alamance Community College
Carolina Biological Supply



Kannapolis

Rowan-Cabarrus Community College
North Carolina Research Center

High Point

vTv Therapeutics
High Point Clinical Trials

Raleigh-Durham (RTP)

Wake Tech Community College
BTEC @ North Carolina State University
BRITE @ NC Central University
Pfizer Vaccines (Sanford)
Biogen
Novozymes
North Carolina Biotech Center

Careers in Bioscience

We met several people in this industry that were not scientists:

Writers/Communications

Regulatory

Business/Management

Finance

Marketing and Sales

Lawyers/Intellectual Property



Soft Skills

The need for employees with soft skills was probably the most commonly addressed need by the employers with which we met. These soft skills include:

Teamwork— working well with others to accomplish the company goals

Communication— to be able to write well and to present ideas, concerns, and issues to others.

Integrity— to admit mistakes and take responsibility for them.

Humility to do whatever job that may be necessary to accomplish the goal.

Flexibility to change focus and or jobs as needed for your company or the new company that you find yourself working for.

Time management that allows you to complete quality work in the appropriate amount of time to meet the deadlines.

Conclusion

There were 10 participants that were educators or researchers at the university, community college or high school level. Spending a lot of time traveling in a van, we had plenty of opportunity to discuss our individual programs and curricula. The Bioscience Industry Fellowship Program provided us the opportunity to engage in many discussions with industry experts over the three weeks so that we each could access our programs and our contributions to the training of a workforce in the Bioscience industry sector. I think we all came away with a better appreciation and understanding of the skills needed to be a successful employee, the many different jobs can be found in a bioscience company, and how we can improve what we do as bioscience educators.