

Public Health Genomics in Action: State-Based Approach to Genomics and Precision Health

CDC Office of Genomics and Precision Public Health Webinar

North Carolina Biotechnology Center

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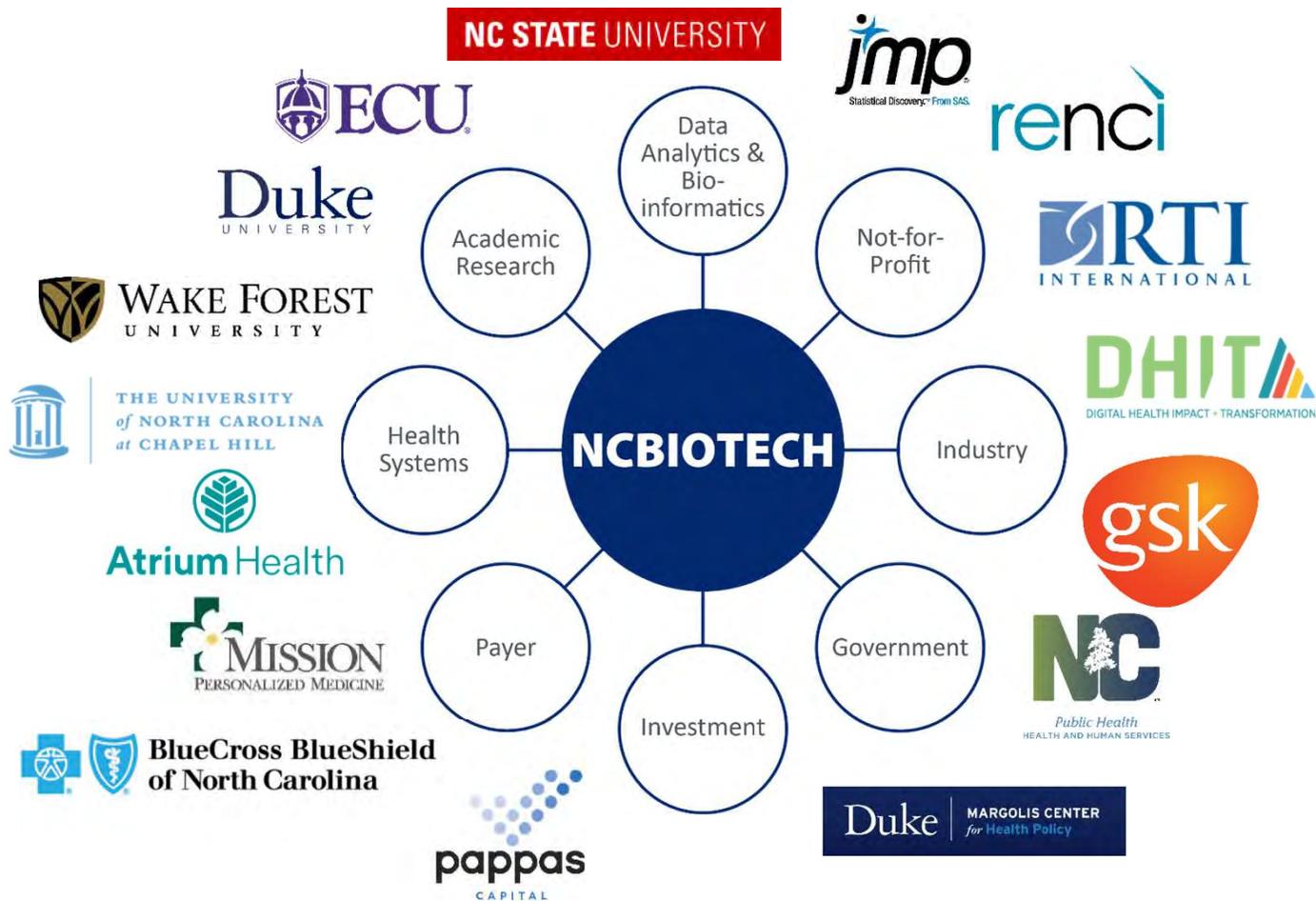


North Carolina Precision Health Collaborative

Presentation overview

- What is it?
- Who are we?
- Highlighted priorities and projects
- North Carolina's thriving – and growing – precision health industrial ecosystem

North Carolina Precision Health Collaborative



Advancing transformative, data-driven precision health through innovation and partnership

Precision Health

Precision Health combines data about an individual's genes, environment, and lifestyle with innovation and diverse partnerships to more precisely predict and diagnose disease, target therapies, and personalize health and wellness plans.



Genes



Environment



Lifestyle

+



Innovation



Diverse Partners

=

Better Health

Precise Prediction and
Diagnosis of Disease

Targeted Therapies

Personalized Care Plans

**NC Precision Health
Collaborative**

powered by **NCBIOTECH**

WHAT IS PRECISION HEALTH?

Precision Health combines data about an individual's genes, environment, and lifestyle with innovation and diverse partnerships to more precisely predict and diagnose disease, target therapies, and personalize health and wellness plans.

Innovation

Analytics

Data analytics, AI, and digital health to enhance clinical prediction, tailor treatments, improve quality, and optimize resource utilization.

Life Science Innovation

End-to-end support of Precision Health: discovery research, product development, translation, delivery and impact.

Clinical Research

Clinical and pragmatic trials on subpopulations to increase intervention effectiveness and safety, new indications, and generate real-world evidence.

Targeted Therapies

Targeted therapies based on multiple data, including an individual's or population's genetic makeup and disease subtype.

Pharmacogenomics

Right patient, right dose, right drug, right time: greatest impact with integrated clinical decision support.

Diverse Partnerships

Healthcare Providers

Engage patients, and utilize precision health tools and bioinformatics, for point-of-care personalized medicine.

Hospitals/Clinics

Implement precision health technologies, including clinical decision support, to more precisely stratify and treat patients.

Public Health

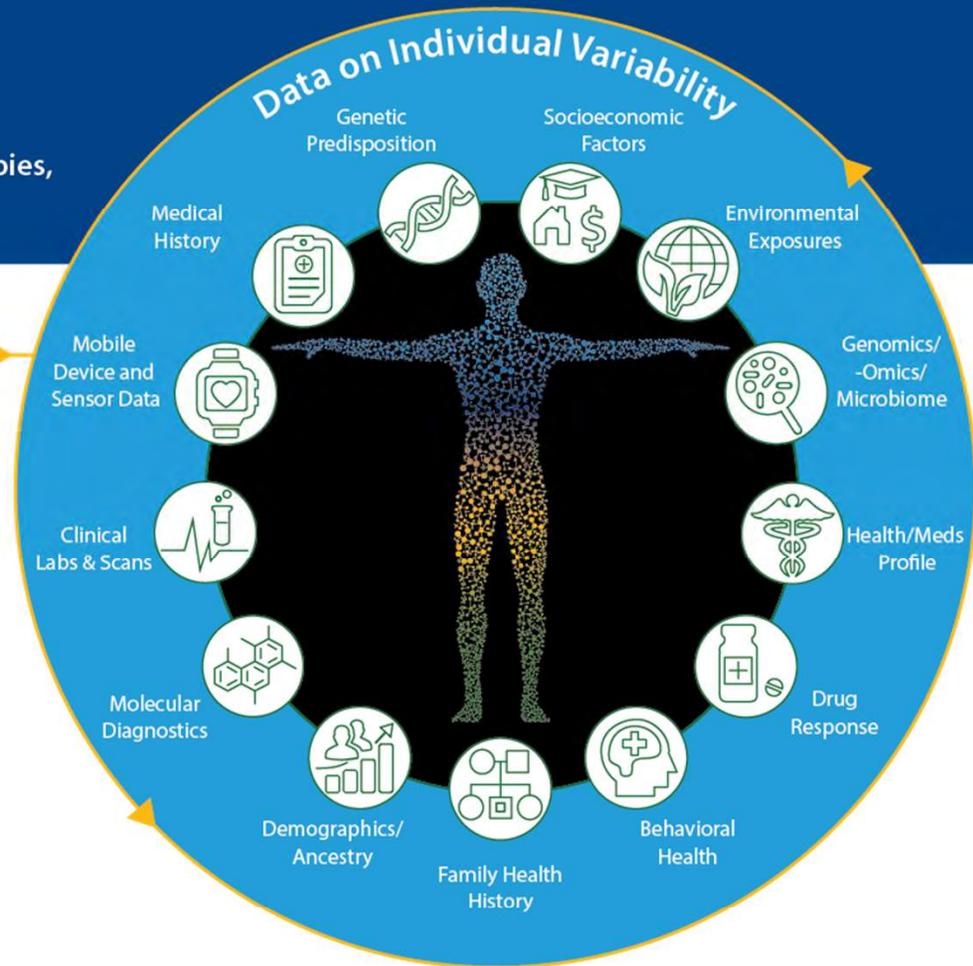
Apply precision health tools to target disease prevention and improve population health: right intervention, right time, to right population.

Policy Influencers

Work with regulators, industry, payers and policy influencers to advance precision health innovation through impact and reimbursement.

Healthcare Purchasers

Involve employers and consumers of healthcare in actionable precision population health strategies for improved outcomes.



Outcomes:

(for individuals or populations)

Precise Prediction and Diagnosis of Disease

Targeted Therapies

Personalized Care Plans



NC Precision Health Collaborative

powered by **NCBIOTECH** in partnership with **DHIT**



NCPHC Priorities / Projects

Precision Population/Public Health

- **CHAMPPS: Cancer & Hereditary disease Management & Pharmacogenomics - Population Screening**

Pharmacogenomics (PGx)

- Strong team statewide, focus on research, implementation and education

Education * Policy

- Convening; produce educational materials; engage Duke Margolis Ctr for Health Policy/PMC; NC DHHS state genetics plan

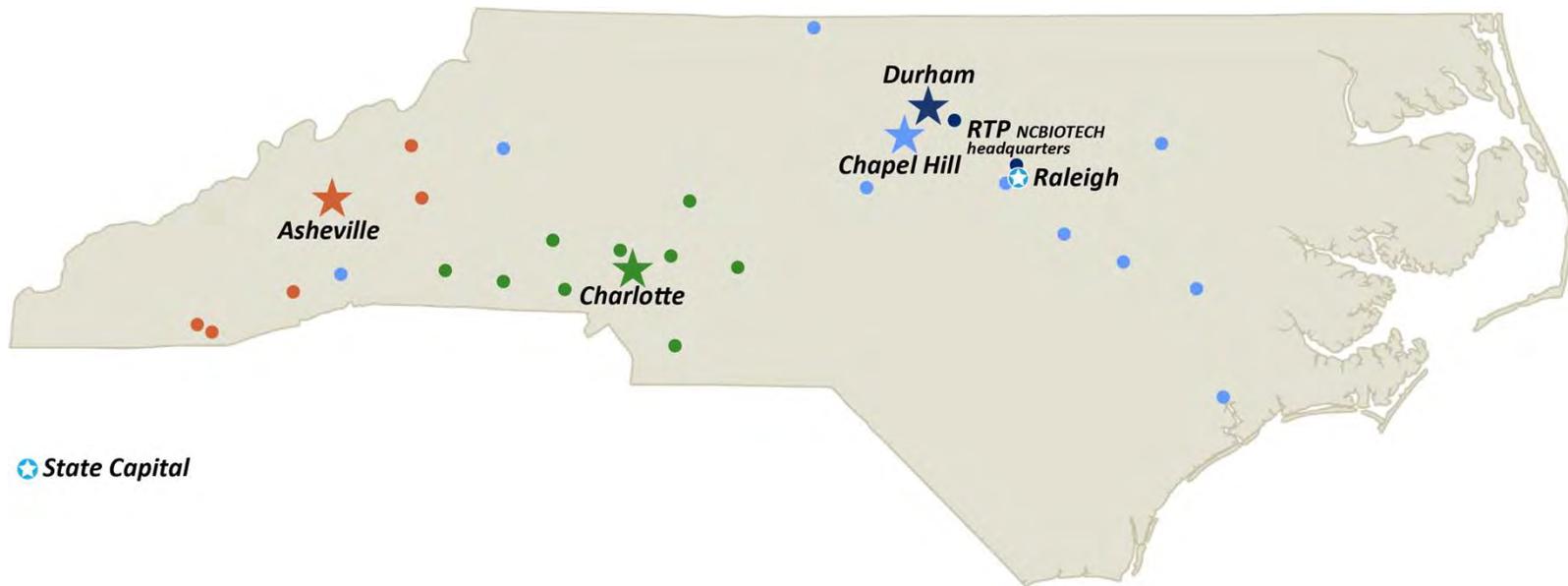
Data * Analytics/Informatics * Digital Health

- Coalesce assets, coordinate projects, embark on data sharing/standards

Economic Development

- Recruit collaborators and companies to NC

North Carolina's multi-institutional PGx efforts with the NC precision health collaborative



★ State Capital

Levine Cancer Institute, Atrium Health

★ Hub city ● Affiliated sites

Mission Health, HCA Healthcare

★ Hub city ● Affiliated sites

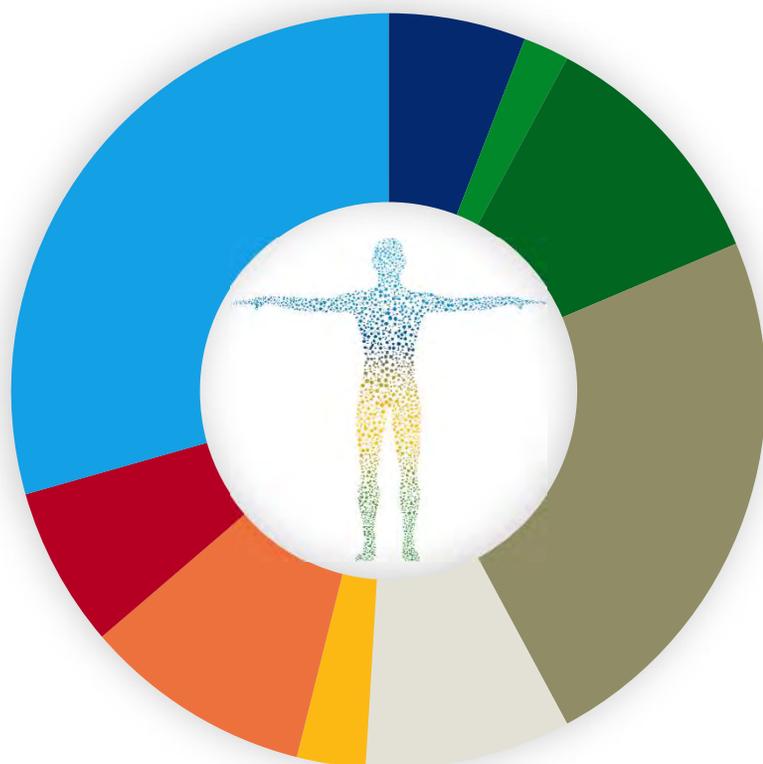
Duke University and Duke Health System

★ Hub city ● Affiliated sites

University of North Carolina at Chapel Hill and UNC Health

★ Hub city ● Affiliated Sites

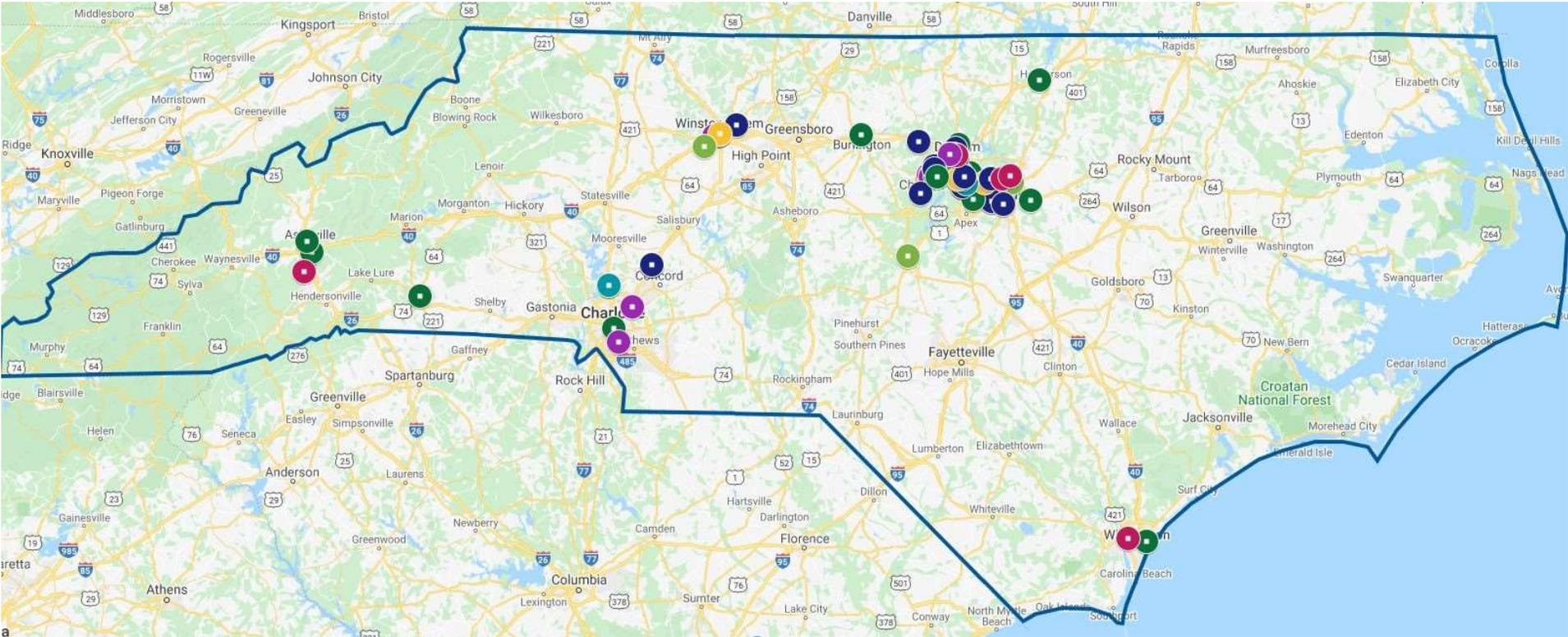
NC Precision Health Industrial Ecosystem – by Organization Type

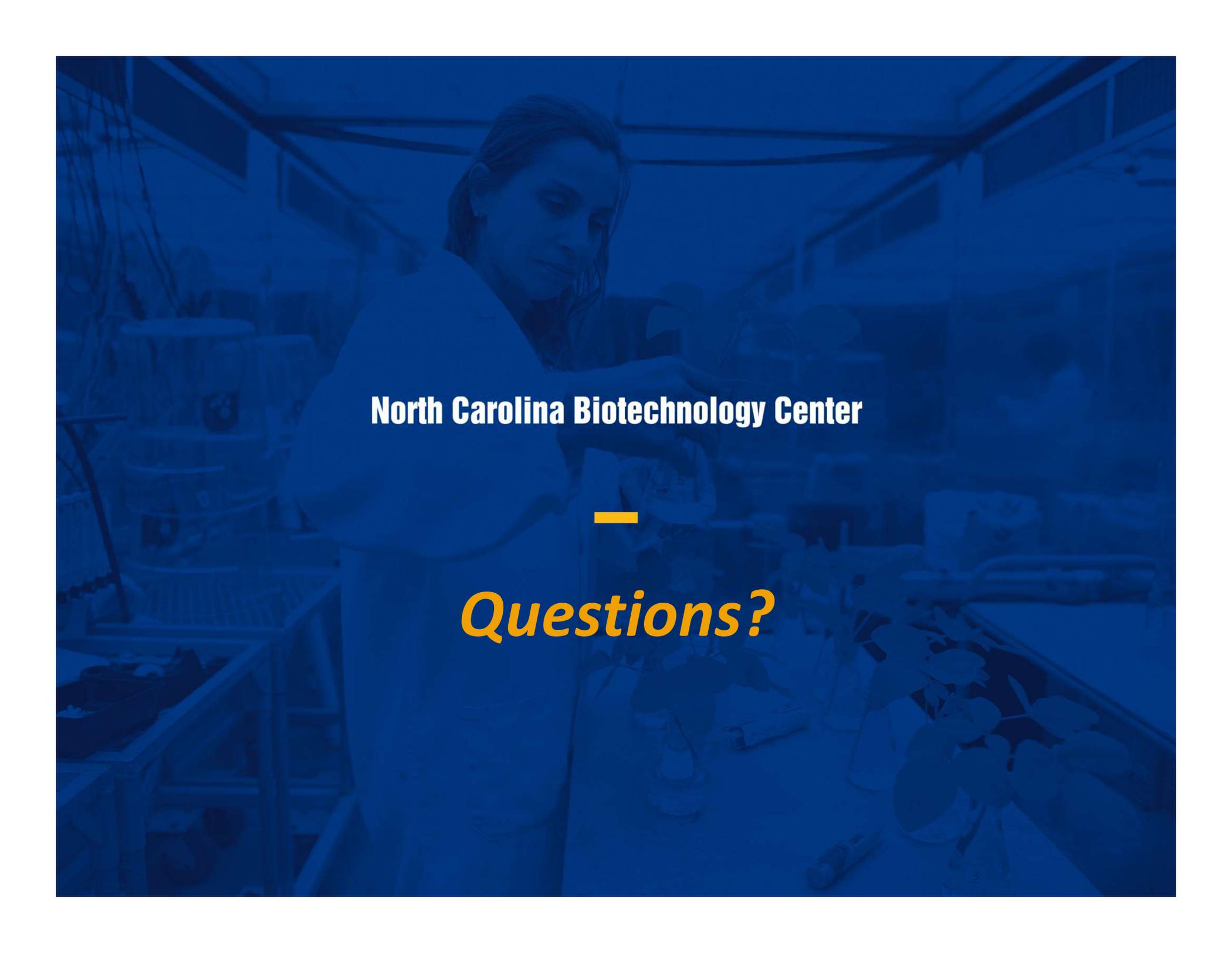


- Clinical Research
- Consulting
- Data, Informatics and Digital Health
- Diagnostics
- Education and Advocacy
- Other
- Research Tools
- Targeted Therapeutics – Biomanufacturing
- Targeted Therapeutics – R&D

NC Precision Health Industrial Ecosystem – by Geography

- Targeted Therapeutics - R&D
- Diagnostics
- Other
- Data, Informatics and Digital Health
- Targeted Therapeutics - Biomanufacturing
- Education and Advocacy
- Clinical Research



A woman in a white lab coat is working in a laboratory. She is holding a small container and looking at it. The background shows laboratory equipment and shelves. The entire image has a blue overlay.

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Questions?