NC Precision Health Collaborative (NCPHC)

Opportunities for Duke Genomic & Precision Health Leaders

North Carolina Biotechnology Center

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Duke Center for Applied Genomics & Precision Medicine

ncbiotech.org
NC Biotech Center

*NCBiotech transforms North Carolina through life sciences.*

- Independent, non-profit with a 30+ year history of creating unique public-private partnerships that cross traditional organizational boundaries.

- We champion technology and company development, career growth, emerging life science sectors and company recruitment, AND our state benefits from the creation of jobs, tax revenue and global business opportunities.

https://ncbiotech.sharefile.com/d-s9635fb3ddda45a0a
Statewide Impact
NCBiotech Funding

University Technology Development and Company Startup and Growth

- Institutional Development Grant (IDG)
- Gene Therapy Fellowship (GTF)
- Biotechnology Innovation Grant (BIG)
- Technology Enhancement Grant (TEG)
- Small Business Research Loan (SRL)
- Strategic Growth Loan (SGL)
What partners and experts should I be working with?

What are the literature or patent trends around my technology?

What are potential funding sources for me?

Who are my competitors and what are they doing?

What is the market size for my product?
Regional and Sector Development

Ag Biotech  Bio Defense  Contract Research  Marine Biotech  Precision Health
North Carolina Precision Health Collaborative

Advancing transformative, data-driven precision health through innovation and partnership
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 to enhance clinical prediction, personalize therapeutics, 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.

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**Individual Variability**

- Genetic Predisposition
- Socioeconomic Factors
- Environmental Exposures
- Genomics/Omics/Microbiome
- Health/Meds Profile
- Drug Response
- Mobile Device and Sensor Data
- Clinical Labs & Scans
- Molecular Diagnostics
- Demographics/Ancestry
- Family Health History
- Behavioral Health

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**Outcomes:**

- Precise Prediction and Diagnosis of Disease
- Targeted Therapies
- Personalized Care Plans

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**NC Precision Health Collaborative**

powered by NCBIOtech in partnership with DHIT
The development of guidelines on genomic screening in the healthy adult population and ready cost coverage by payers for services related to genomic screening and follow-up will be contingent on pilot studies and data aggregation that demonstrate a sufficient evidence base.

“When stakeholders believe there is sufficient evidence to support screening then offering such screening becomes standard of care for clinical practice and is carried out in clinicians’ offices or other health care settings.”
Research – CHAMPPS pilot

- Implementing Genomics-Based Screening Programs for Healthy Adults
  - Cancer and Hereditary disease Management & Pharmacogenomics – Population Screen (CHAMPPS)

Engage/educate NC-based self-insured companies

Results / Counseling

Survey participants: Clinical feasibility/utility

Employer opts OUT

Employer opts IN Employees enroll

Personalized Health + Prevention Plan
Education / Policy

- PGx educational programming
  - Working with NC health care professional associations

- NC BIO / BIO
  - Life Science Caucus – NC General Assembly

- NC DHHS:
  - State Genetics Plan Update; Public Health

- Personalized Medicine Coalition (PMC)
  - DC policy meetings, annual meeting, April 9 forum

- Strong relationship with the largest statewide insurer: BCBSNC
Digital Health

- Recognition of strength at Duke in this space
- Partnership with Digital Health IMPACT + Transformation (DHIT)
  - DHIT Summit – IMPACT committee work in 2019
  - Emphasis on connection to “DEMAND” side
Economic Development

- Ecomap deck – describing our ecosystem
- 170+ Precision Health companies in NC – contributing to innovation, economics, and health outcomes, statewide
# IMPACT

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Questions?

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