

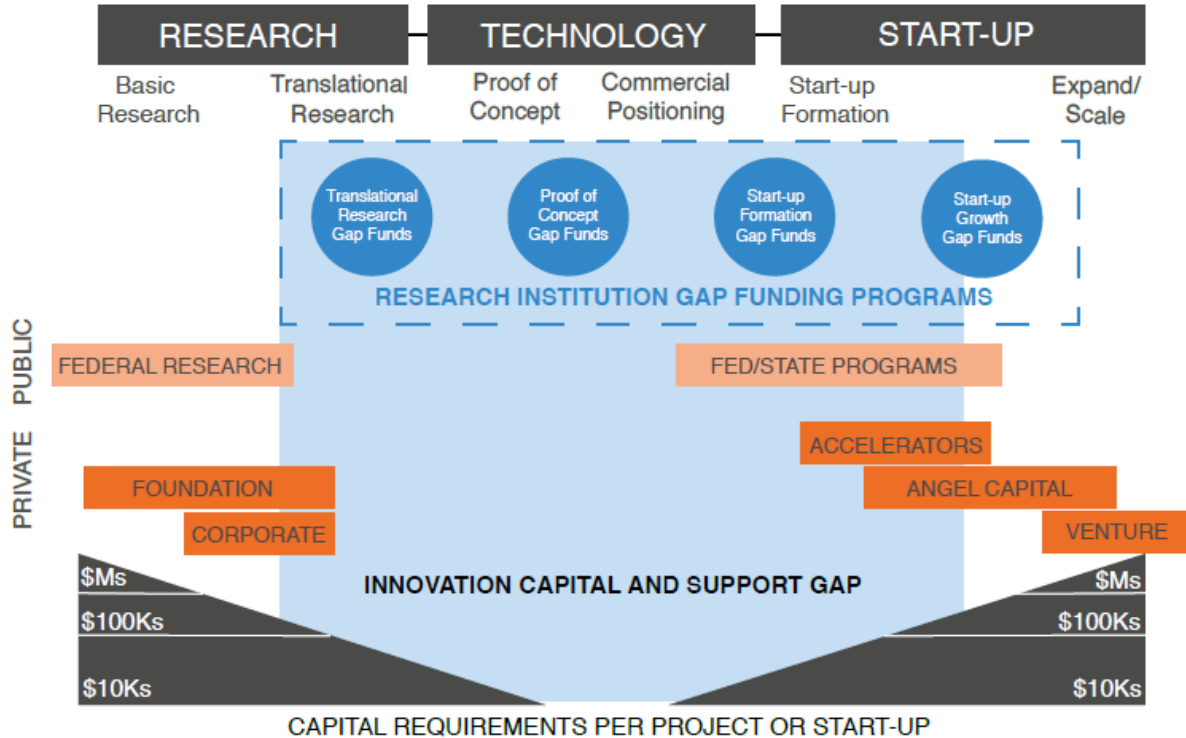


**Technology
Commercialization**

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Seraph Biosciences

EARLY STAGE INNOVATION: TRANSLATION AND FUNDING



Adapted from Innovosource, *Mind the Gap*, 2015



Leverage and Convergence

**NCAI: NIH Centers for
Accelerated Innovations**

**REACH: Research Evaluation
and Commercialization Hubs**



NIH: Commercialization Innovation: Concept to Clinic (c3i)



TECHNOLOGY COMMERCIALIZATION



Seraph Biosciences



QURGEN INC.
Fuent Biotechnology



RetroSense Therapeutics

E2I | ENERGY EMISSIONS INTELLIGENCE



Seraph Biosciences

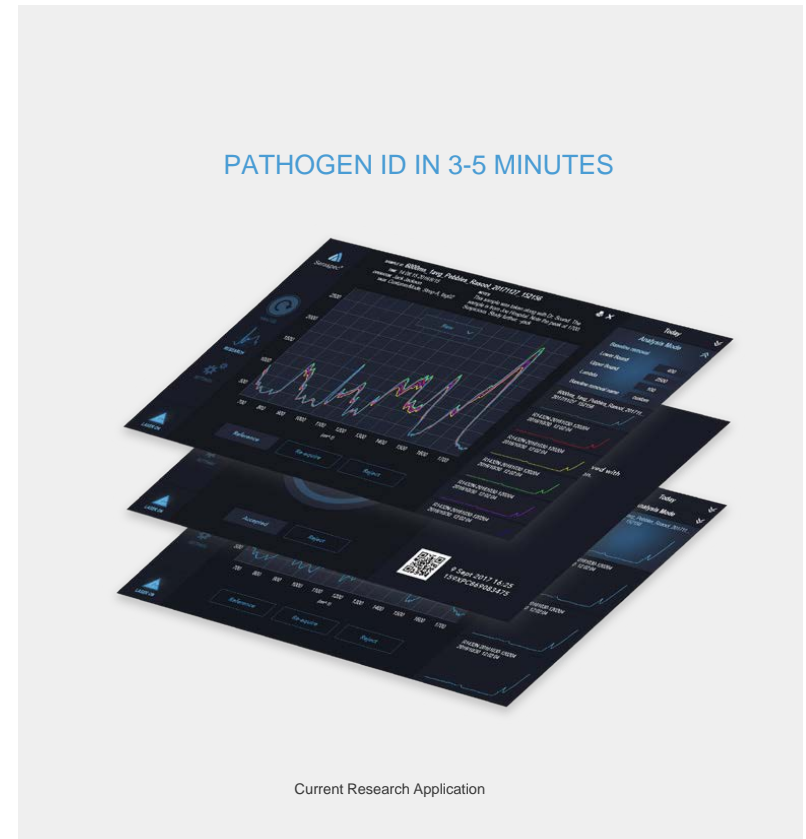
*Capable of broad-based pathogen identification (ID)
in 3-5 min and Antibiotic Susceptibility Testing (AST)
in under an hour.*





Seraspec®
Real-time pathogen ID

*No Reagents
Direct from Sample
Disposable Cuvette*





Other Human Health Applications



Retail Health Clinics



**Real-time Biointelligence
Epidemiologic Tracking**



**Real-time Environmental Monitoring
and Agent detection**



Incorporated in 2017

Closing of Series A and addition of Management Team



9 Employees / 23 Full Time Equivalent positions

Added 2 full time roles during COVID



~\$12.5M capital raised to date from MI Investors

Currently raising \$25M



+\$3M in Sponsored Research back to WSU

Leverages +\$10M in basic research through State and Federal grants



Critical programs we have benefited from

Invest Detroit, Renaissance Ventures, TSS Program, MIR/T3N, TechTown





Finding non-automotive talent can be a challenge

Diversity in the job market benefits both startups and later stage companies



Mentor Programs benefit companies at all stages that could not otherwise support experience

During my time as a mentor – I supported as many as 12 new businesses to help ensure they were sustainable



Foundational or “critical mass” of talent is key to ensuring start-up success

Must solve the “chicken and egg problem”

Michigan’s MEDC funded programs are critical to level the playing field



Prioritized virus detection



Cut operational spending across the board

50% reduction on average



Secured \$2.5M in bridge financing

Currently raising \$25M



Benefited from several programs

PPP, TSS, Key Vendor / Community Support



Continued to grow and have successes

Driven home the need for POC testing

Filed additional patents

Hired 2 additional heads during COVID

New opportunities for grants and follow-on funding

