Spring ‘26 Event:
PHT180 Refresher

MARCH 16, 2026

PHT180 Overview

Creating the future of healthcare through ground-breaking technologies & radical collaborations

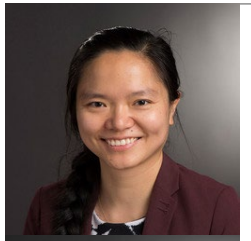
145
affiliates

9
RIT colleges

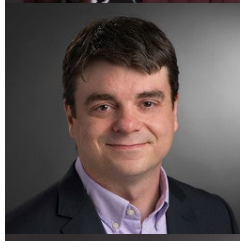
79
active awards

91
submitted proposals in FY26 (so far)

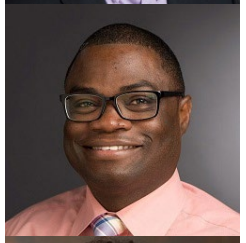
PHT180 Leadership and Staff



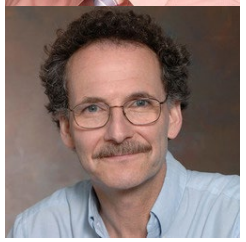
Linwei Wang
GCCIS



Adam Smith
CAD

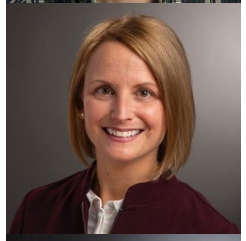


Andre Hudson
COS

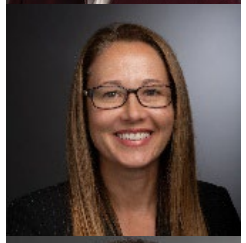


Dan Phillips
KGCOE

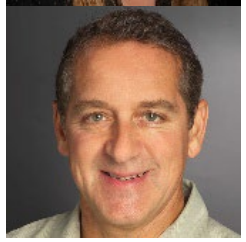
Esa Rantanen
CLA



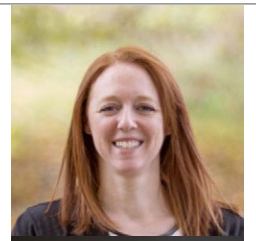
Karin Wuertz-Kozak
KGCOE



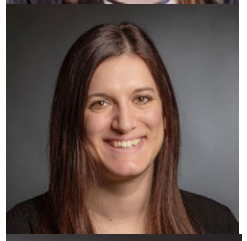
Pamela Beach
CHST



Chris Bondy
GCCIS



Gina Lamanna
Research Program Administrator



Nicole Hale
Research Development Specialist

Terry Koo
Senior Research Development Specialist

PHT180 Services

Pre-Award Support

Personalized grant opportunity scouting & proposal development support

Grant review roundtable

Grant writing workshops

Post-Award Support

SRS & SPA collaborative liaison

Administrative support

Sponsor reporting support

Creative Services

Illustrations

Website support

Design (Information, Graphics & Presentations)

Animation (2D and 3D)

PHT180 Research Areas

Accessibility

Accessible technology, physical interventions and therapies

Dan Phillips, KGCOE

Intelligent Systems

AI, ML, data science, imaging

Linwei Wang, GCCIS

Behavioral Health

Telehealth, web and mobile interactive platforms, mental and behavioral health

Pamela Beach, CHST

Biotechnology

Bioengineering, tissue engineering, fluid mechanics, medical devices

Karin Wuertz-Kozak, KGCOE

User Experience Design

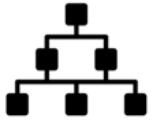
Interactive user engagement, design, human-computer interaction, data visualization, marketing

Adam Smith, CAD

Social and Human Computing

Language science, human factors, public health, psychology

Esa Rantanen, CLA



Systems, Processes, and Workflows

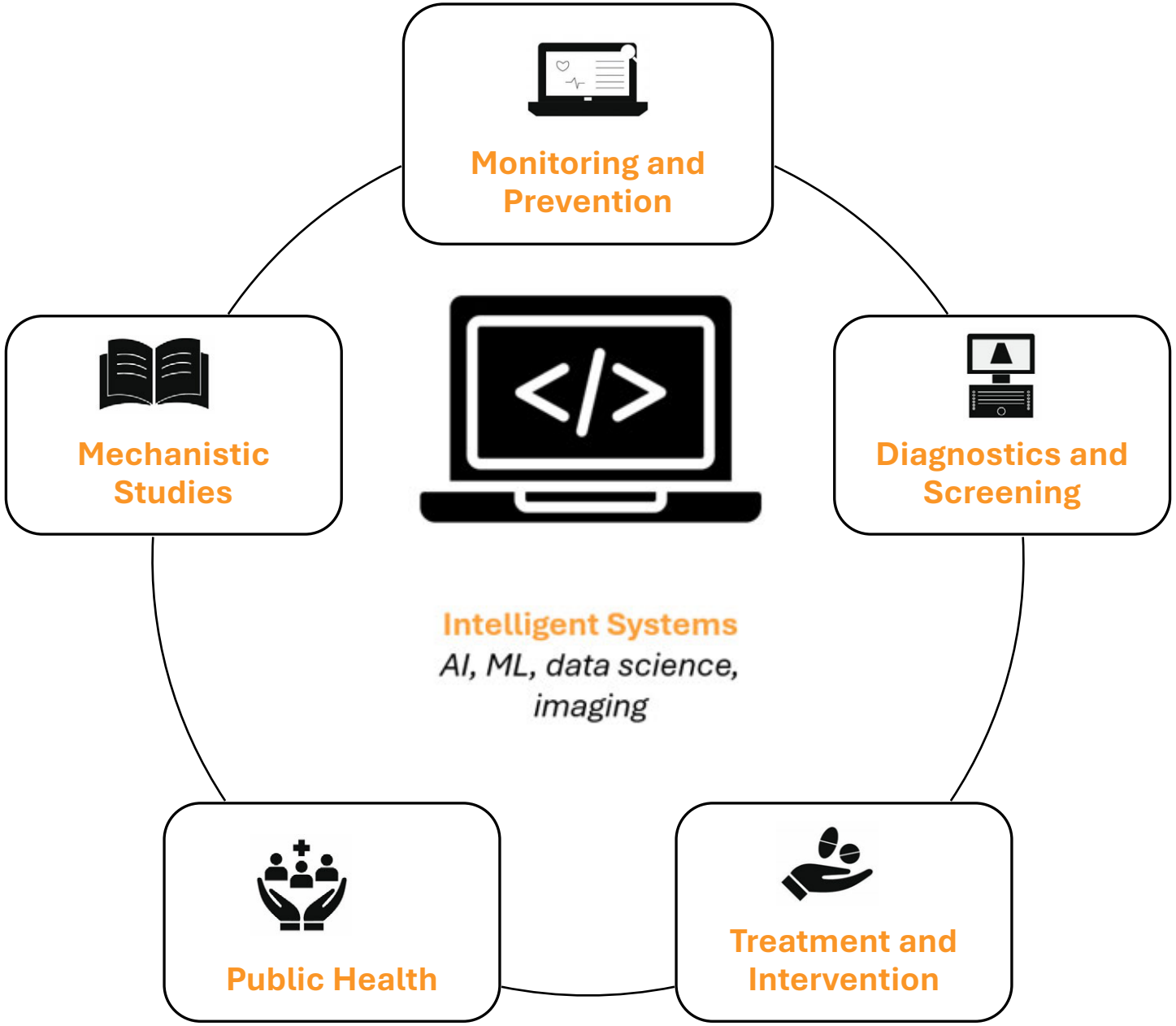
Data analytics, healthcare systems, information science, economics

Chris Bondy, GCCIS

Fundamental/Basic Science

Drug development, chemical synthesis, computational and mathematical biology, biochemistry, biophysics

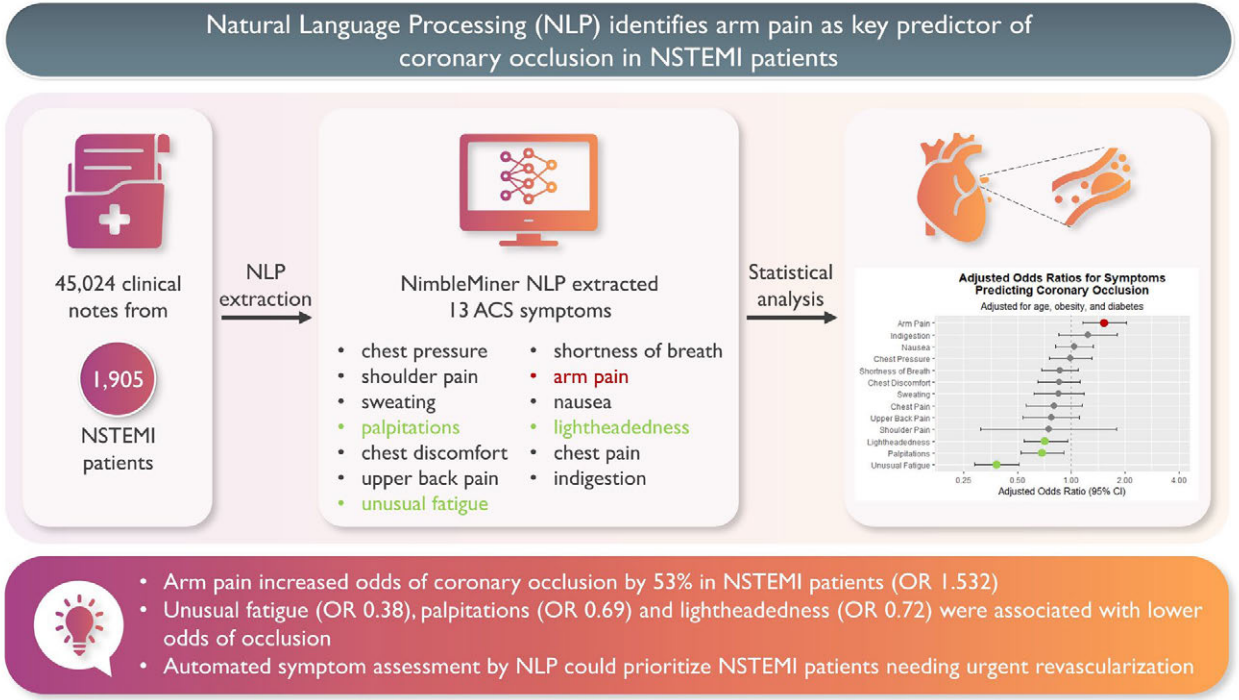
Andre Hudson, COS

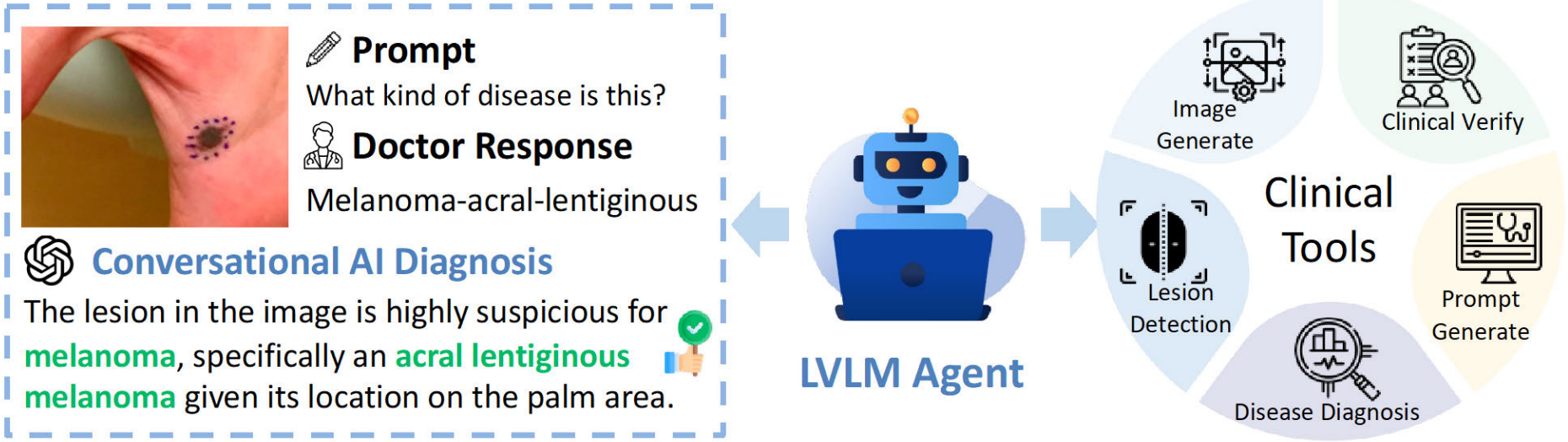

Monitoring and Prevention
Diagnostics and Screening
Treatment and Intervention
Public Health
Mechanistic Studies
Intelligent Systems
AI, ML, data science, imaging

Diagnostics and Screening

Occlusion Myocardial Infarction
(Linwei Wang, GCCIS)

Dermatology AI Agent
(Zhiqiang Tao, GCCIS)

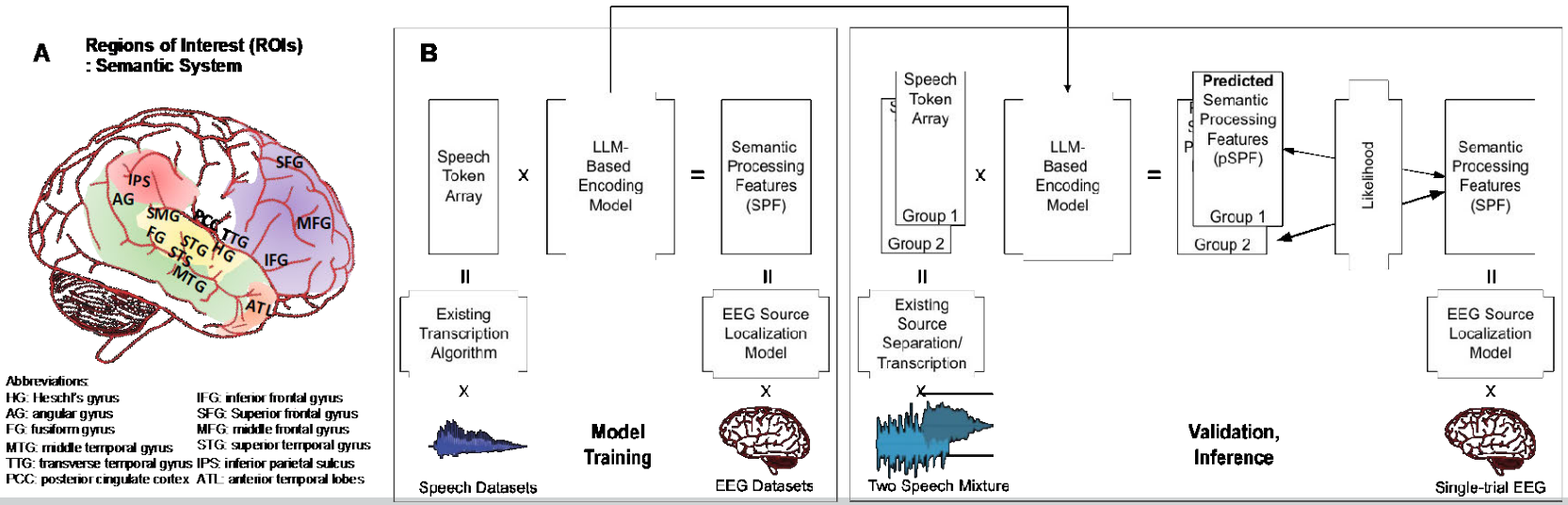




Treatment and Intervention

Treatment outcome prediction
(Dongfang Liu, KGCOE)

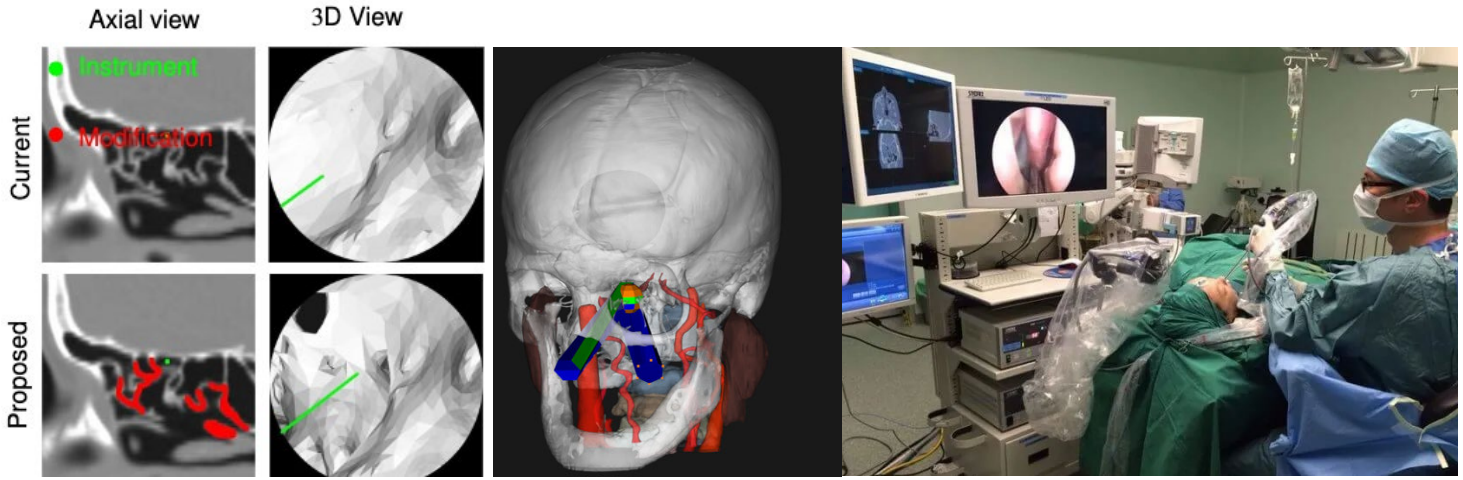
Improve hearing ability
(Hwan Shim, CET)

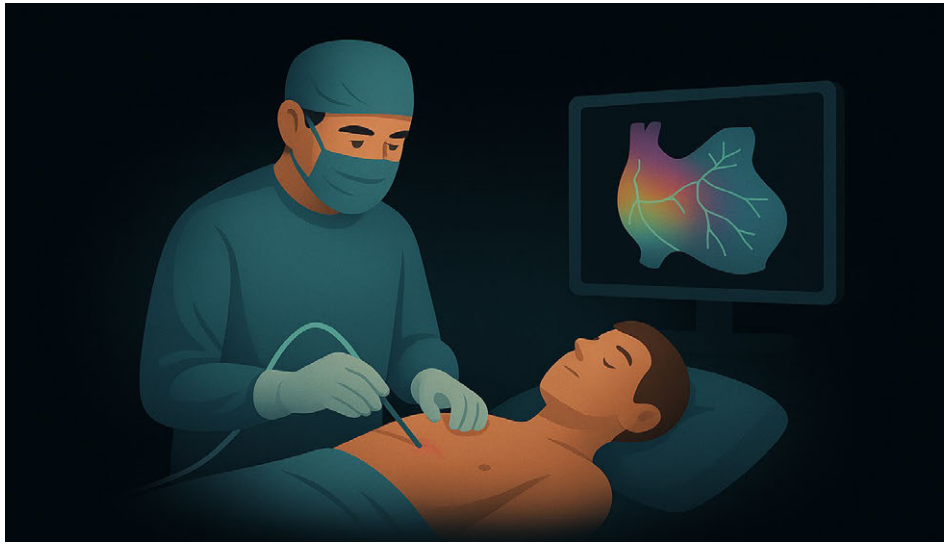


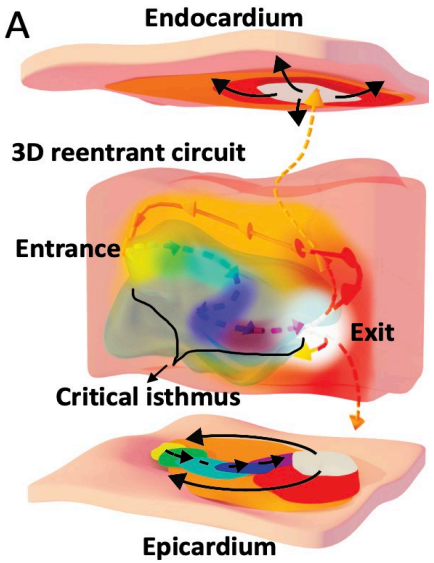
Treatment and Intervention

Image-guided and robotic surgery
(Yangming Lee, CET)

Arrhythmia ablation guidance
(Linwei Wang, GCCIS)



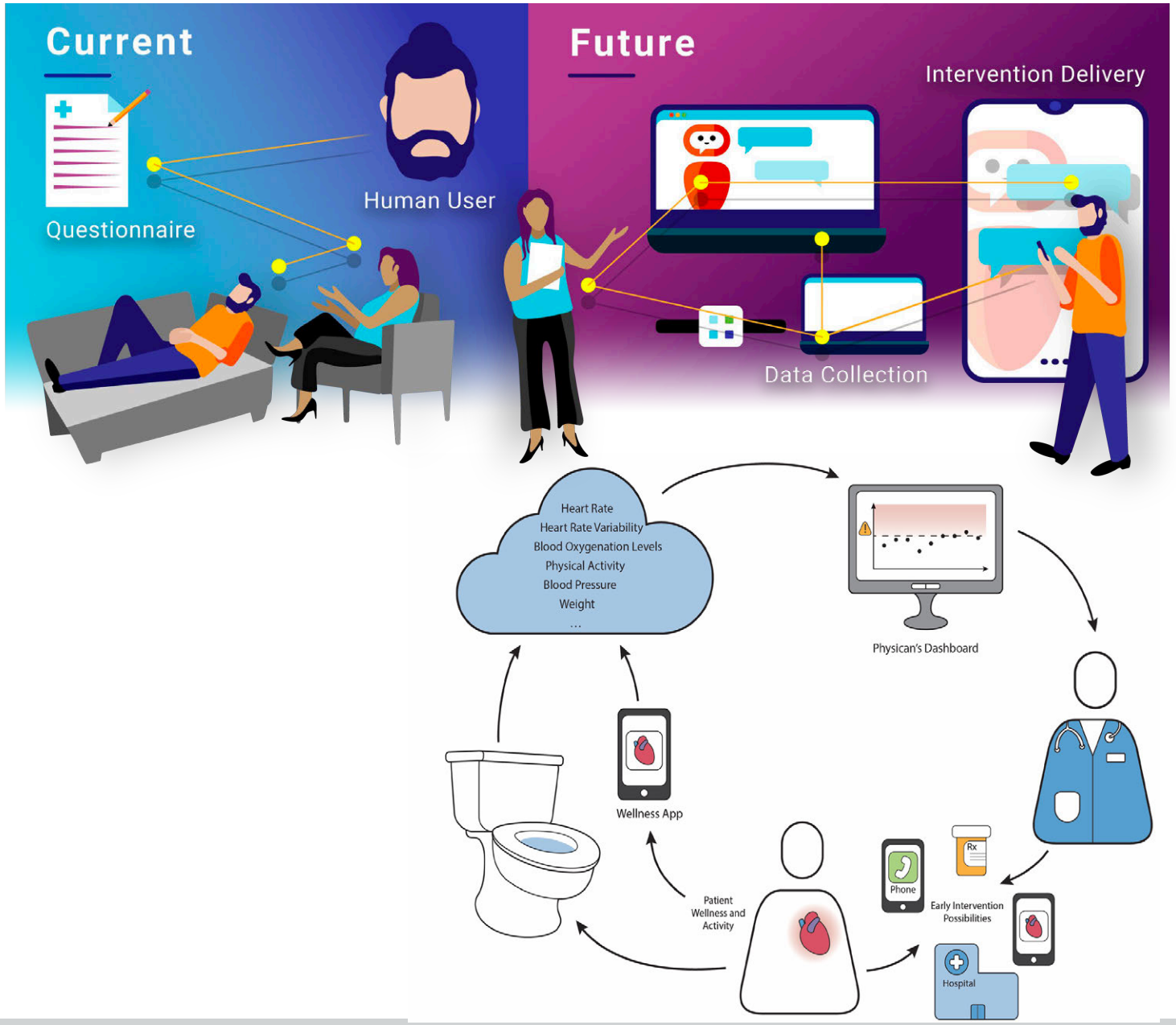




Monitoring and Prevention

AI for mental health and addiction
(Linwei Wang, GCCIS,
and Ali Tosyali, SCB)

In-home monitoring of heart failure
(Linwei Wang, GCCIS)



Public Health

WIC workforce training
(Elizabeth Ruder, CHST)

Interpersonal violence
(Christopher Homan, GCCIS)

Exploration	Preparation	Implementation	Sustainment

Formation of WIC Workforce Advisory Board (WWFAB)
 	
Project Team launch iterative Delphi process including: design thinking activity to identify user groups and gather information about scholarships, WIC workforce skill/requirements and training programs.
 	
FY 2025 Deliverables include:
• Convening of WWFAB
• Web crawlers to identify relevant information
• Crosswalk summary of data collected from WWFAB and web crawlers
	Plan for integrating outcomes of exploration phase into 1) identify potential scholarship/funding opportunities for various WIC career paths; 2) identify strategies to increase reach and retention of BIPOC applicants for the scholarship pool; 3) select at least 1 scholarship path to pilot test and plan supporting process for pilot
	
	FY 2026 Deliverables include:
	• Evaluation plan for identified scholarships/ funding/training
	• Identification of key resources needed for successful implementation
	• Preliminary version *of NutriScholar* clearinghouse
	• Initial large language model training of chatbot
		Pilot study of WIC WF Scholarship
		
		Launch *of NutriScholar* online clearinghouse
		
		Expert Facilitation Strategies
		• Support Diversify Dietetics to track and report key metrics of pilot
		  • Marketing analytics/engagement/views
		  • Applicant Q&A sessions
		  • Number of applications received
		  • Number of applications awards
		  • Demographics of applicants
		FY 2027-2029 Deliverables include:
		• Awarded scholarships
		• *NutriScholar* Clearinghouse
			Synthesize findings from pilot process, including challenges and potential solutions
			
			• Create a sustainability action plan within the long-term implementation plan
			• Identify key steps and funding needs
			• Provide recommendations on leveraging big data and machine learning to predict the future success of scholarship recipients
			• Budget action planning

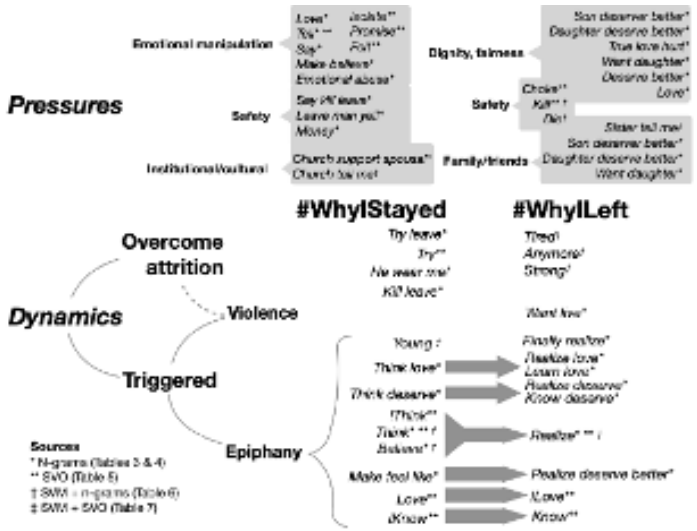
Inner Context: individual scholarship requirements, staffing, workplace climate within given WIC agency, existing infrastructure within a given school/training program

Outer Context: WIC State and local agency needs, Dietetics training program requirements/changes, scholarship funding landscape changes

Innovation: application of LLM and other data science approaches to summarize necessary and viable features of an active, searchable platform to connect potential scholars/trainees with relevant mechanisms

Bridging: process data across all objectives will support identification of necessary structures, including formal and informal partnerships that may be necessary for sustainability.

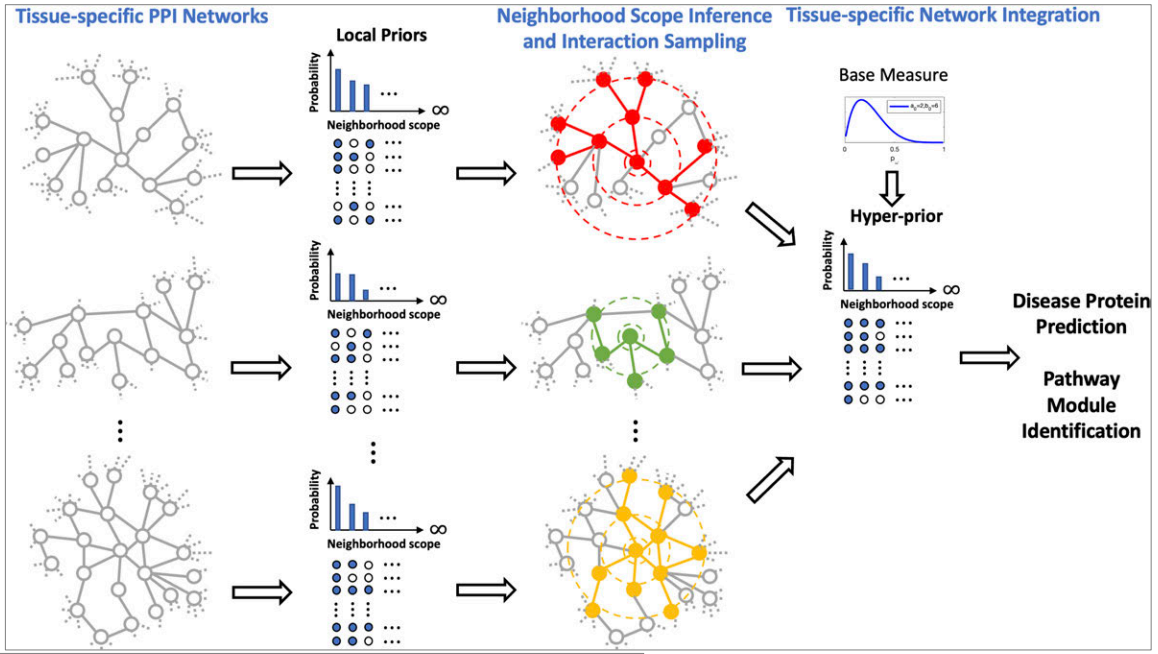
Figure 1. Overview of key across the Exploration, Preparation, Implementation, Sustainment (EPIS) Framework phases



Mechanistic Studies

Large-scale disease pathways
(Rui Li, GCCIS)

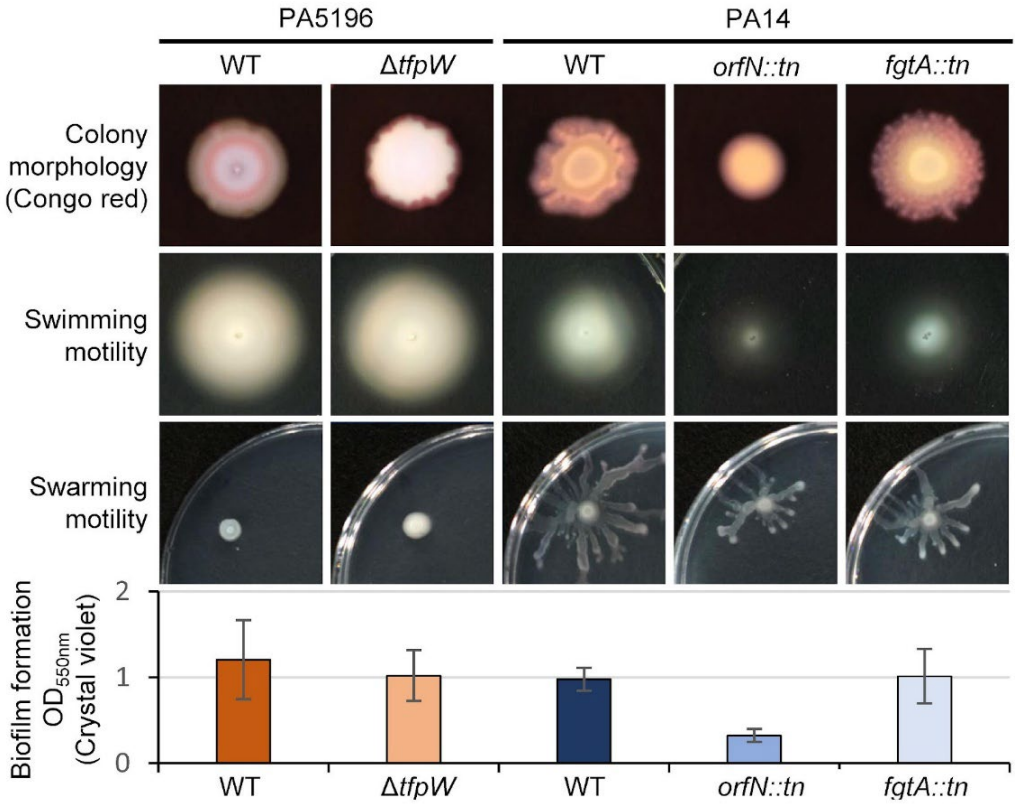
Nanobody sequencing
(Haibo Yang, GCCIS)

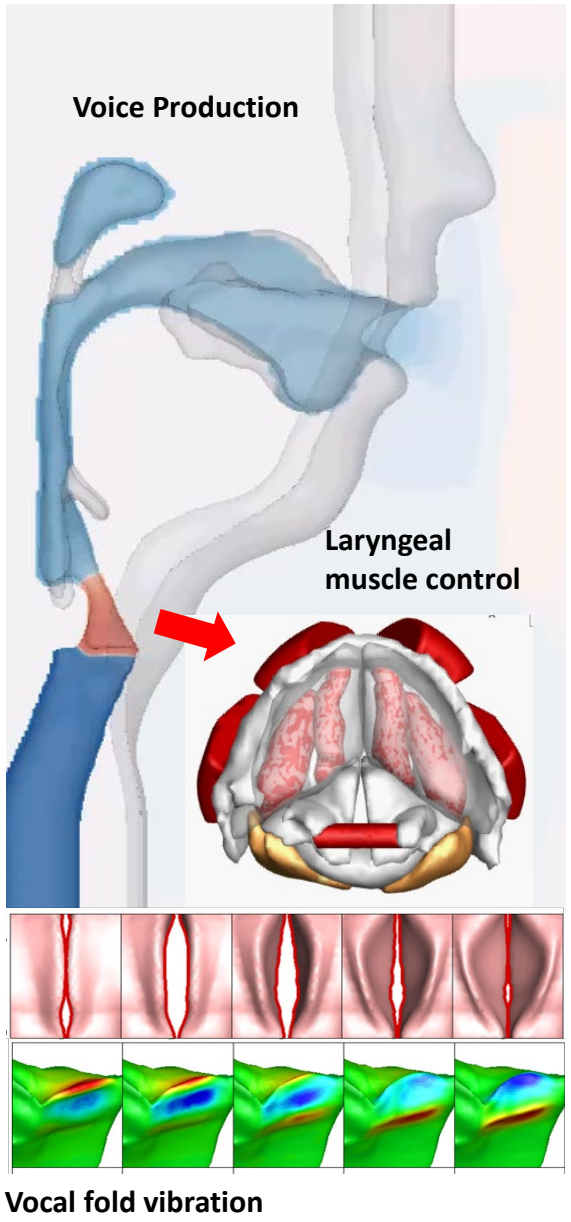


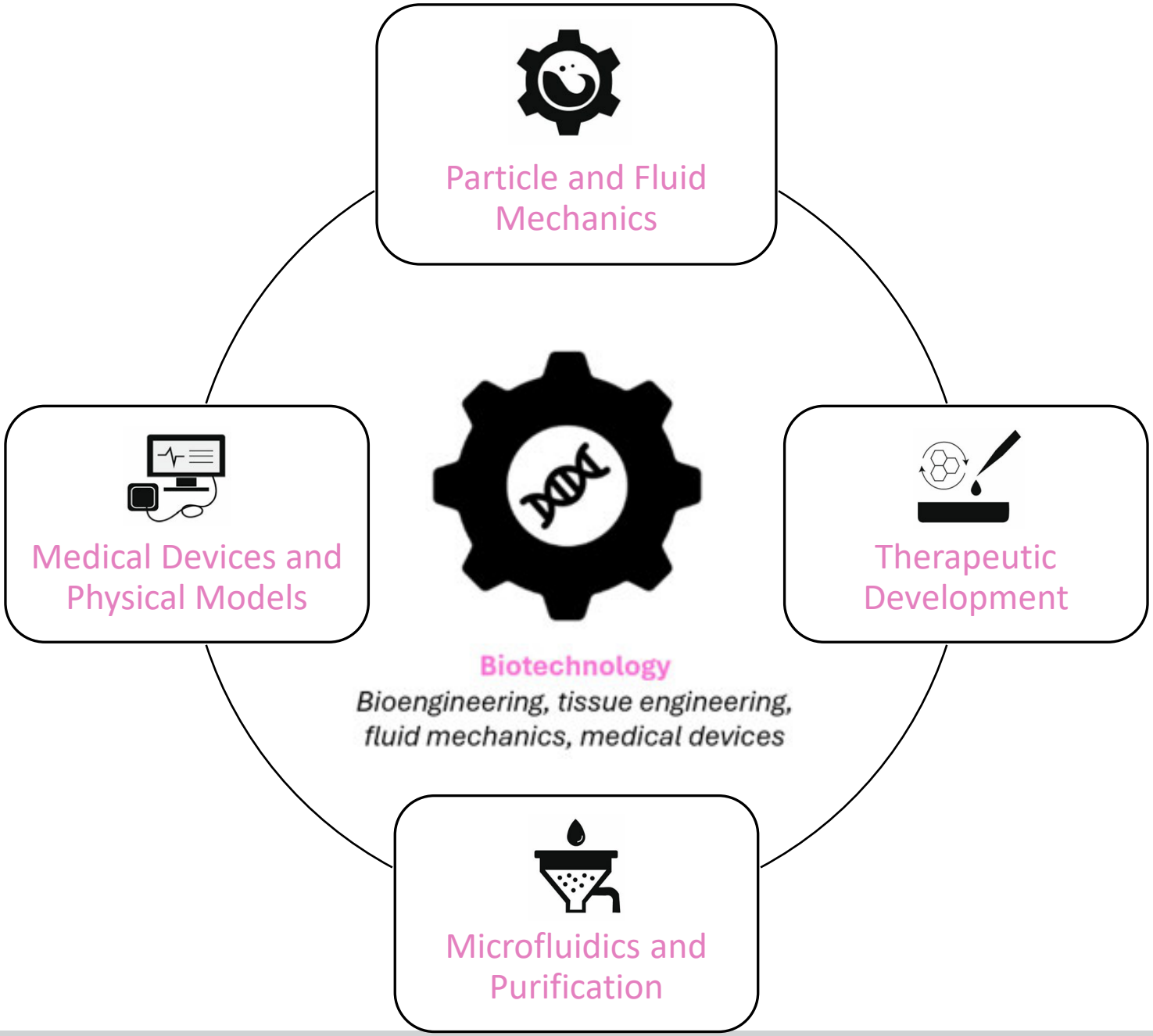
Mechanistic Studies

Voice control and production
(Qian Xue, KGCOE,
and Xudong Zheng, KGCOE)

Bacterial proteomics
(Stefan Schulze, COS)





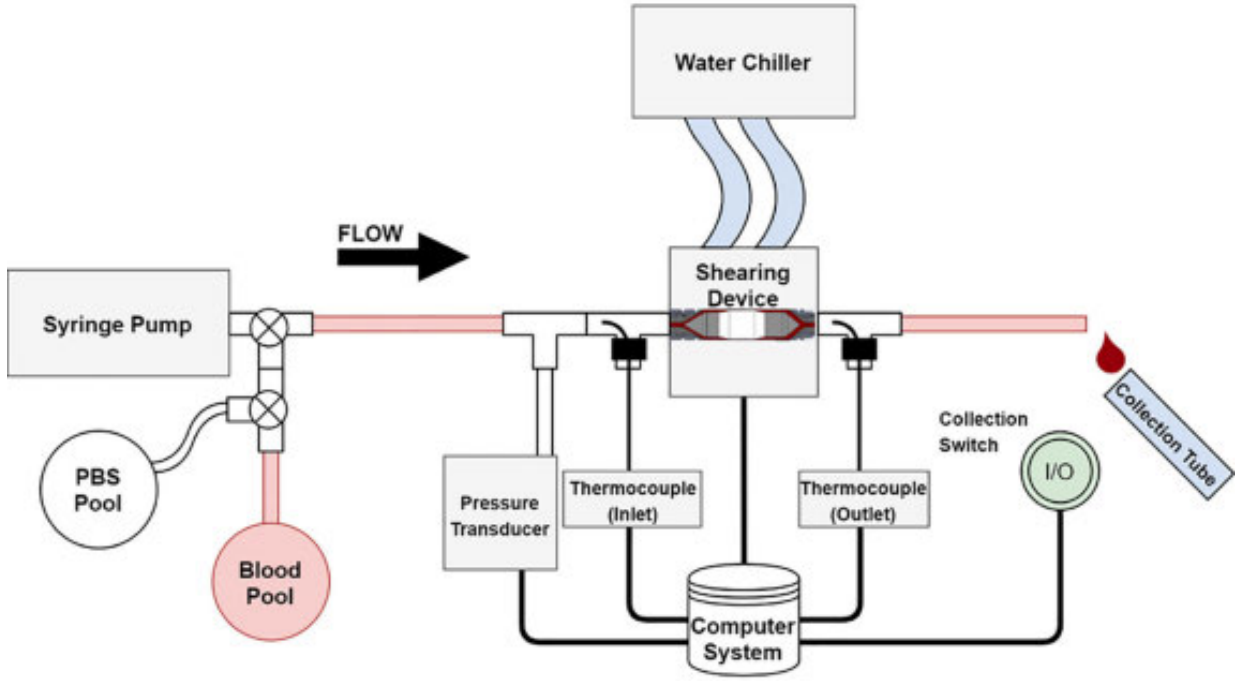

Particle and Fluid Mechanics
Medical Devices and Physical Models
Therapeutic Development
Microfluidics and Purification
Biotechnology
Bioengineering, tissue engineering, fluid mechanics, medical devices

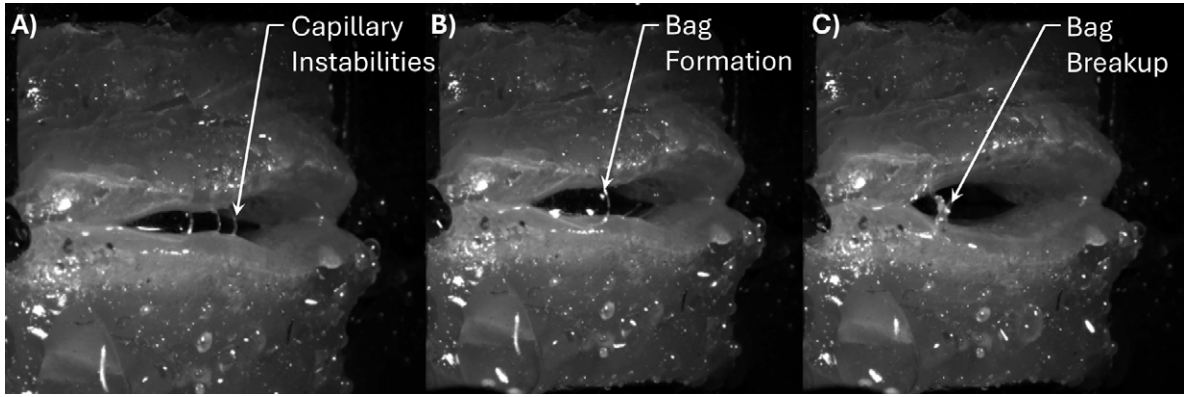
Particle and Fluid Mechanics

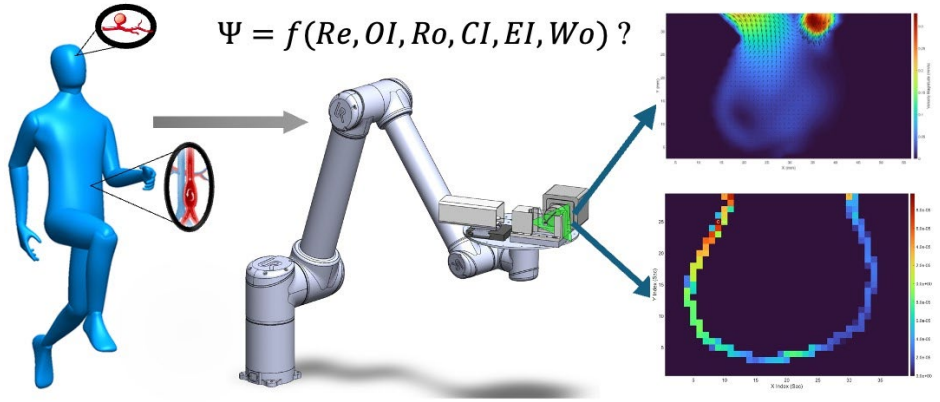
Ventricular assist devices
(Steven Day, KGCOE)

Blood flow dynamics
(Zhongwang Dou, KGCOE)

Particle production mechanics
(Byron Erath, KGCOE)





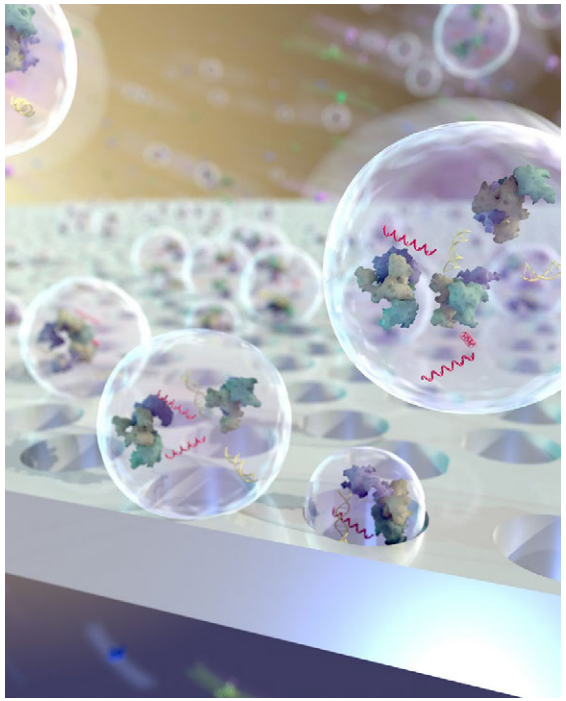


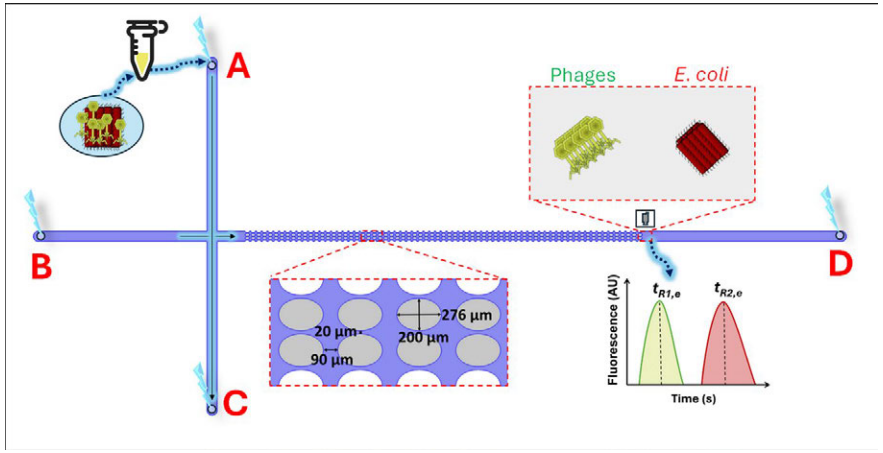
Microfluidics and Purification

Size-selective membranes
(Tom Gaborski, KGCOE)

Nonlinear electrophoresis
(Blanca Lapizco-Encinas, KGCOE)

Electrokinetic workflow
(Blanca Lapizco-Encinas, KGCOE)

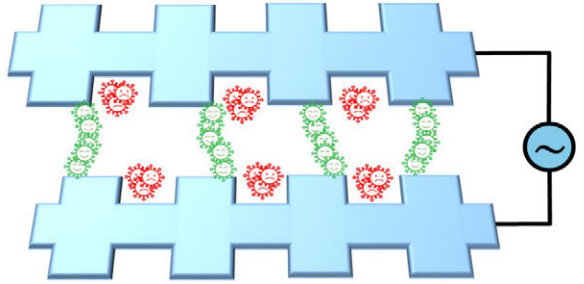




Electrophoresis

Live cell Dead cell

Dielectrophoresis

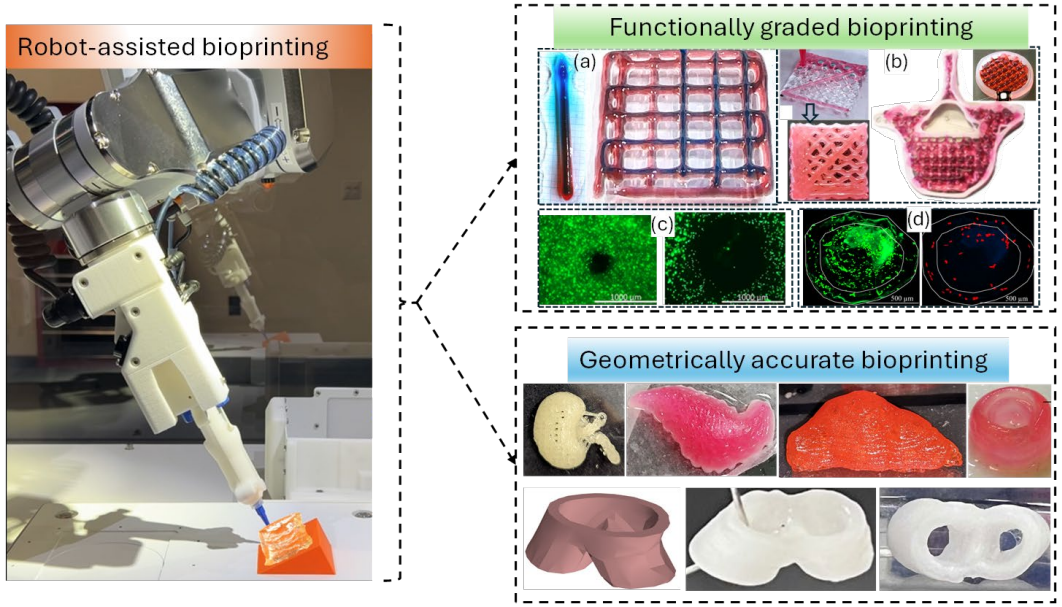


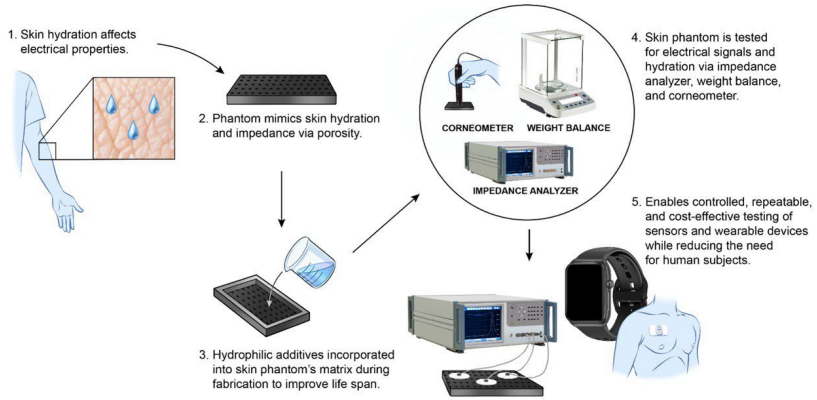
pDEP nDEP

Medical Devices and Physical Models

3D Bioprinting
(MD Ahasan Habib, CET)

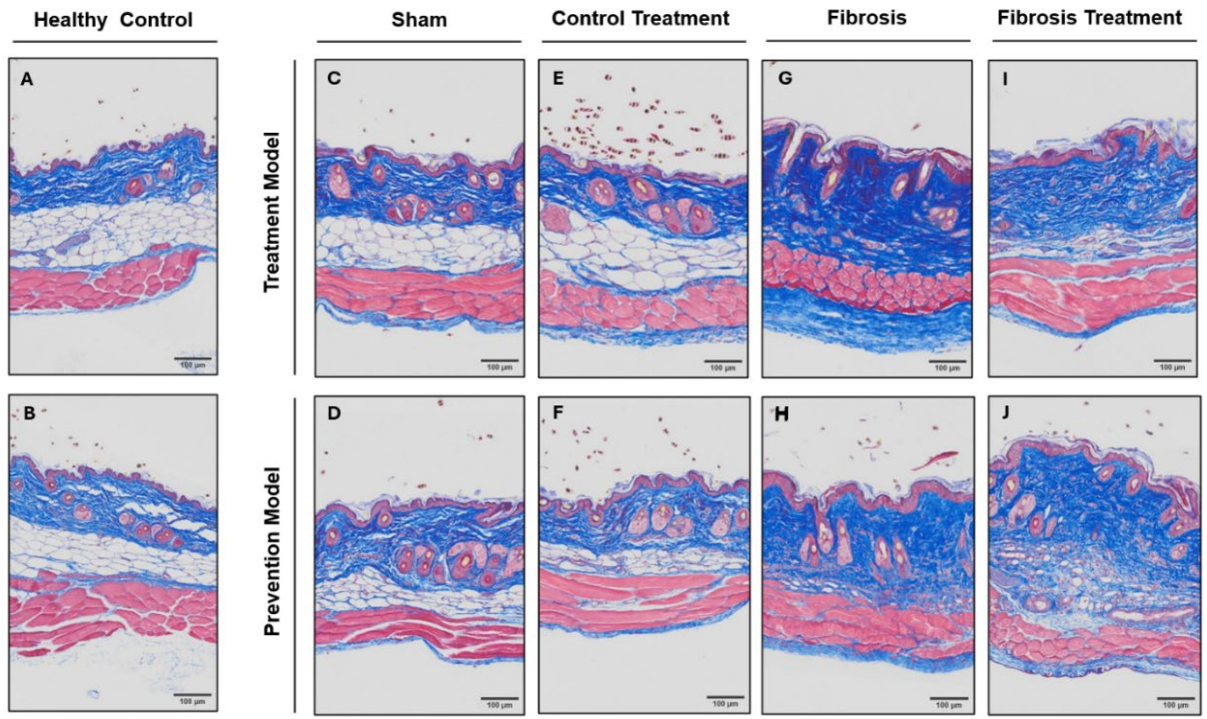
Artificial skin model for wearables
(Krittika Goyal, CET)

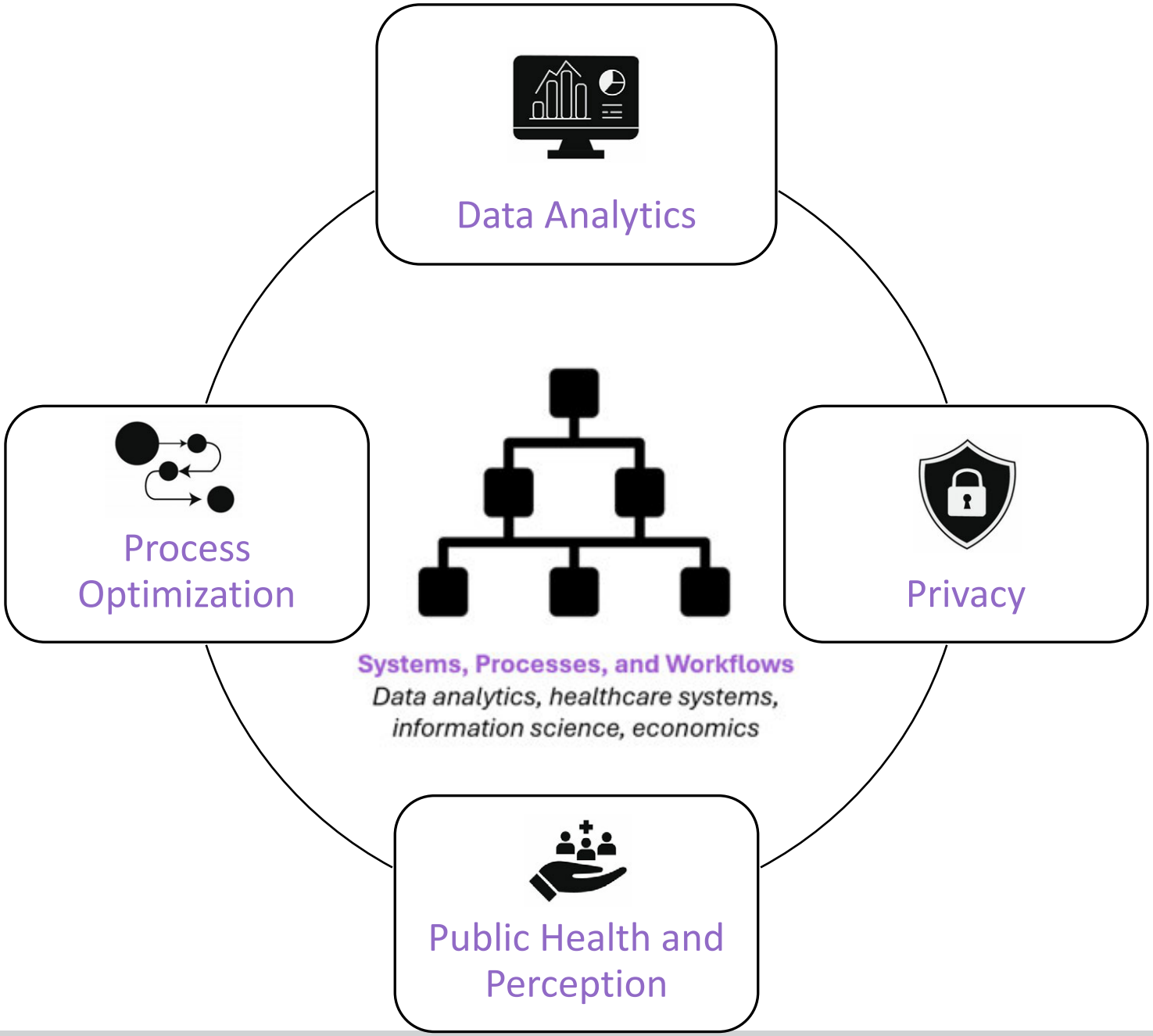




Therapeutic Developments

Antifibrotic treatment stategies
(Karin Wuertz-Kozak, KGCOE)



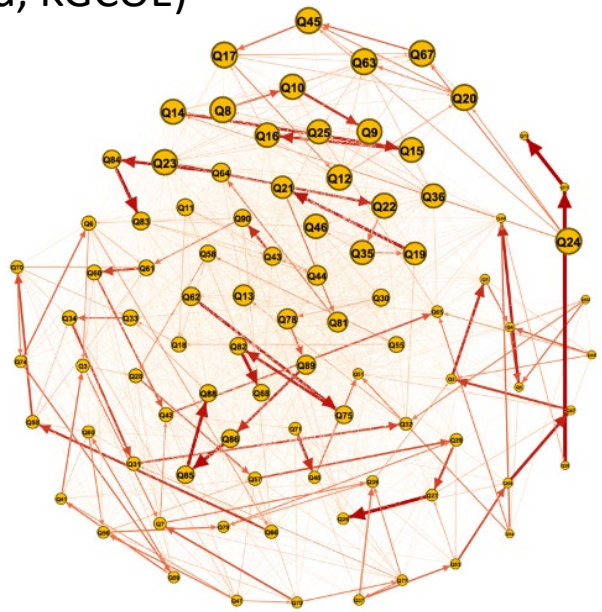

Data Analytics
Process Optimization
Privacy
Systems, Processes, and Workflows
Data analytics, healthcare systems, information science, economics
Public Health and Perception

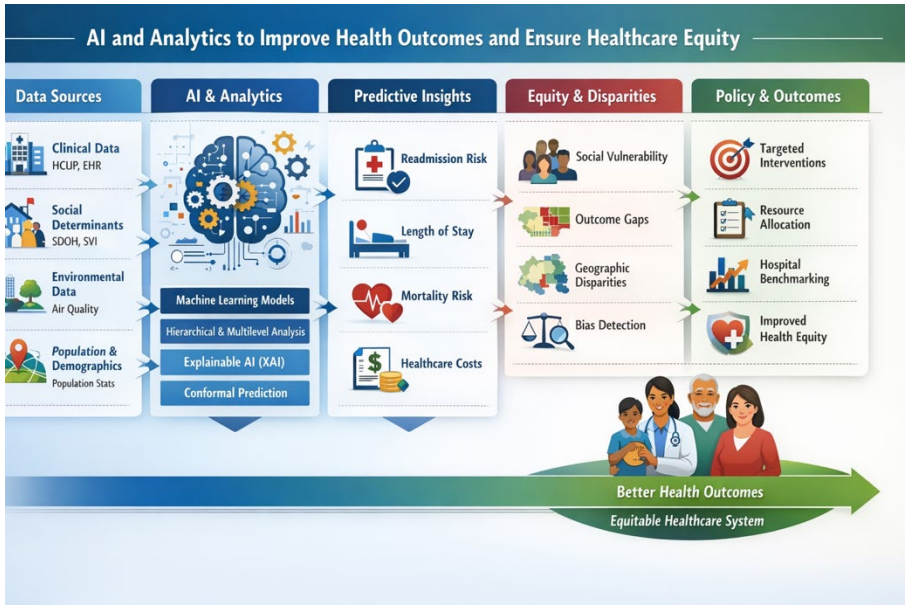
Data Analytics

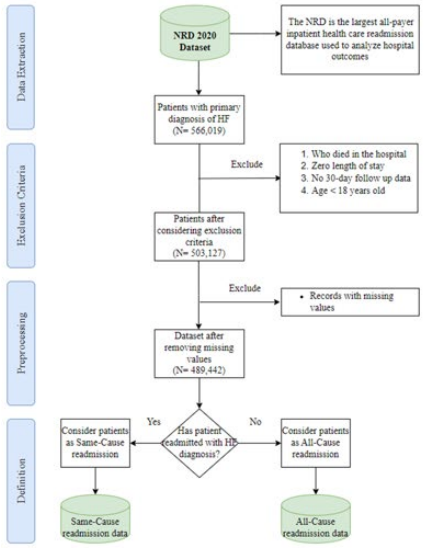
Improved health outcomes
(Nasibeh Azadeh Fard, KGCOE)

Hospital readmission models
(Nasibeh Azadeh Fard, KGCOE)

Diagnostic screening
(Ali Tosyali, SCB)







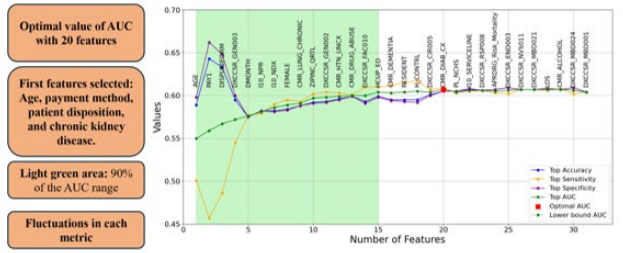


Figure 1. Predicting Same-Cause Readmission

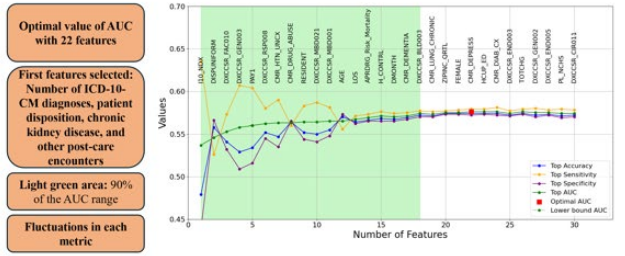
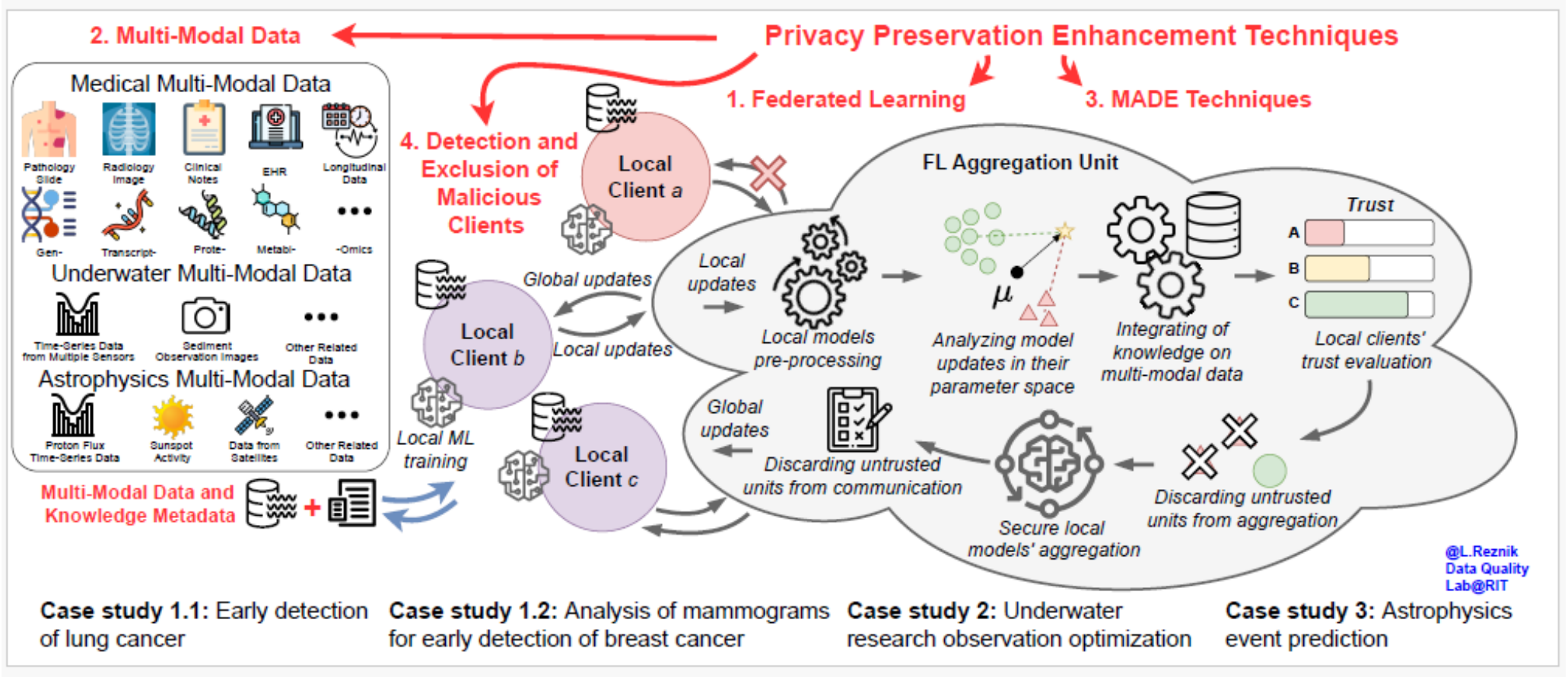


Figure 2. Predicting All-Cause Readmission

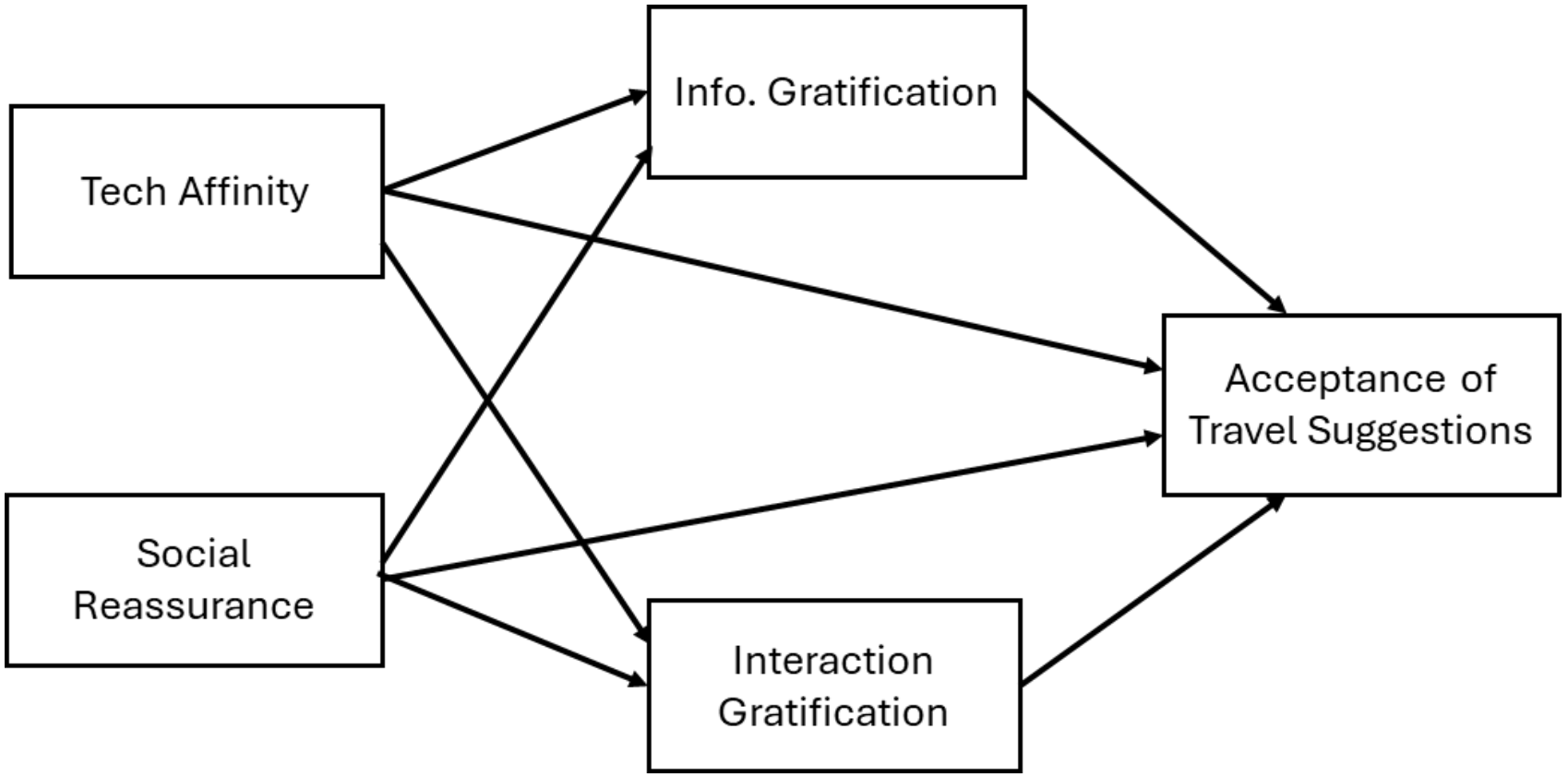
Privacy

Protecting privacy
(Leon Reznik, GCCIS)



Public Health and Perception

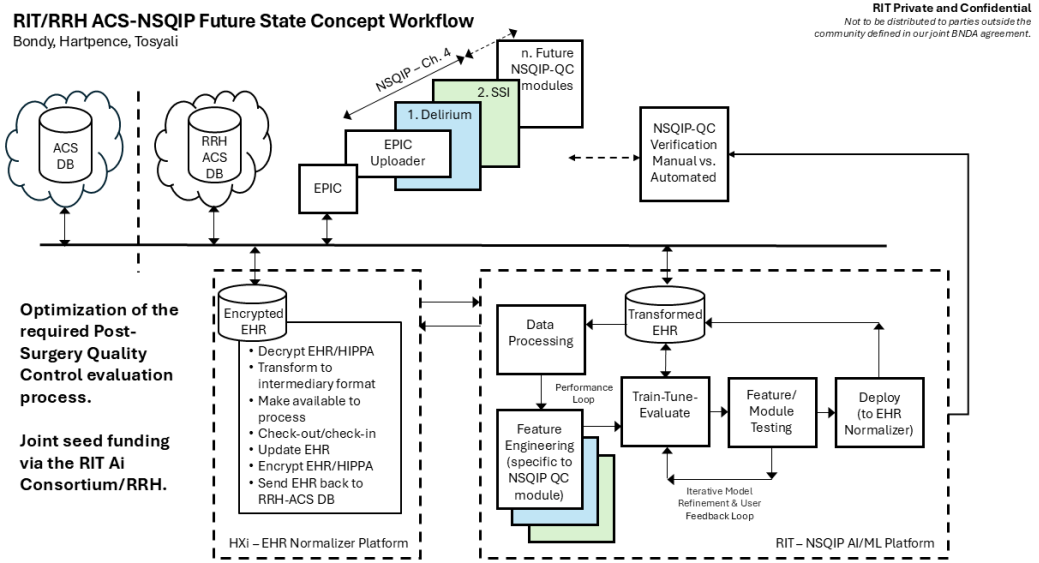
Trust in online information
(Quang Neo Bui, SCB)

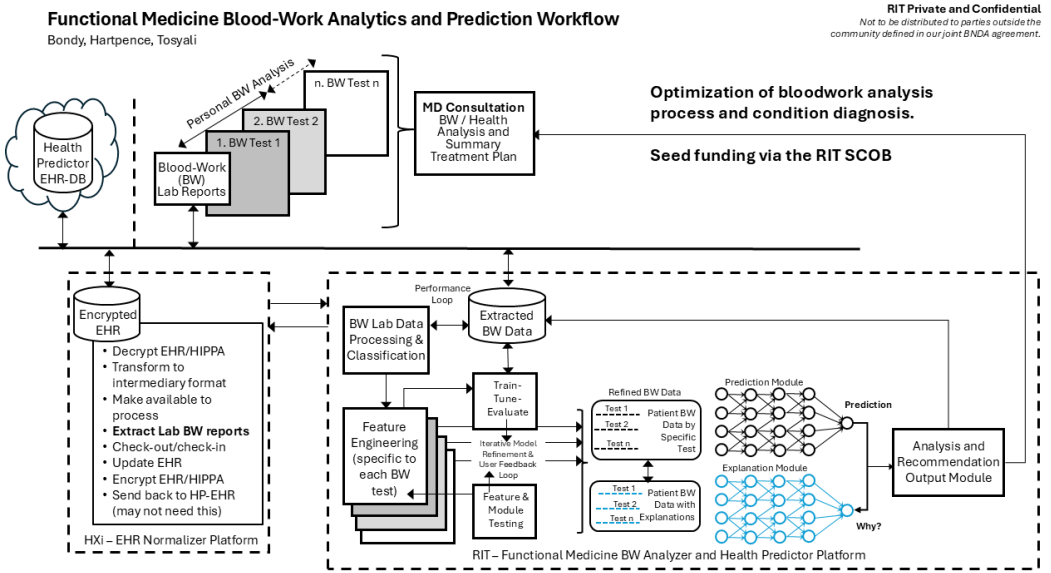


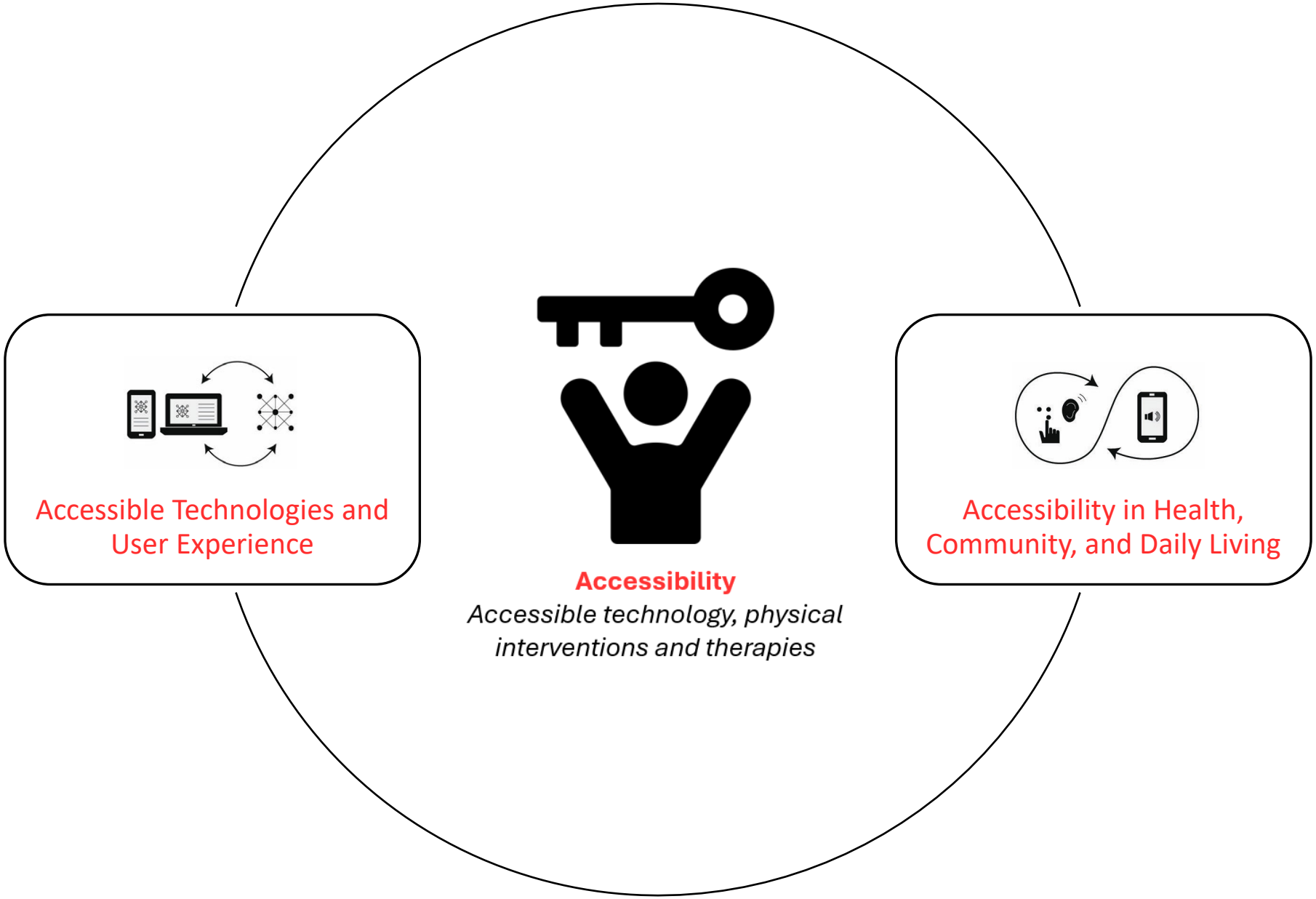
Process Improvement

Quality Improvement
(Chris Bondy, GCCIS)

Bloodwork Analytics
(Chris Bondy, GCCIS)






Accessible Technologies and User Experience
Accessibility
Accessible technology, physical interventions and therapies
Accessibility in Health, Community, and Daily Living

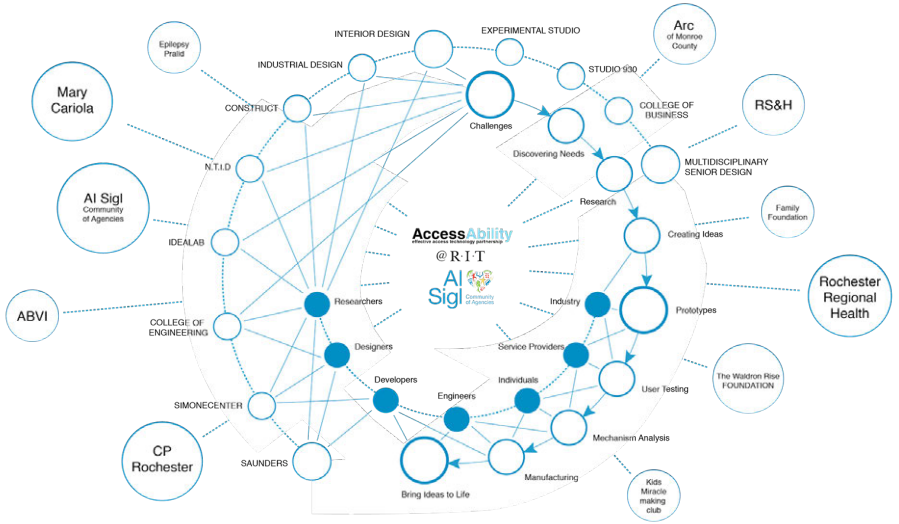
Accessible Technologies and User Experience

Game design
(Chao Peng, GCCIS)

Accessibility in Health, Community, and Daily Living

Emergency services for DHH community
(Sandra Rothenberg, CLA)

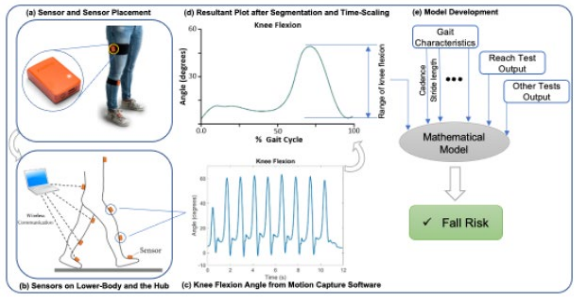
Outreach and interaction
(Mary Golden, CAD)

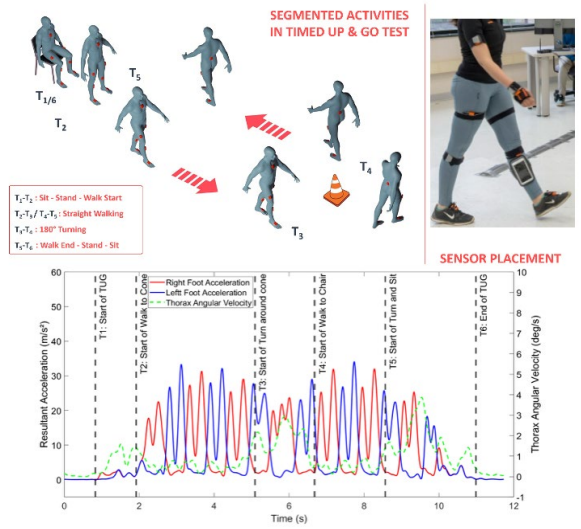


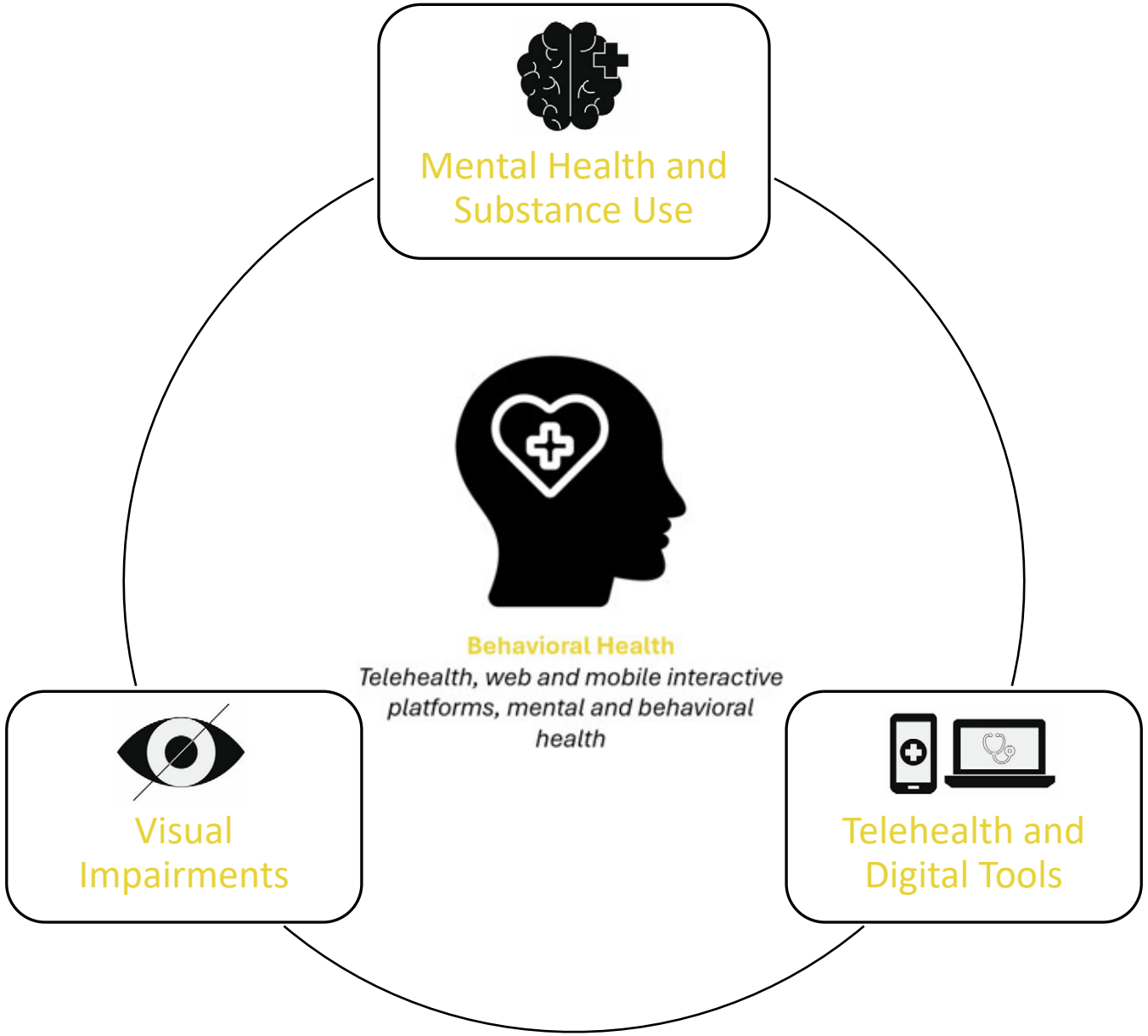
Accessibility in Health, Community, and Daily Living

Tai Chi interventions
(Yong Tai Wang, CHST)

Remote monitoring
(Ehsan Rashedi, KGCOE)



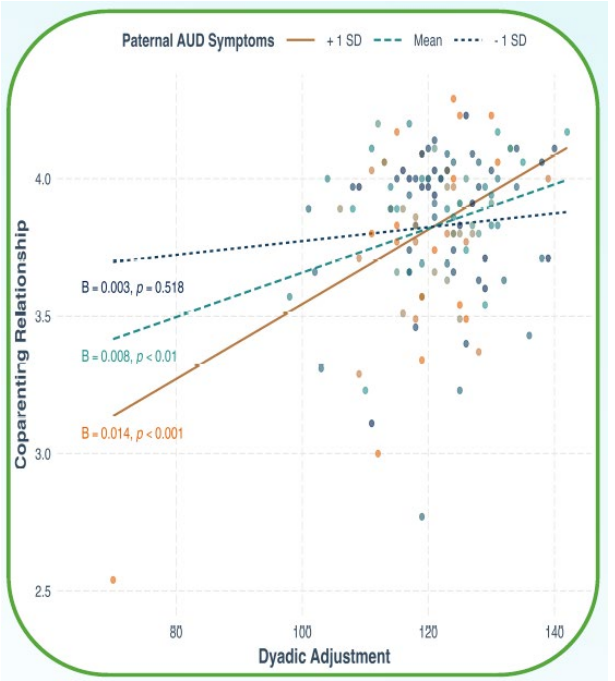


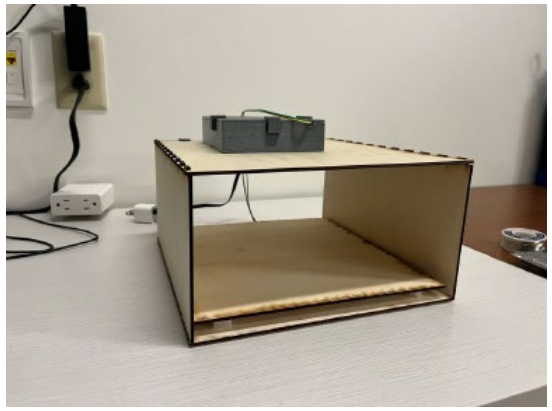

Mental Health and Substance Use
Behavioral Health
Telehealth, web and mobile interactive platforms, mental and behavioral health
Visual Impairments
Telehealth and Digital Tools

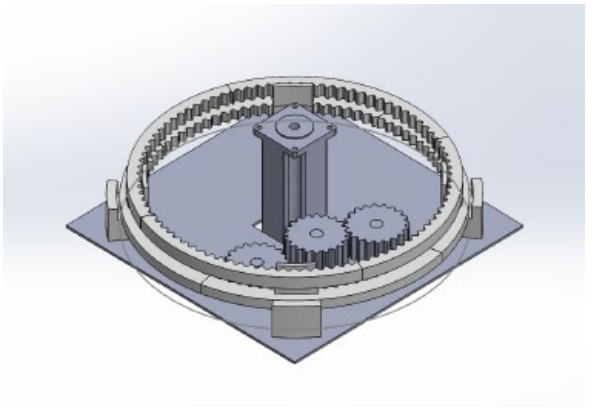
Mental Health and Substance Use

Strong Family Foundations
(Stephanie Godleski, CLA)

Cue exposure therapy
(Rebecca Houston, CLA,
and Elena Fedorovskaya, COS)



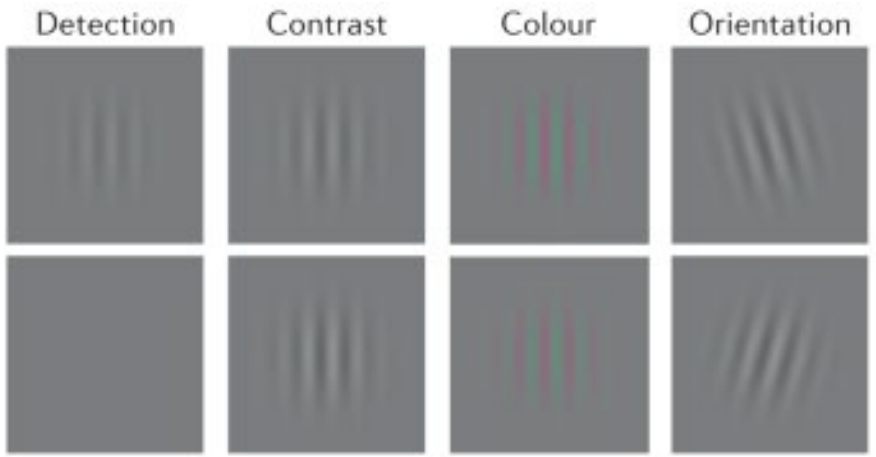




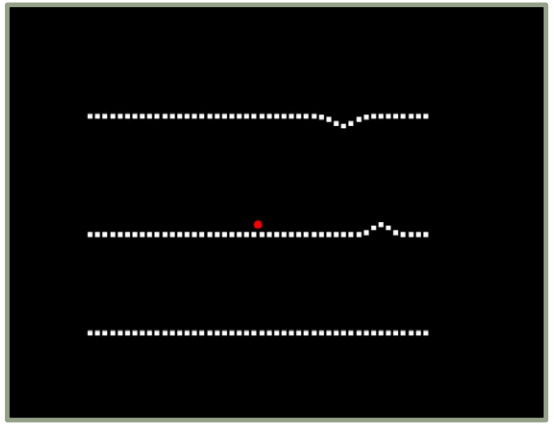
Visual Impairments

Interventions for vision loss
(Marcello Maniglia, CLA)

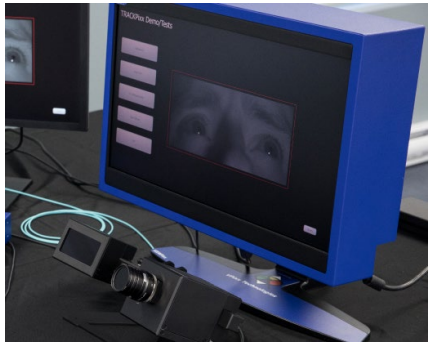
Macular Degeneration
(Marcello Maniglia, CLA)



Visual training

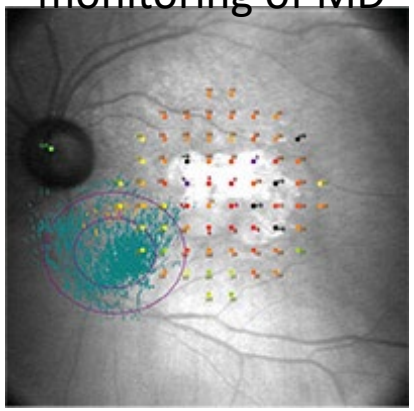


Detection and monitoring of MD



Eye tracking

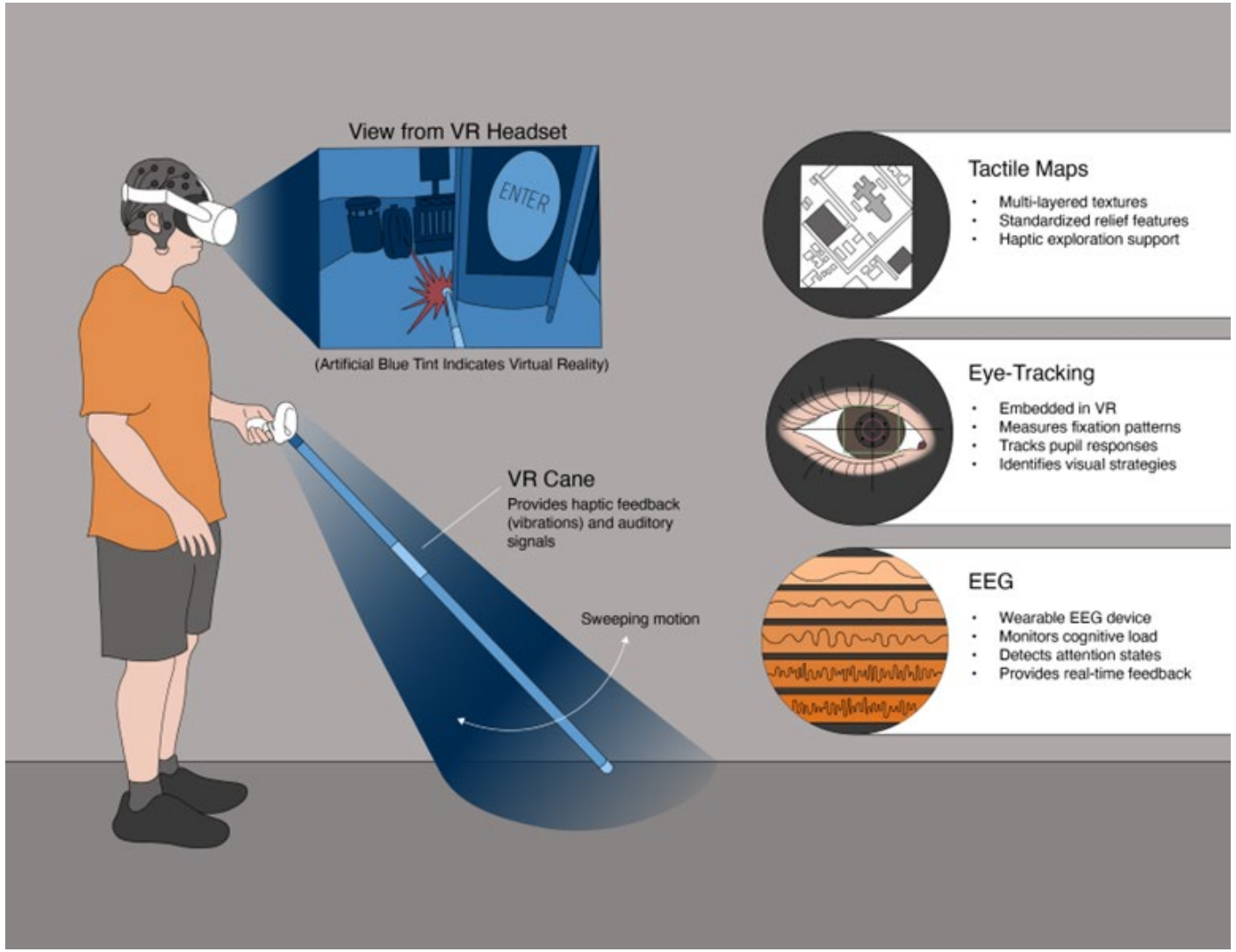
Neuromodulation

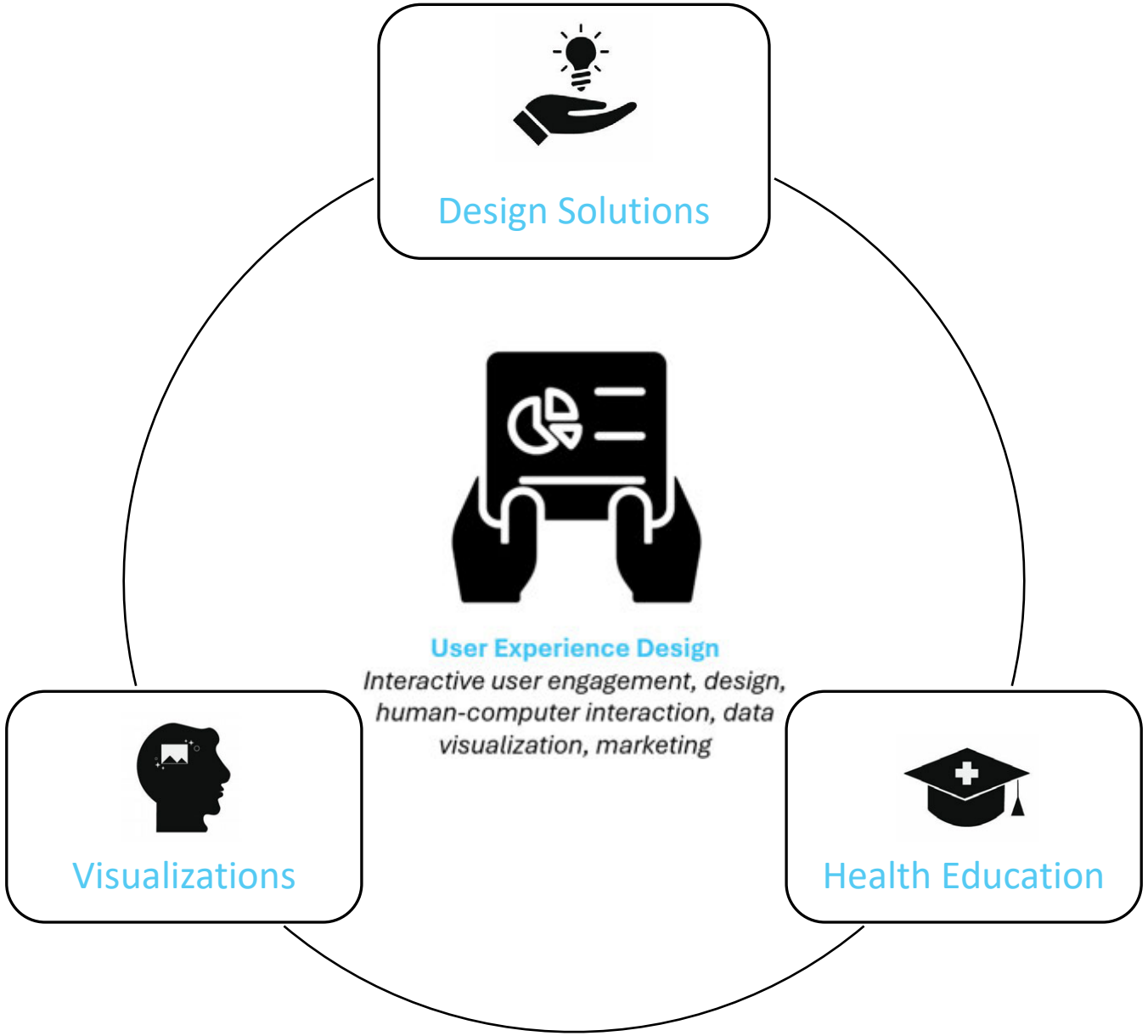


Retinal imaging

Telehealth and Digital Tools

Multisensory assessment tools
(Pamela Beach, CHST)

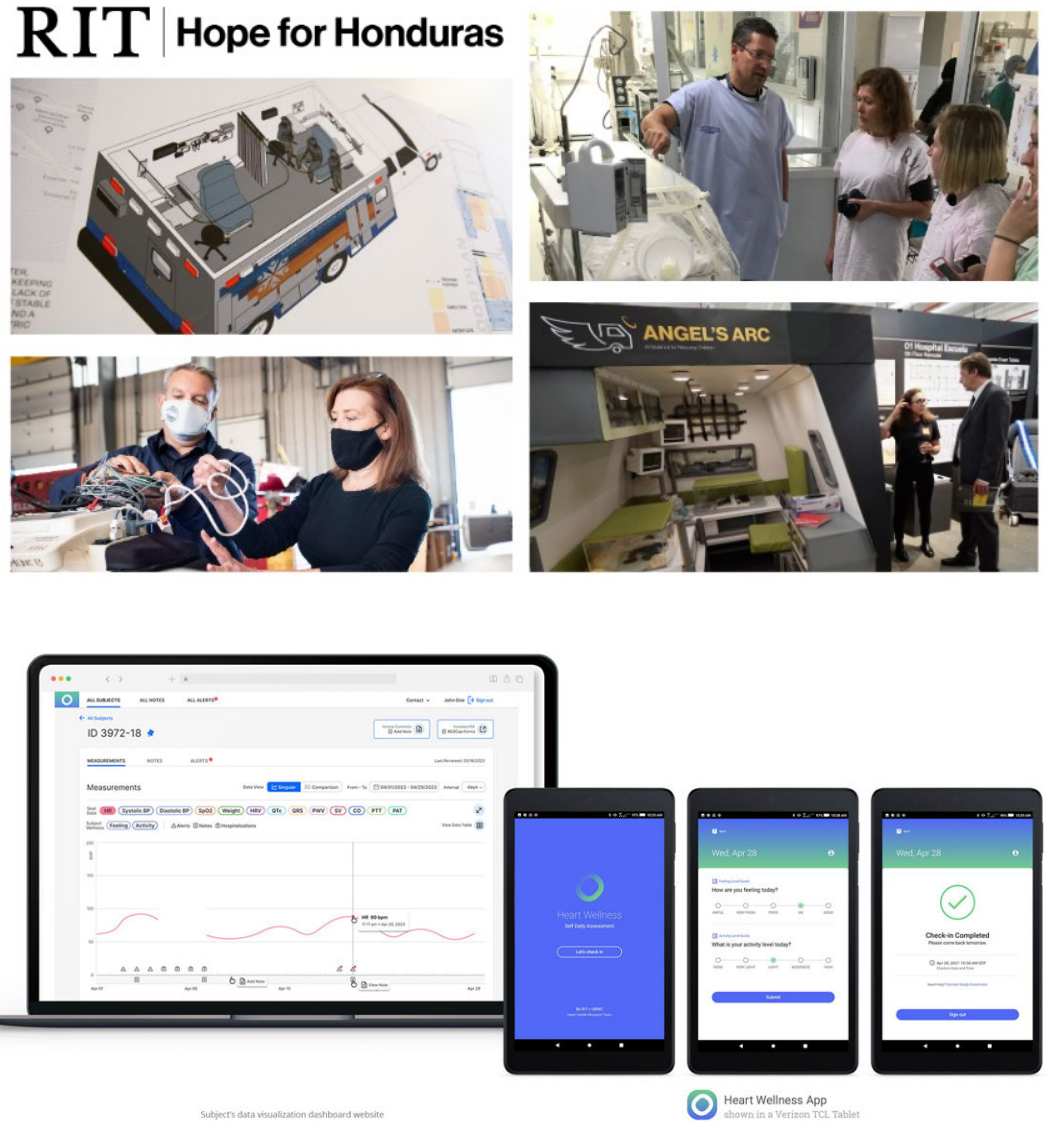



Design Solutions
User Experience Design
Interactive user engagement, design, human-computer interaction, data visualization, marketing
Visualizations
Health Education

Design Solutions

Hope for Honduras
(Mary Golden, CAD)

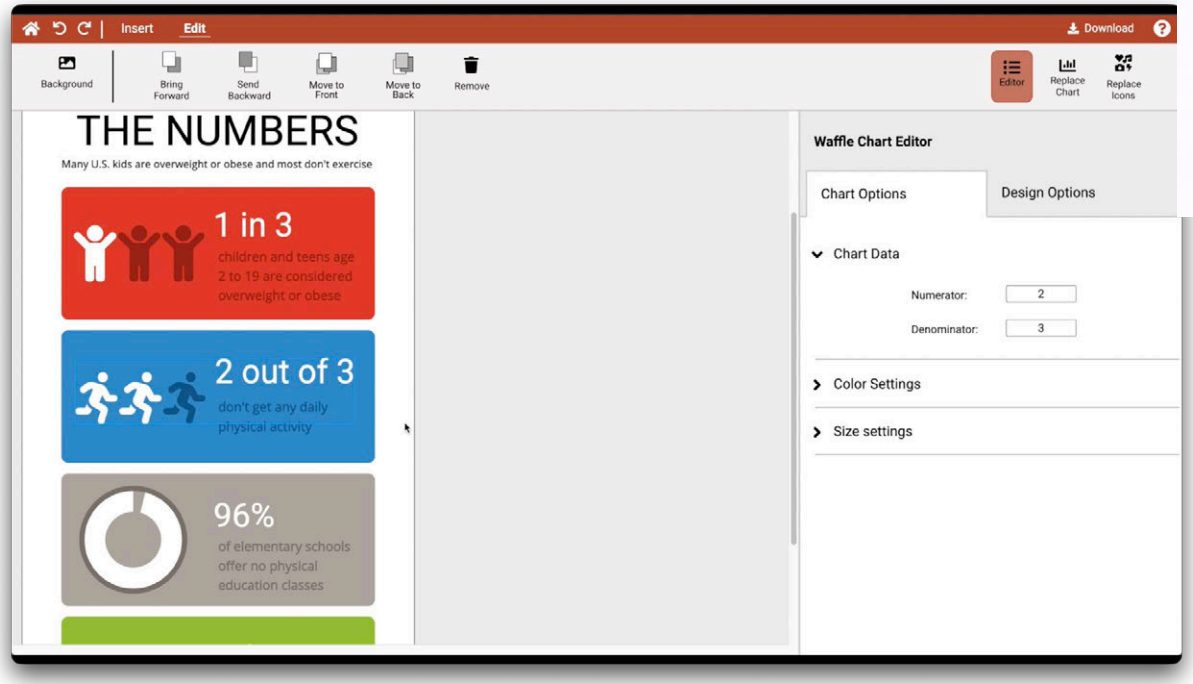
Patient data visualization
(Hye-Jin Nae, CAD)

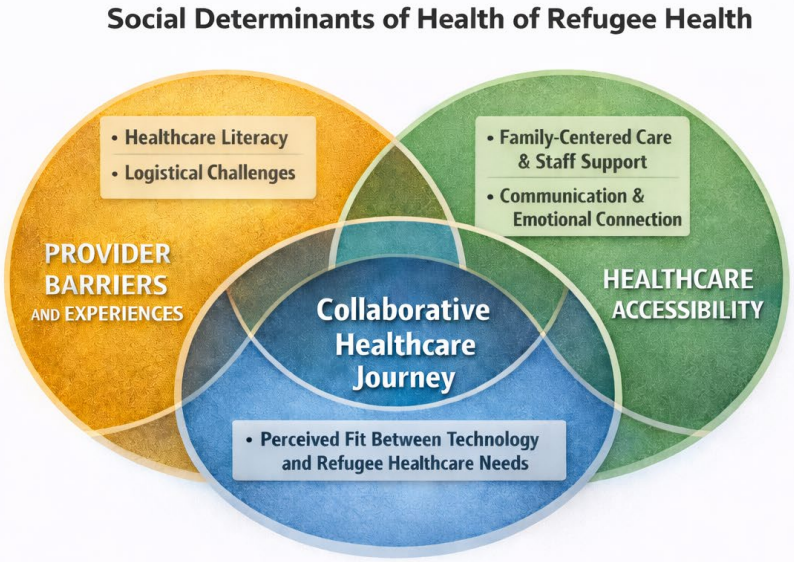


Health Education

Infographics for public health
(Hidy Kong, GCCIS)

Health education for refugees
(Emi Moriuchi, SCB)





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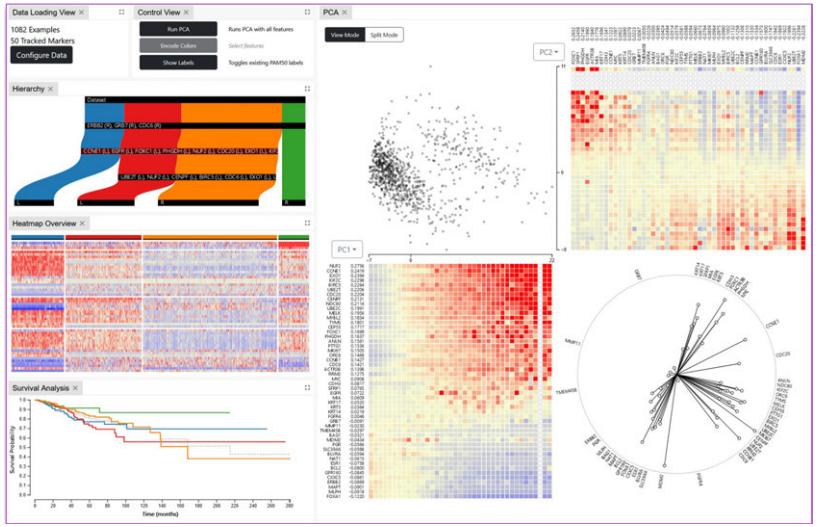
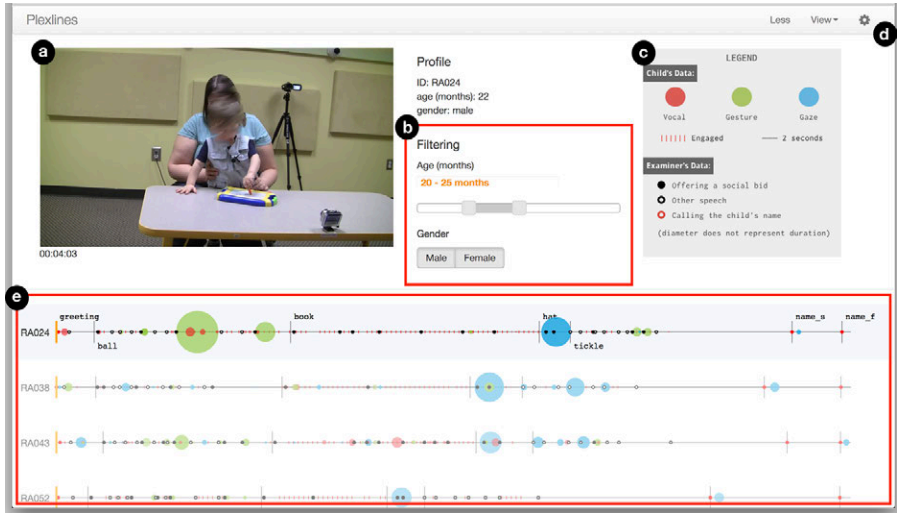
Visualizations

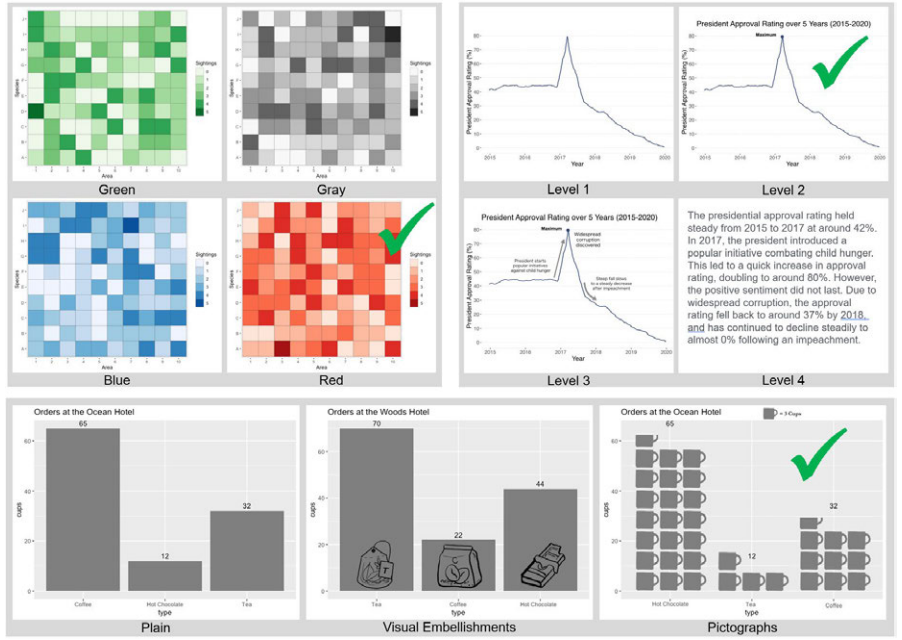
Data visualization
(Hidy Kong, GCCIS)

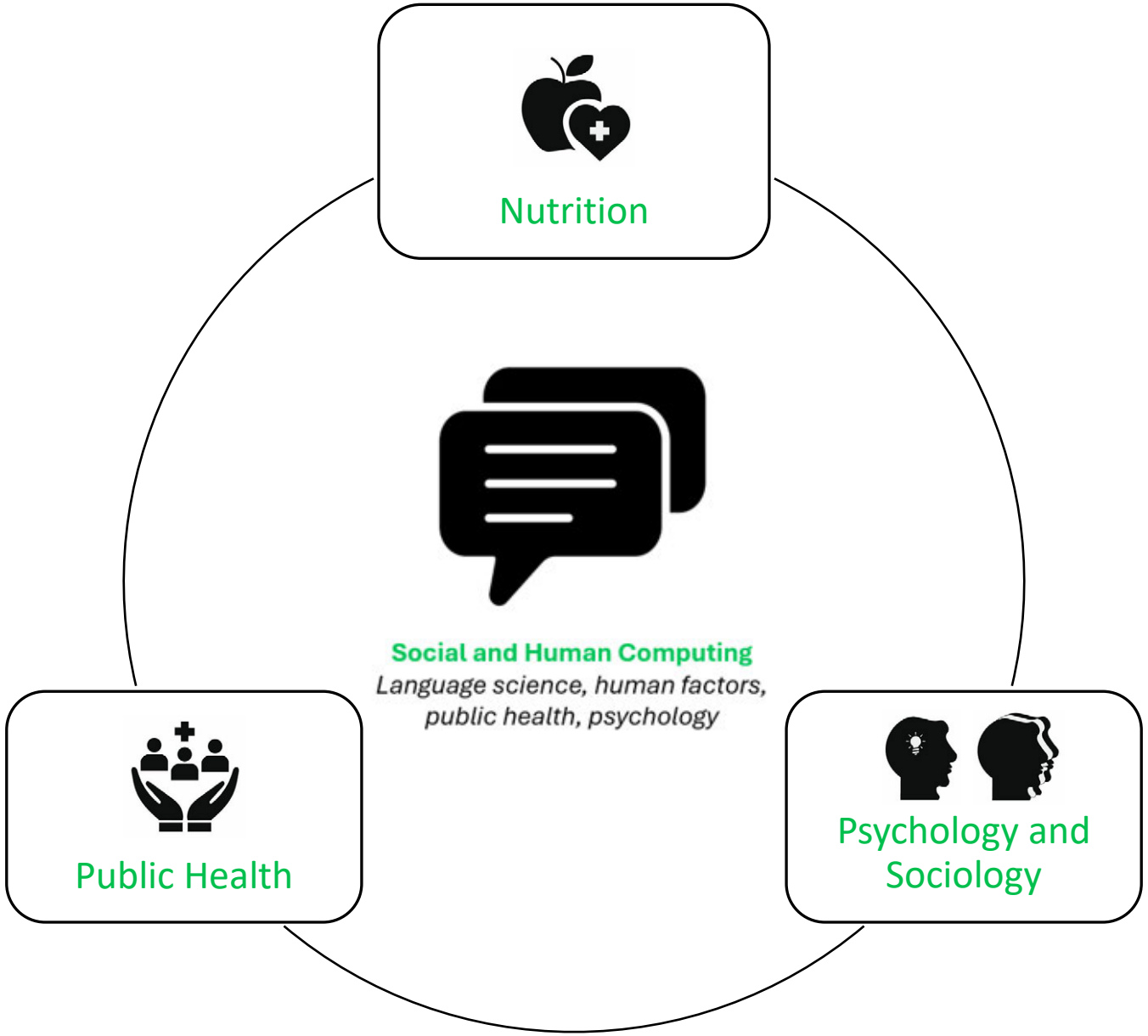
Protein and gene data
(Ji Hwan Park, GCCIS)

Accessible visualizations
(Ji Hwan Park, GCCIS)





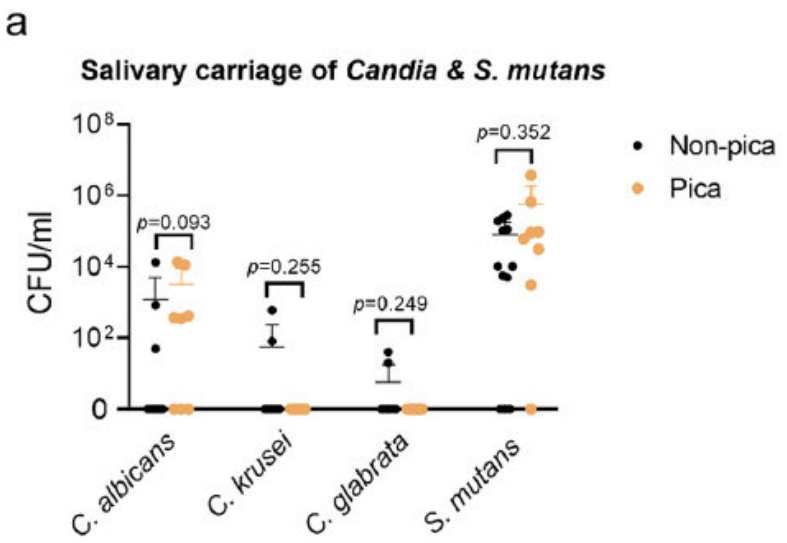


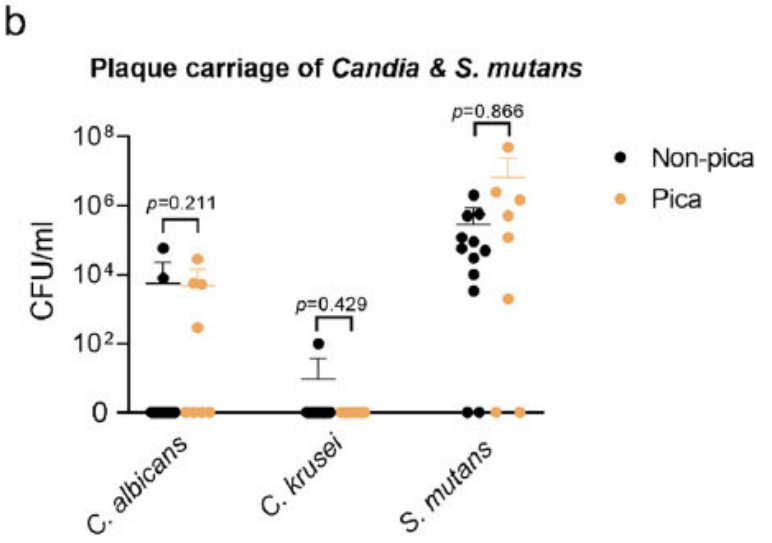

Nutrition
Social and Human Computing
Language science, human factors, public health, psychology
Public Health
Psychology and Sociology

Nutrition

Child oral health
(Brenda Abu, CHST)

Metabolic injustice
(Jessica Hardin, CLA)

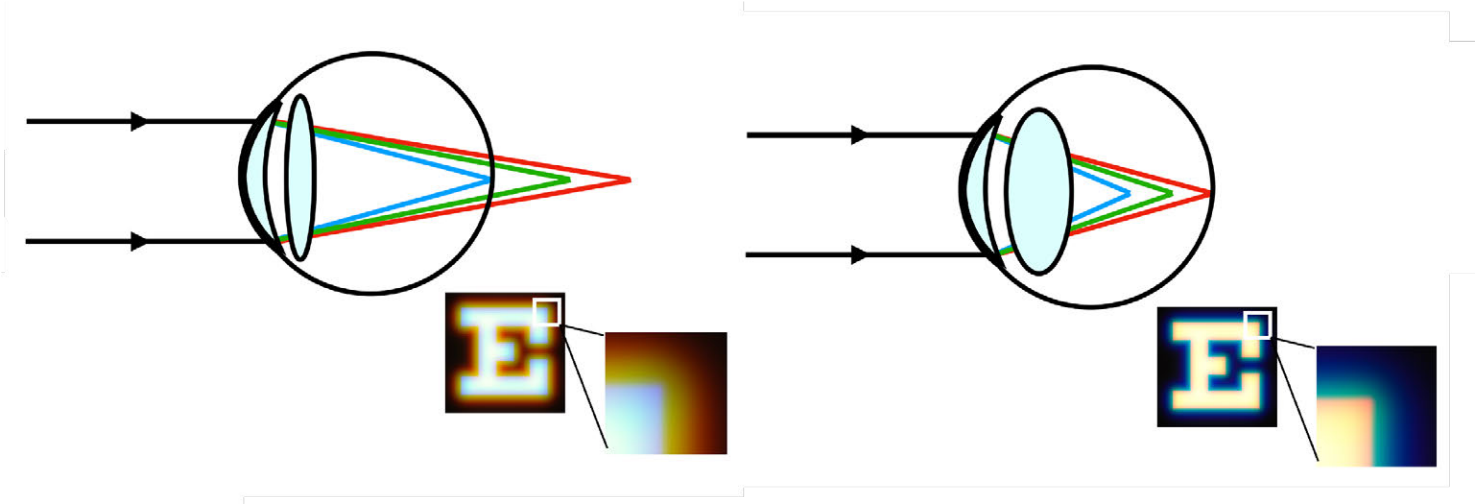


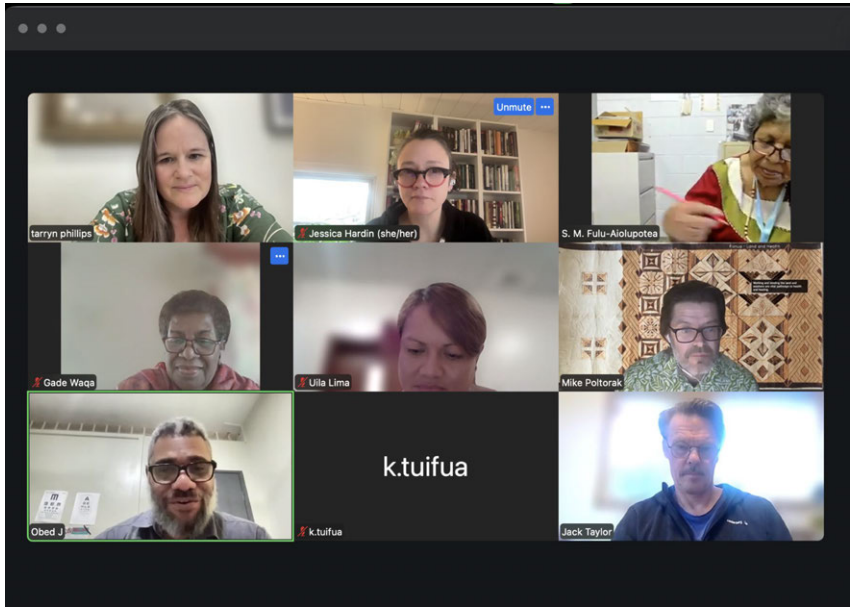


Psychology and Sociology

Visual accommodation
(Benjamin Chin, COS)

Trust in Pacific healthcare
(Jessica Hardin, CLA)

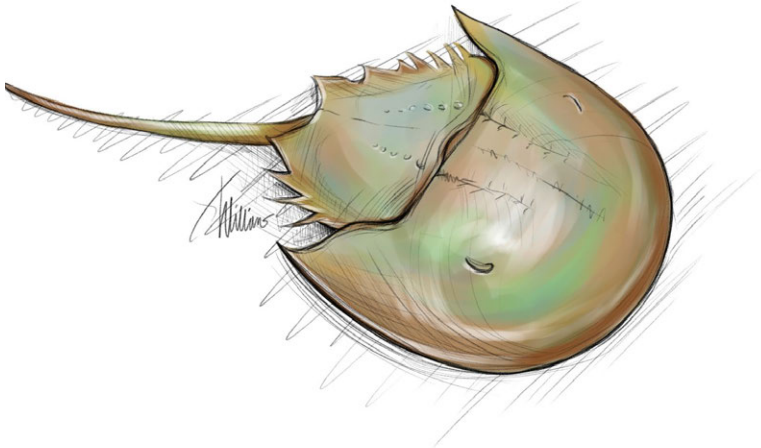


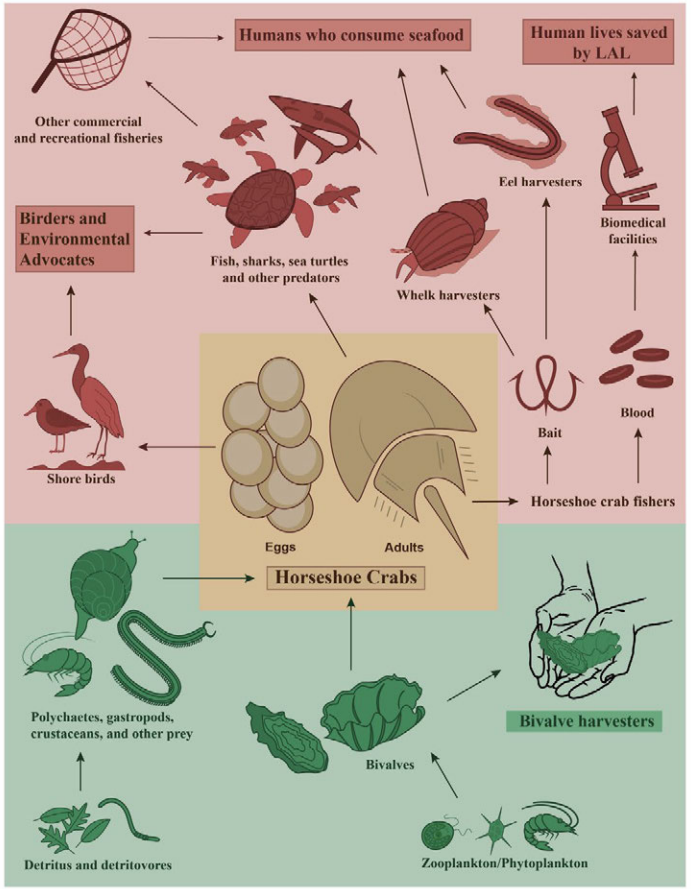


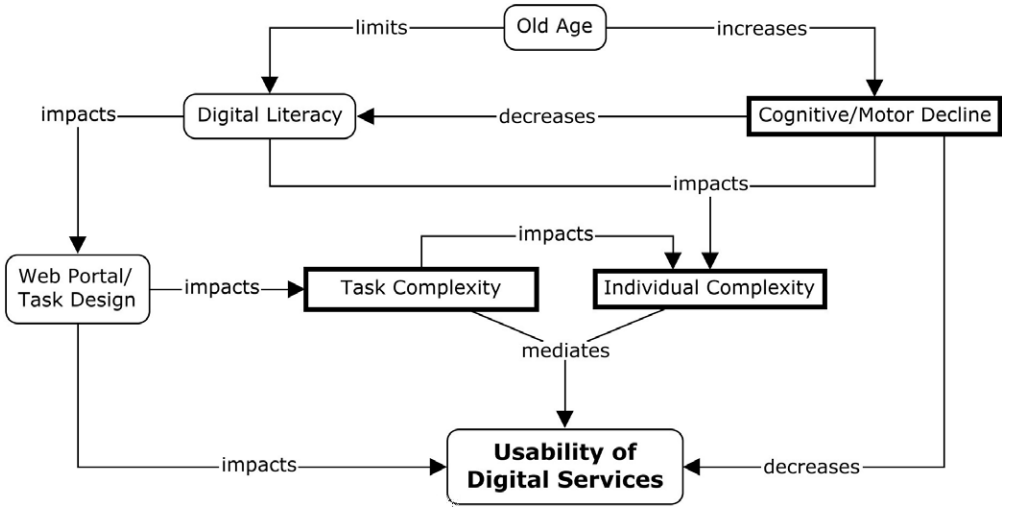
Public Health

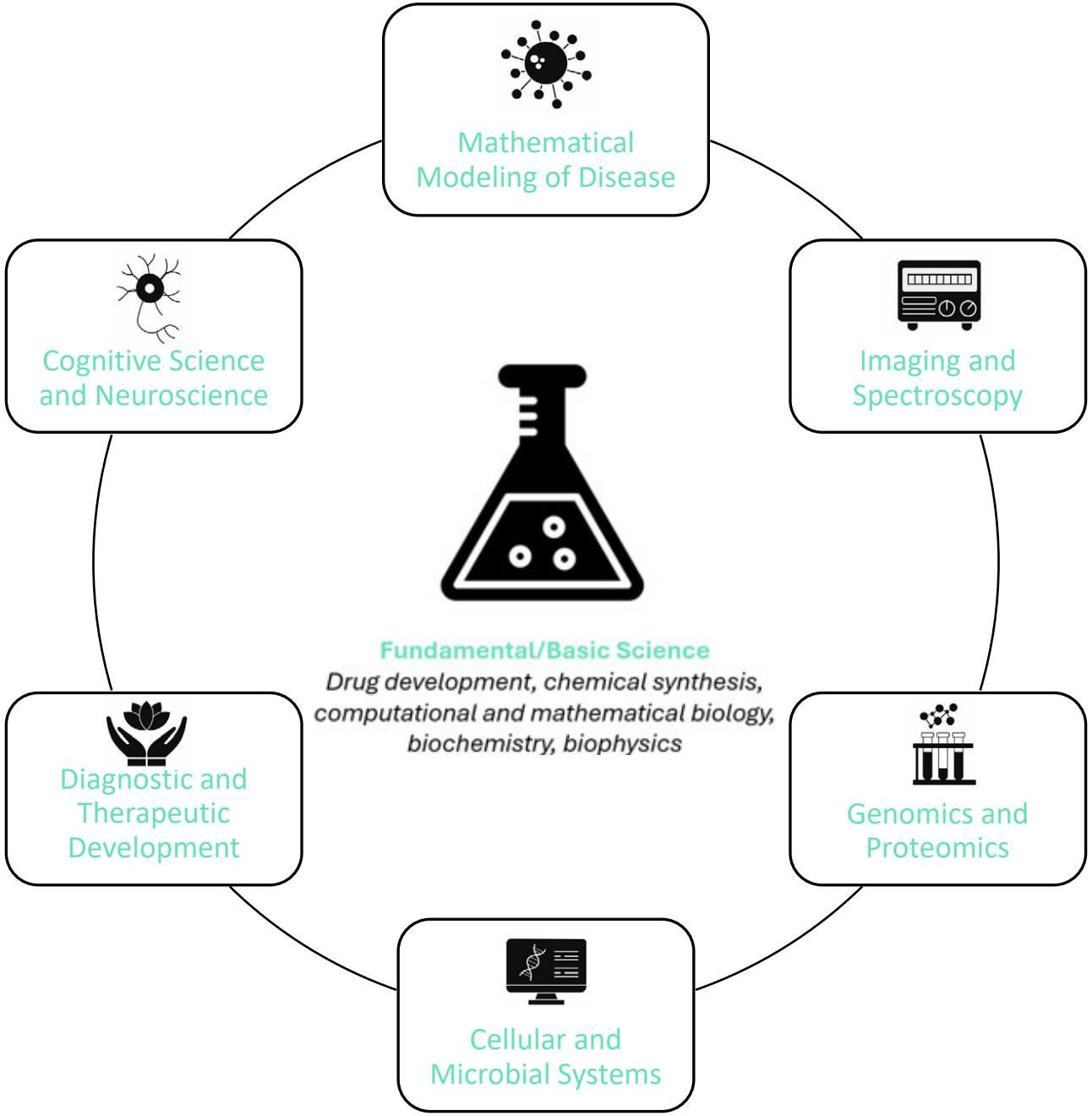
Biomedical use of horseshoe crabs
(Kristoffer Whitney, CLA)

Usability problems
(Esa Rantanen, CLA)



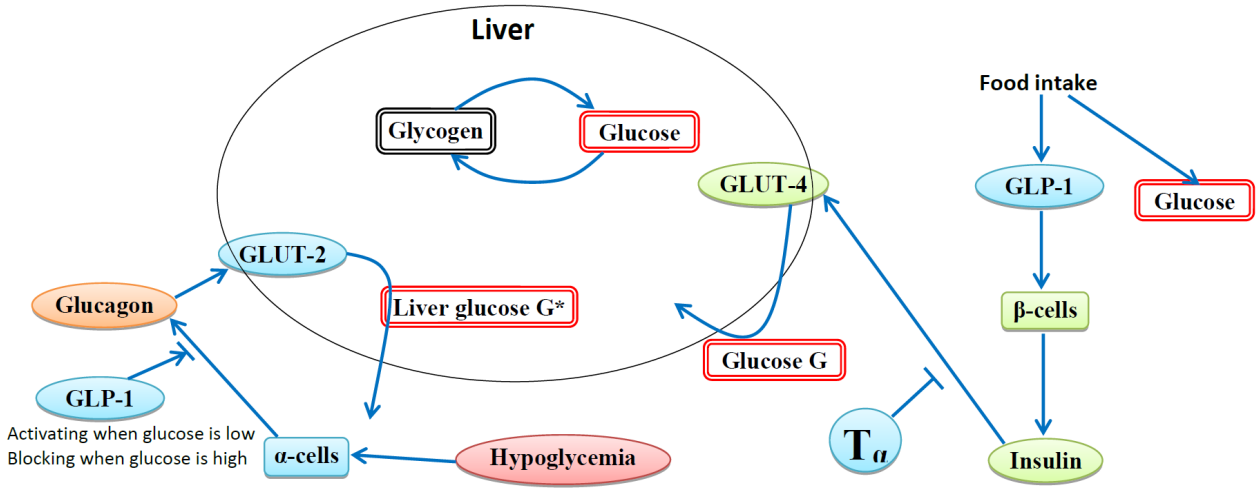


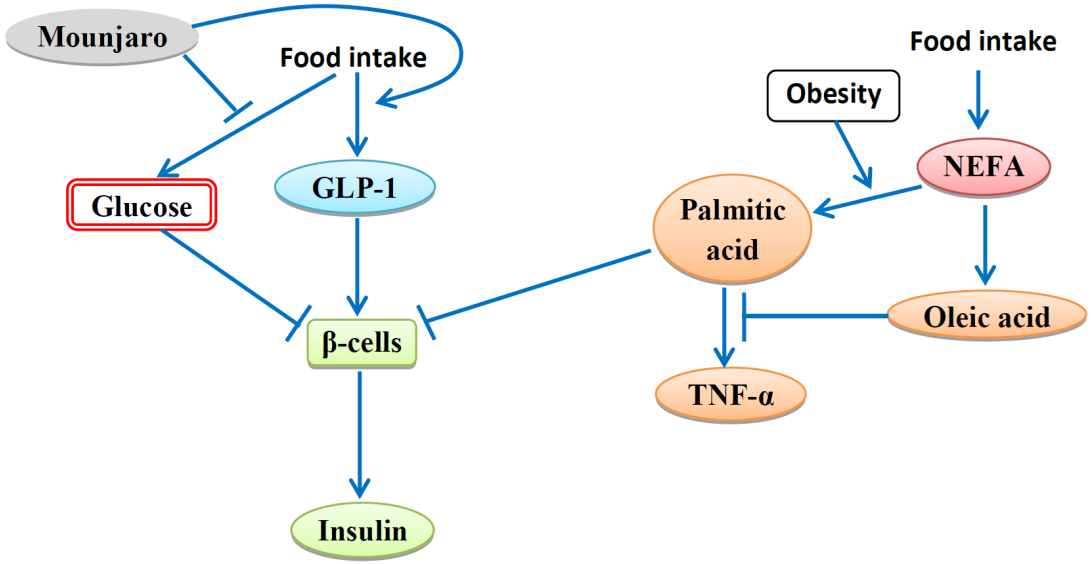



Mathematical Modeling of Disease
Imaging and Spectroscopy
Genomics and Proteomics
Cellular and Microbial Systems
Diagnostic and Therapeutic Development
Cognitive Science and Neuroscience
Fundamental/Basic Science
Drug development, chemical synthesis, computational and mathematical biology, biochemistry, biophysics

Mathematical Modeling of Disease

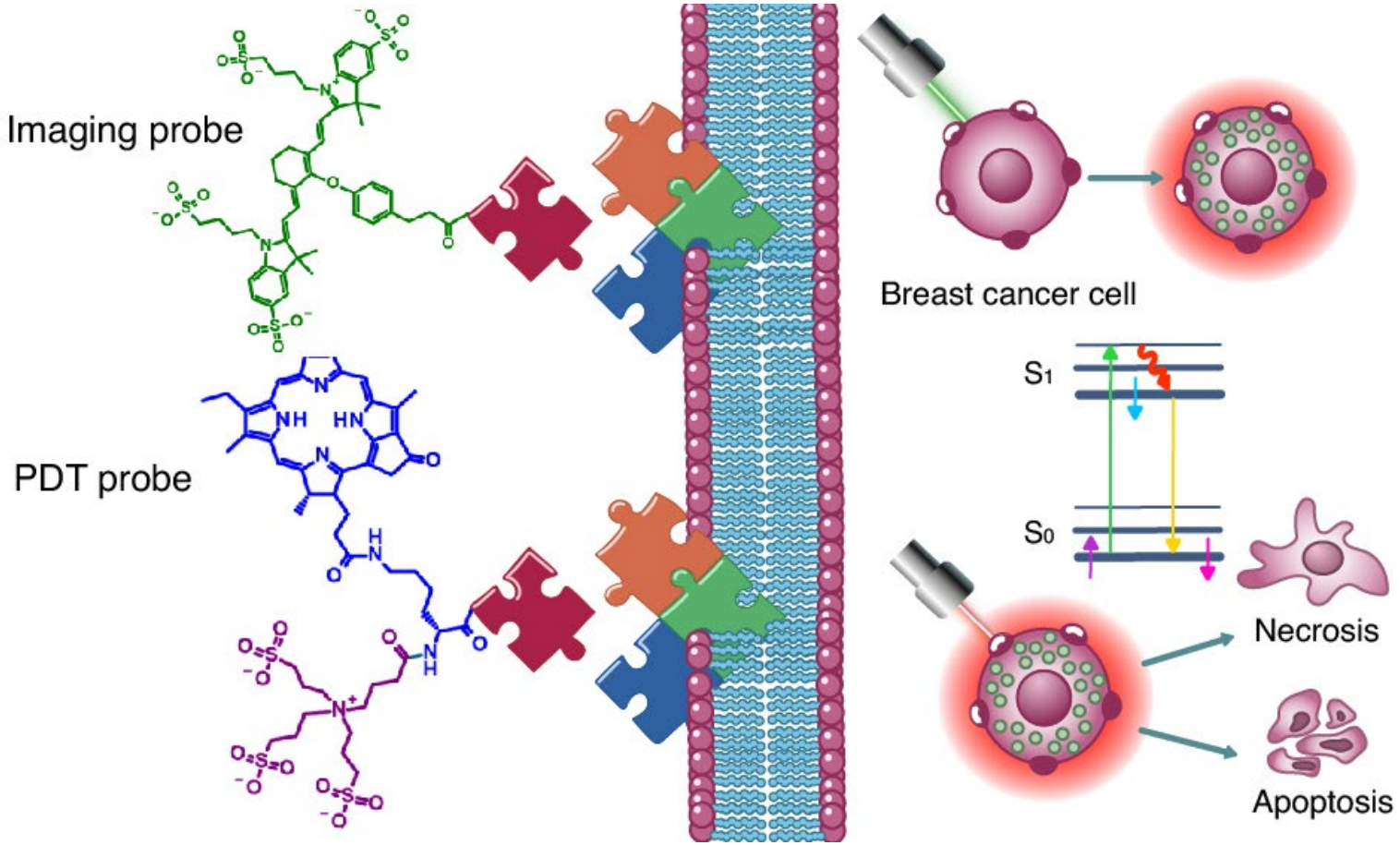
Predictive models for diabetes
(Nourridine Siewe, COS)





Imaging and Spectroscopy

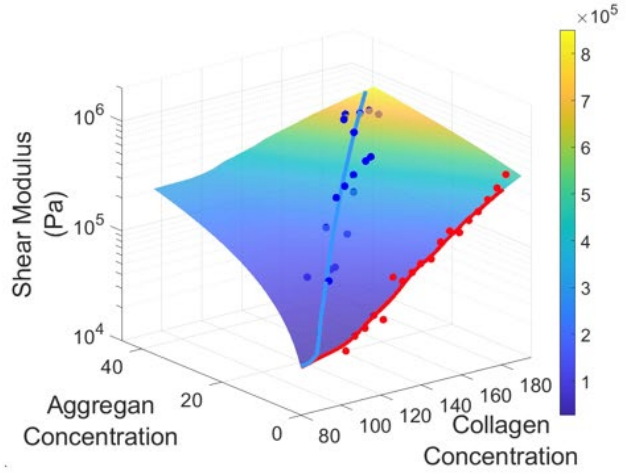
Breast cancer cells
(Hans Schmitthenner, COS)

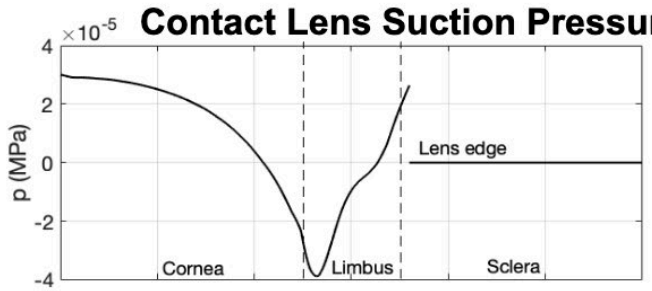


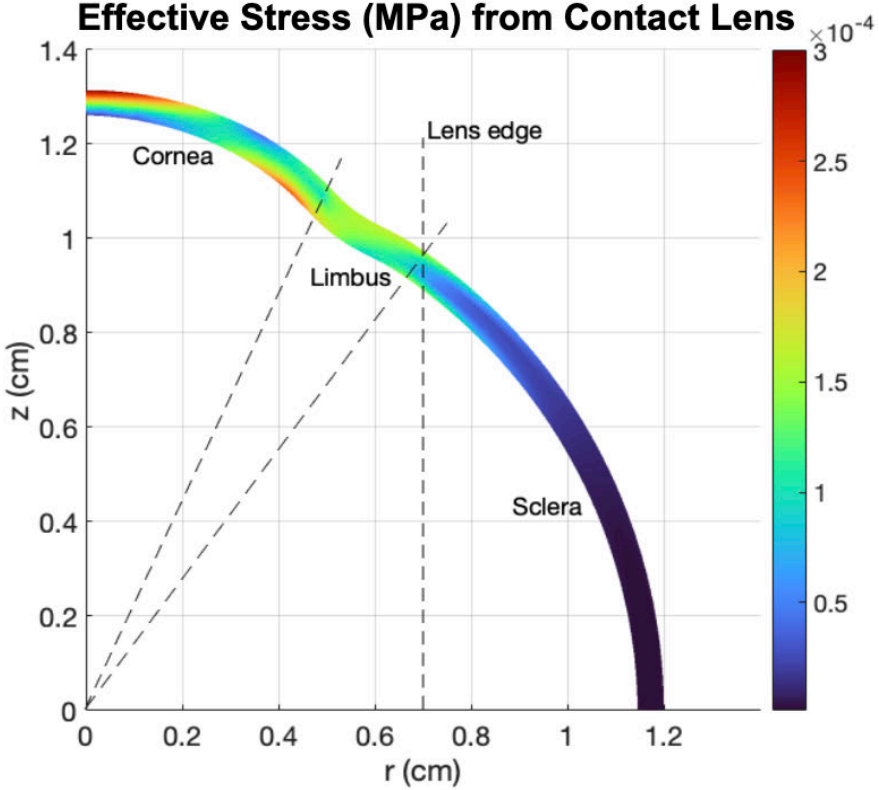
Cellular and Microbial Systems

Contact lens interactions
(Lucia Carichino, COS)

Cartilage function
(Moumita Das, COS)



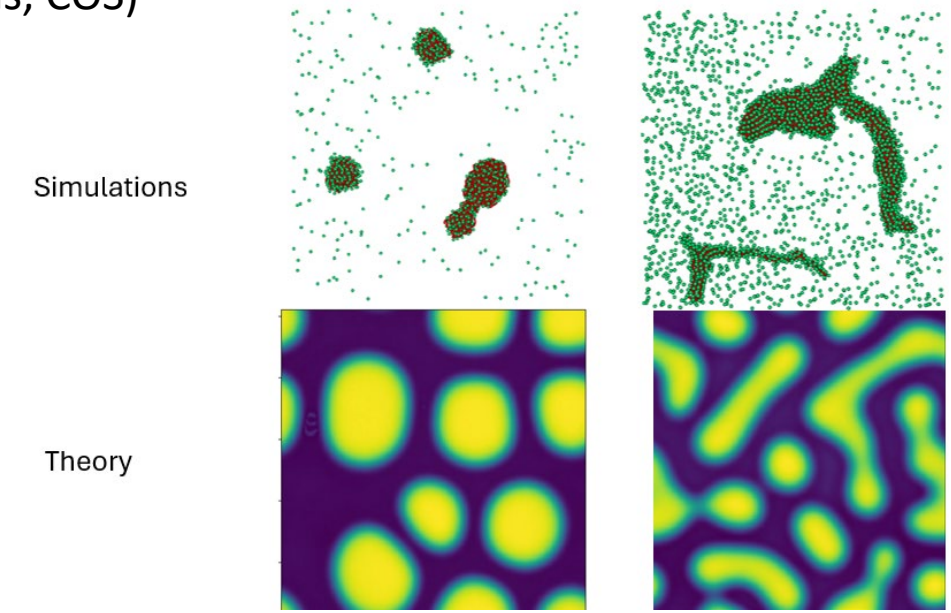


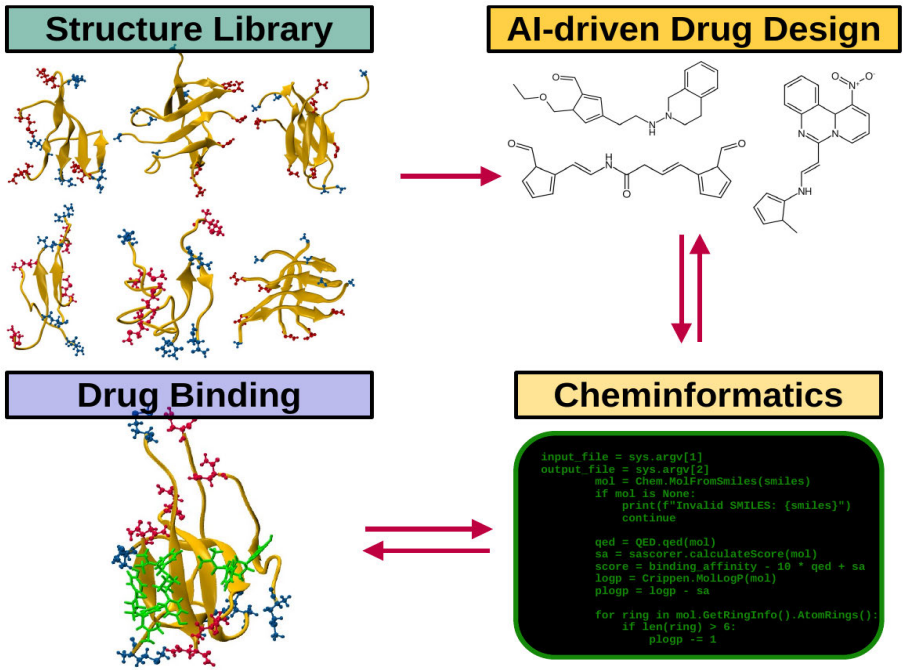


Cellular and Microbial Systems

Molecular dynamics simulations
(Pritam Ganguly, COS)

Bacterial cells
(Moumita Das, COS)



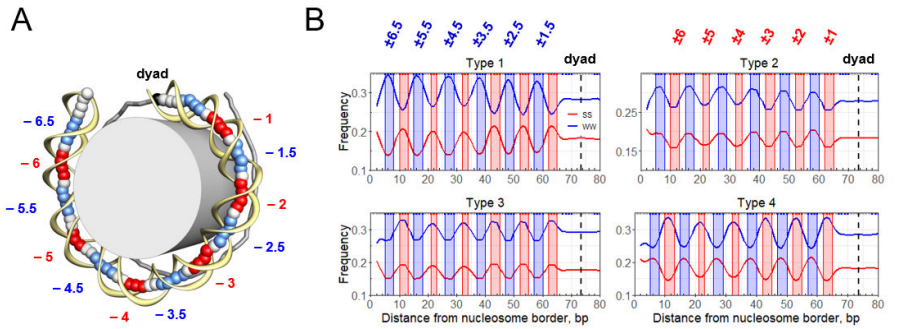


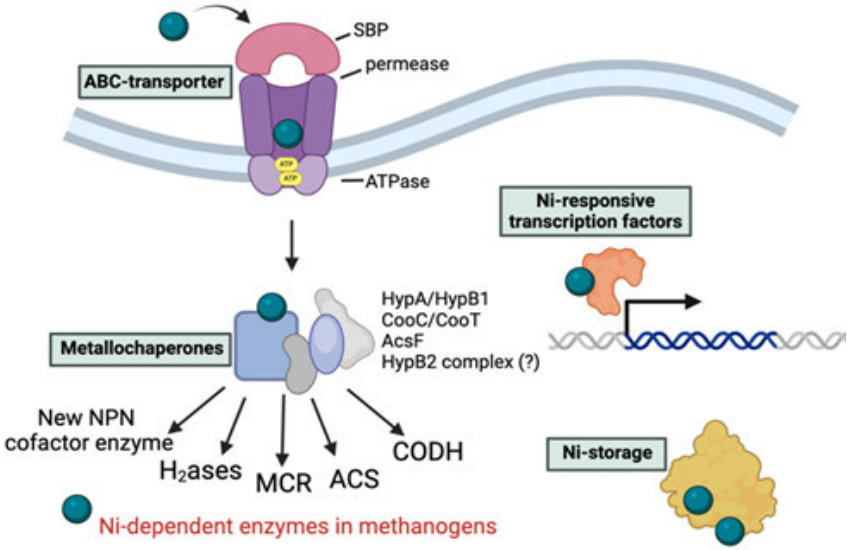
Genomics and Proteomics

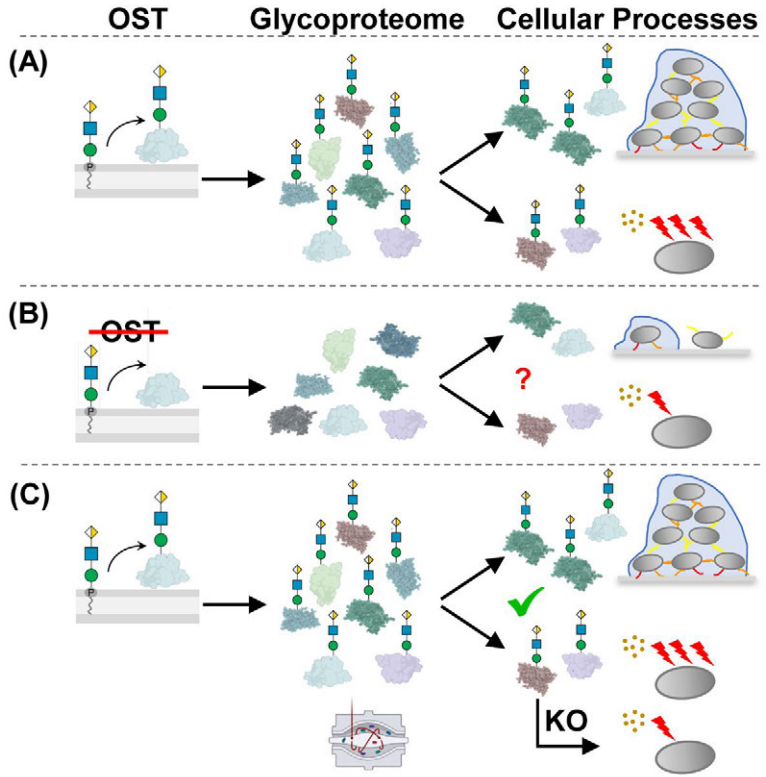
Nucleosome-protein interaction
(Feng Cui, COS)

Protein glycosylation
(Stefan Schulze, COS)

Nickel delivery
(Stefan Schulze, COS)



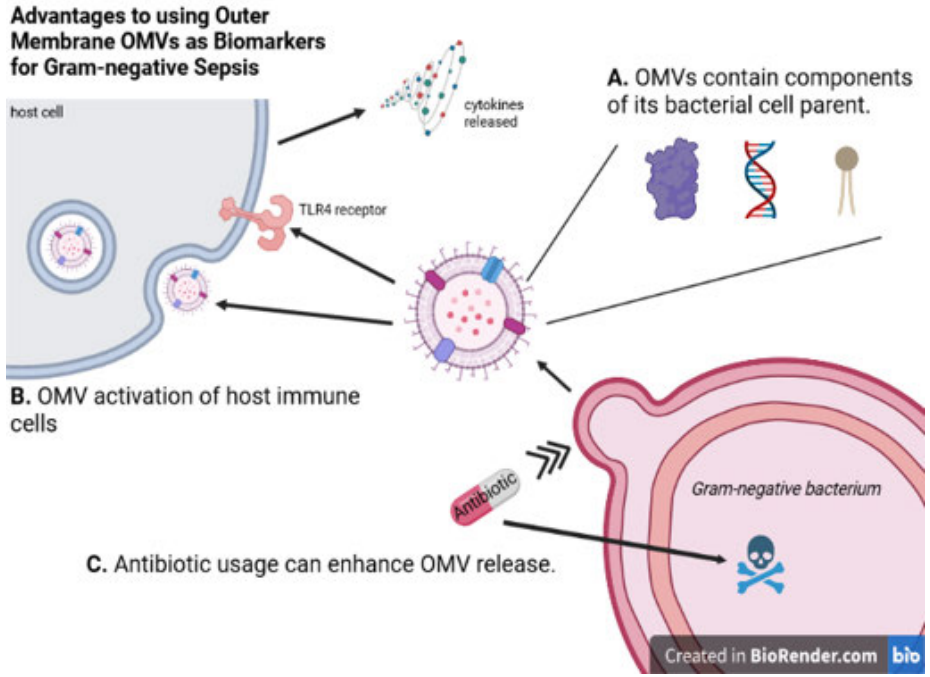


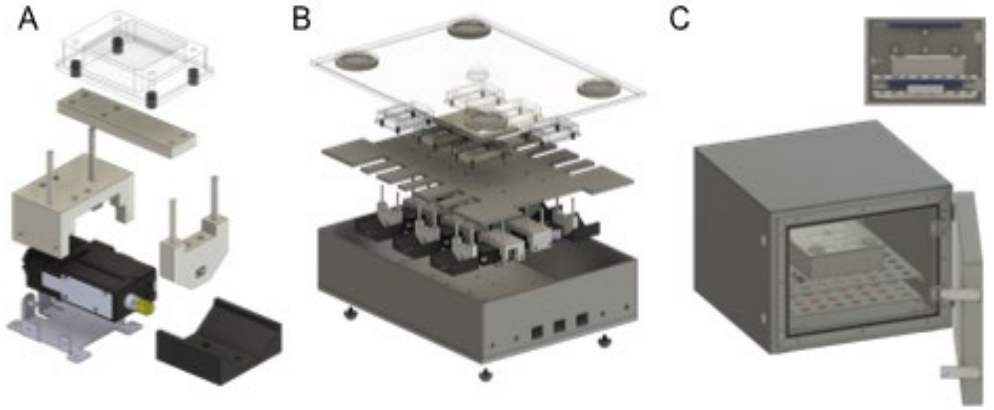


Diagnostic and Therapeutic Development

Biomarkers for sepsis
(Lea Michel, COS)

Human lung fibroblasts
(Karin Wuertz-Kozak, KGCOE)





Diagnostic and Therapeutic Development

Antibiotic activity
(Andre Hudson, COS)

Reduce inflammation
(Karin Wuertz-Kozak, KGCOE)

Colorectal cancer
(Moumita Das, COS)

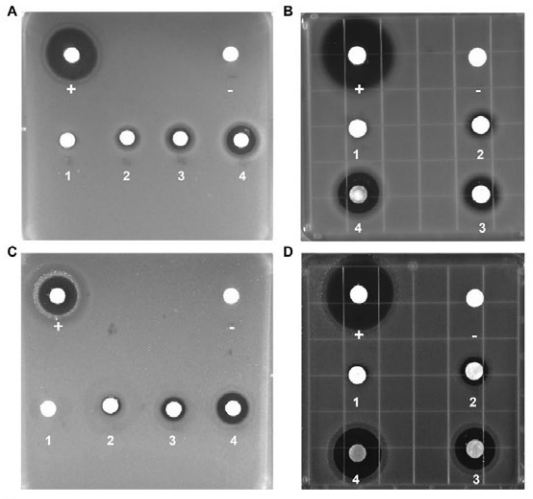
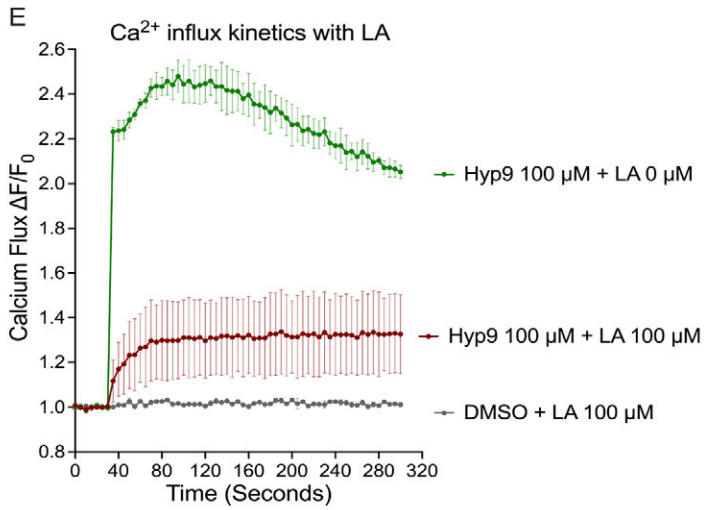
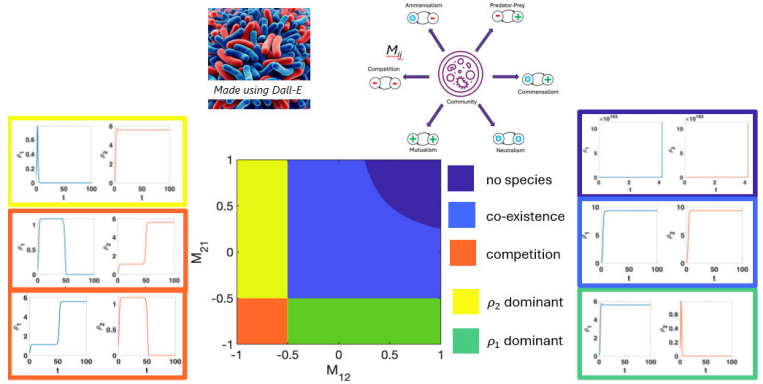


FIGURE 1
Disc-diffusion inhibitory assays of ethyl acetate spent medium crude extracts of *Exiguobacterium* sp. RIT 594 combined with 20% v/v of *Acinetobacter* sp. RIT 592 supernatant against various bacteria: *Escherichia coli* **(A)**, *Staphylococcus aureus* **(B)**, *Pseudomonas aeruginosa* **(C)**, and *Bacillus subtilis* **(D)**. Tetracycline, 0.2 mg (+, positive control); methanol, 20 µL (-, negative control); 1.25 mg (1), 2.5 mg (2), 5 mg (3), and 10 mg (4) of the crude extract. The experiments were performed in duplicates, and the average ZOI values are shown in Supplementary Table S3. **(E)** Bar graph comparing the inhibitory activities of different volumes of RIT 592/594 extracts against the Gram-negative and Gram-positive bacteria shown in panels **(A–D)**.





PHT180 Research Areas + Support

Accessibility
Accessible technology, physical interventions and therapies

Dan Phillips, KGCOE

Intelligent Systems
AI, ML, data science, imaging

Linwei Wang, GCCIS

Behavioral Health
Telehealth, web and mobile interactive platforms, mental and behavioral health

Pamela Beach, CHST

Biotechnology
Bioengineering, tissue engineering, fluid mechanics, medical devices

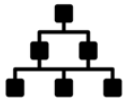
Karin Wuertz-Kozak, KGCOE

User Experience Design
Interactive user engagement, design, human-computer interaction, data visualization, marketing

Adam Smith, CAD

Social and Human Computing
Language science, human factors, public health, psychology

Esa Rantanen, CLA



Systems, Processes, and Workflows
Data analytics, healthcare systems, information science, economics

Chris Bondy, GCCIS

Fundamental/Basic Science
Drug development, chemical synthesis, computational and mathematical biology, biochemistry, biophysics

Andre Hudson, COS

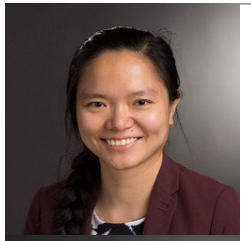
PHT180 Support

Pre-Award Support

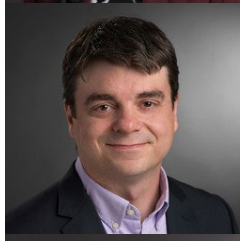
Post-Award Support

Creative Support

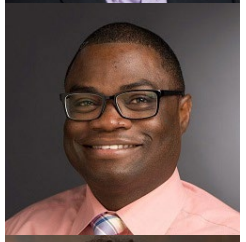
PHT180 Thank You!



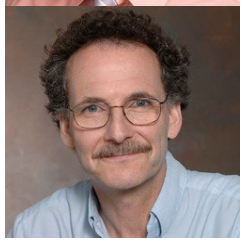
Linwei Wang
GCCIS



Adam Smith
CAD

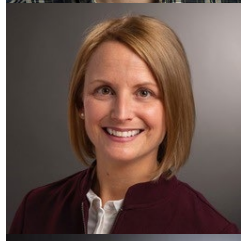


Andre Hudson
COS

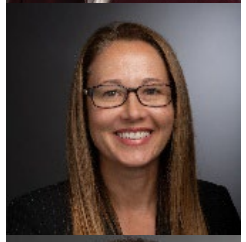


Dan Phillips
KGCOE

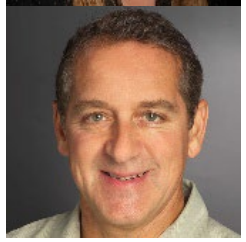
Esa Rantanen
CLA



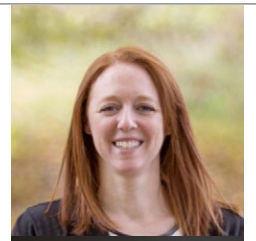
Karin Wuertz-Kozak
KGCOE



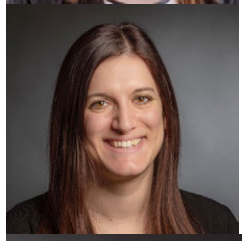
Pamela Beach
CHST



Chris Bondy
GCCIS



Gina Lamanna
Research Program Administrator



Nicole Hale
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