# CIMIT®

MI

IN PRIMARY CARE

Center for Integration of Medicine & Innovative Technology

### Center Overview: Point of Care Technology Research Center in Primary Care Drs. Steven Schachter and John Parrish (co-Pls) Penny Carleton (Program Director)

NIBIB Point of Care Technology Research Network Science Symposium



National Institute of Biomedical Imaging and Bioengineering



## **POCTRC in Primary Care**

- A "center-without-walls" for rapid transformation of emerging point-ofcare technologies into commercially viable, *clinically focused solutions* for improving primary care.
- Leverages the resources and infrastructure of CIMIT with industry, military, and international affiliates.
- CIMIT was founded in 1998 to harness the power of multidisciplinary collaboration to speed the translation of high-impact research into clinical practice.



# CIMIT: Consortia for Improving Medicine with Innovation and Technology



# **Center Aims and Highlights**

#### **ORIGINAL AIMS**

- 1. Apply CIMIT's innovation model
- 2. Identify unmet primary care needs and develop performance criteria
- 3. Select the most promising point-of-care technologies and develop them into prototypes
- 4. Evaluate prototype performance in simulated environments and "living laboratories"
- 5. Transition prototypes into commercially licensable or start-up company opportunities
- 6. Train and educate relevant stakeholders
- 7. Disseminate "lessons learned" and best practices both nationally and internationally

#### ADDITIONAL AIMS

- 1. Develop and maintain shared collaboration resources for POCTRN
- 2. Integrate systems engineering principles and methodology
- 3. Develop an interoperability roadmap for POCTs

# **Driving Towards Precision Medicine:**

Unmet Needs in Primary Care and Annual National Solicitation

- The need for primary care is increasing, while the number of providers is decreasing.
- Therefore there is a need to increase the capacity of providers to care for more patients
  - Without decreasing quality of care, or
  - Burdening providers.
- There are two POC technology-enabled pathways towards this end:
  - Introduce POCTs that increase the efficiency of operations, or
  - Offload selected testing and self-monitoring capabilities to the home setting

- Diverse portfolio of 30 projects drawn from across the country, including academic labs and start-ups. (see posters for 16 of them)
  - Must demonstrate strong engineering-clinical collaboration
  - Higher priority for projects with likely clinical impact/commercialization within 12-18 months

### **Examples of Center Activities/Resources**



Consortia for Improving Medicine with Innovation & Technology

#### APPLICATION OF TECHNOLOGY READINESS LEVELS TO TRACK PROJECT PROGRESS FOR POCTRC IN PRIMARY CARE

PENNY CARLETON, RN, MS, MPA, MSC, JOHN PARRISH, MD, STEVEN SCHACHTER, MD, CIMIT



Commercialization Readiness Assessment and Accelerator for Solutions in Healthcare



Center for Point of Care Technology Product Validation and Outcomes Analysis

See posters for details

### **Network Collaboration: Systems Engineering Workshop**



*Abstract*— Systems engineering is an interdisciplinary field that seeks to better understand and manage changes in complex systems and projects as whole. Systems are sets of interconnected elements which interact with each other, are dynamic, change over time and are subject to complex behaviors. This poster presentation will report on the results of an NIBIB/POCT workshop exploring the future of point of care testing and technologies and the recognition that these new technologies do not exist in isolation but within of other technologies and systems that influence their likelihood of success or failure and their effectiveness.

# **Network Collaboration: POCTRN Website**

#### CELAB





CENTERS -

CLINICAL NEEDS

PRIOR AWARDS

RESOURCES -

Sign In/Register

### **Our Research Centers**



Center for Point-of-Care Tests for Sexually Transmitted Diseases Charlotte Gaydos, Johns Hopkins University

Point of Care Technology Research Center in Primary Care John Parrish, Steve Schachter CIMIT

**Center for Future Technologies in Cancer Care** Catherine Klapperich, Boston University (Charles River Campus)

#### www.poctrn.org

# CIMIT®

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Center for Integration of Medicine & Innovative Technology

CHNOLOGY

RESEARCH CENTER IN PRIMARY CARE

# **Questions?** Thank you

More detail on Center's projects and resources during the poster sessions



National Institute of Biomedical Imaging and Bioengineering

