

Summary of the Discussion and Minutes of the Teleconference

Technical Committee on Translational Engineering and Healthcare Innovation

February 24, 2016
Meeting ID: TC-TEHI-2-16

Teleconference Agenda:

1. Welcome and approval of minutes of last teleconference
2. Potential hubs/centers for collaborative communication and information databases (see below the locations that were discussed in the last meeting).
3. HI-POCT Conference In Cancun: Invited Speakers and Student-Paper Competition
4. New Business
5. Adjourn

Following the discussion from the January teleconference, the critical need of developing a Global Healthcare Collaborative Network (GHCN) was discussed. The GHCN will connect to regional resources, programs and networks focused on the evolving and priority healthcare and clinical needs, development of innovative technologies, and translational projects to bring all stakeholder groups together towards addressing global healthcare challenges. The GHCN will be supported by collaborative databases of information, projects and programs through which the priority needs including those evolving through outbreaks can be identified and addressed through collective synergy of researchers, clinicians, healthcare providers, industry, entrepreneurs, and regulatory agencies.

In continuation of the discussion on establishing the GHCN, the following regional resources were identified with the next-step actions and plans towards formation of the collaborative synergy with stakeholder groups.

1. Center for Integration of Medicine and Innovative Technology (CIMIT)
Website: <http://www.cimit.org>
GHCN Liaison: Steven Schachter, MD, Chief Academic Officer, CIMIT, Program Leader, Neurotechnology. Steve will provide a description on the resources, opportunities and any database interface to follow up with CIMIT administration to connect with GHCN.
2. NASA Gene Lab and Health Sciences Center at Houston
Website: NASA Gene Lab: <http://genelab.nasa.gov>
Dan L. Duncan Institute for Clinical and Translational Research:
<https://www.bcm.edu/research/advanced-research-resources/institute-clinical-and-translational-research>

- GHCN Liaison: Clifford Dacso, MD, MPH, MBA, Philip J. Carroll, Jr. Professor in Translational Molecular & Cell Biology and Professor of Medicine. Cliff will provide a description on the resources, opportunities and any database interface to follow up with NASA-Gene Lab and ICTR administration to connect with GHCN.
3. Atlanta Clinical and Translational Science Institute (ACTSI), Emory University, Georgia Institute of Technology
Website: <http://www.actsi.org>
GHCN Liaison: Srini Tridandapani, MD, PhD, MBA, Assistant Professor of Radiology and Imaging Sciences at Emory University. Srini will provide a description on the resources, opportunities and any database interface to follow up with ACTSI administration to connect with GHCN.
 4. NIH-NIBIB PointofCare Research Network
Website: <https://list.nih.gov/cgi-bin/wa.exe?SUBED1=pointofcaretechnologies&A=1>
GHCN Liaison: Tiffani Lash, PhD, Program Director/Health Scientist Administrator at the National Institutes of Health; Program Director for the NIBIB Point of Care Technologies Research Network. Tiffani will follow-up with POCT-RN interface with GHCN through collaborative efforts that merge scientific and technological capabilities with clinical needs.
 5. Hospital network and translational program in Germany
GHCN Liaison: Thomas Penzel, PhD, scientific director of the sleep medicine center at Charite Universitätsmedizin Berlin, Germany. Resources, opportunities and any database interface to follow up with ACTSI administration to connect with GHCN will be determined.
 6. Hospital network and translational program in Italy
GHCN Liaison: Christian Cipriani, PhD, Associate Professor and Head of the Artificial Hands Area at The BioRobotics Institute, Scuola Superiore Sant'Anna, Pisa, Italy; and Silvestro Micera, PhD, Associate Professor and Head of the Translational Neural Engineering Laboratory at the Ecole Polytechnique Fédérale de Lausanne (EPFL). Resources, opportunities and any database interface to follow up with ACTSI administration to connect with GHCN will be determined.
 7. Hospital network and translational program in Brazil
GHCN Liaison: Arturo FornerCordero, PhD, Associate Professor and Head of the Biomechatronics Laboratory, Polytechnic School of the University of São Paulo. Resources, opportunities and any database interface to follow up with ACTSI administration to connect with GHCN will be determined.
 8. Need to add GHCN sites and liaisons in Chicago, Seattle, SF/LA/Bay, India, China, South Africa, Middle East, and others. Jie Chen, Tiffani Lasj and Metin Akay and other members will follow up on contacts.
 9. Need to bring in industry:
Phillips HealthCare: Portia Singh
CVS MinuteClinic: Tobias Barker, MD, Vice President of Medical Operations, CVS/MinuteClinic; and J. Benjamin Crocker, MD, Medical Director, Ambulatory Practice of the Future

Cepheid: Fred C. Tenover, Ph.D. D(ABMM), Vice President, Scientific Affairs, Cepheid

More industry participants: Through translational institutes. TC members will facilitate to connect to industry.

HI-POCT 2016 format was discussed. Members will help nominate keynote speakers.

JTEHM special issue on HI-POCT 2015 is on its way. More than 25 manuscripts have been submitted. TC members will help promoting JTEHM for translational research publication involving academic, industry and clinical sectors.

Follow up with email communications on GHCN hubs. Please send information about potential GHCN resources to Atam Dhawan in next few weeks.

Next teleconference will be scheduled in two months.

Report from Jie Chen:

The Canadian government has invested multi-million dollars in helping create a metabolomics center (refer to <http://www.metabolomicscentre.ca/>). We got additional \$5 million dollars to build "Tricoder" devices for point-of-care (refer to <http://www.tricoder.ca/>). The goal is test metabolites (listed in the following table), not only one but multiple with 10 minutes and cost \$1 per marker.

Glycerol	Indoxyl sulfate	Carnosine
Vitamin D	Choline	Vitamin B12
Phenylalanine	Lactate	Folate
Tyrosine	Glutamate	Taurine
Leucine	Glutamine	Bilirubin
Amino adipic acid	Glucose	ADMA
TMAO	Formate	Pyruvate
Betaine	Aldosterone	Cortisol
Homocysteine	Testosterone	Dopamine
Uric acid	Estradiol	HPHPA

-- We are collaborating with the Memorial Sloan Kettering Cancer Center in developing an early diagnostic point-of-care device to detect colorectal cancer using urine sample. The field study is ongoing in Nigeria.

-- In addition to the field trial in Nigeria, we also secured \$3.6 million RMB (seed money) from the Chinese government to create a metabolite biomarker database for lung and colorectal cancers.

— Last but not least, to support the commercialization, we are seeking Venture Capitals in the Silicon Valley to create a start-up company.