Message

From: Kingshuk Das [/O=THERANOS ORGANIZATION/OU=EXCHANGE ADMINISTRATIVE GROUP

(FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=KINGSHUK DASE2B]

Sent: 1/11/2016 7:06:47 AM

To: Elizabeth Holmes [eholmes@theranos.com]; Daniel Edlin [dedlin@theranos.com]; Waldo Concepcion

[wconcepcion@theranos.com]

Subject: RE: Science Review Meeting Attendees

Great!

I would recommend considering, in addition, one Clinical Chemist and one Clinical Microbiologist (in no particular order), and based on my personal experience, these are the names that come to mind:

Clinical Chemists

- 1. Mitch Scott, PhD (Washington U, former president of American Association for Clinical Chemistry)
- 2. Jack Ladenson, PhD (Washington U), renowned Clinical Chemist, inventor of CK-MB and troponin assays, delta checks, among other advances)
- 3. Ann Gronowski, PhD (Washington U, another former AACC president, particular expertise in endocrine testing)

Clinical Microbiologists

- 1. Michael Lewinski, PhD (currently at Roche Diagnostics, former faculty at UCLA and director at Quest, particular expertise in molecular virology)
- 2. W. M. Dunne, PhD (currently at bioMerieux, formerly at Washington University, particular expertise in bacteriology)

Thanks,

k

From: Elizabeth Holmes

Sent: Sunday, January 10, 2016 12:12 PM

To: Kingshuk Das <kdas@theranos.com>; Daniel Edlin <dedlin@theranos.com>; Waldo Concepcion

<wconcepcion@theranos.com>

Subject: RE: Science Review Meeting Attendees

Please do add any thoughts. We are still orchestrating this,

Elizabeth

From: Kingshuk Das

Sent: Sunday, January 10, 2016 11:04 AM

To: Daniel Edlin <dedlin@theranos.com>; Waldo Concepcion <wconcepcion@theranos.com>

Cc: Elizabeth Holmes < eholmes@theranos.com>
Subject: RE: Science Review Meeting Attendees

Hi Dan,

Apologies for this delayed reply--just started using the company laptop and email address. It's a great list--I did have a couple of recommendations for Clinical Chemists and Microbiologists, but if the deadline has passed, no worries, just let me know.

Thanks, king

From: Daniel Edlin

Sent: Tuesday, January 05, 2016 10:42 AM **To:** Waldo Concepcion; Kingshuk Das

Cc: Elizabeth Holmes

Subject: Science Review Meeting Attendees

Hi Waldo and King,

Bill Foege has suggested inviting the following three people to our science review meeting. If you could please offer your feedback today on any other attendees you think we should add, or if you think this group is sufficient, we will hopefully be able to lock in this list today and start moving forward with preparations and planning.

- 1. Tristram G. Parslow, MD, PhD, Microbial Pathogenesis, HIV Pathogenesis
- Chief of Pathology Section, The Emory Clinic
- Attending Pathologist, Emory Healthcare, Emory University Hospital, and Crawford Long Hospital
- o Member, Board of Directors, The Emory Clinic
- o Member, Board of Directors, Emory Medical Care Foundation
- o National Council Member, Association of Pathology Chairs
- Research Interests:
- Molecular Virology of HIV and Influenza. Our laboratory's research is focused mainly on the structure and assembly of the human immunodeficiency virus (HIV) and influenza A virus, with the goal of developing new approaches to antiviral therapy. We are particularly interested in understanding how each of these viruses is able to recognize and package its genomic RNA into new viral particles as they form within an infected cell. By combining three-dimensional structural analysis with targeted mutagenesis of virally encoded macromolecules, we are elucidating specific RNA-RNA and RNA-protein interactions that are critical for replication, and that may offer new targets for antiviral drugs.
- My other scientific interests extend broadly over the fields of immunology, virology, and the molecular basis of human disease. Past projects have included studies of human telomerase RNA; of the apoptotic regulatory proteins Bcl2 and Bax; and of immune responses to multicellular parasites; as well as co-discovery of a novel form of human severe combined immunodeficiency (SCID) that results from an inherited defect in ZAP-70, a tyrosine kinase involved in T-cell receptor signaling. In addition, as a pathologist, I have enjoyed several opportunities to collaborate in characterizing novel transgenic or knockout mouse strains whose phenotypes shed light on important facets of mammalian development, immunity, and carcinogenesis.

- 2. Rafi Ahmed, PhD
- Vaccine Center Director, Emory Vaccine Center
- Professor, Department of Microbiology and Immunology
- o Eminent Scholar, Georgia Research Alliance
- o Investigator, Emory Center for AIDS Research
- o Dr. Rafi Ahmed, a member of the National Academy of Science, is a world-renowned immunologist whose work during the past decade has been highly influential in shaping our current understanding of memory T cell differentiation and anti-viral T and B cell immunity. The long-term goal of Dr. Ahmed's research is to understand the mechanisms of B and T cell immunological memory and to use this information to develop new vaccines for the prevention and treatment of disease. The Ahmed laboratory uses highly sophisticated cellular and molecular techniques to study antigen-specific immunological memory in murine, primate, and human systems. A major area of focus is identifying cellular molecules that regulate the generation and maintenance of CD8 and CD4 T cell and humoral immunity. One such molecule is mTOR that we recently identified as a major regulator of memory CD8 T cell differentiation.
- o Another area of focus is to develop strategies to restore function in virus-specific T cells during a chronic viral infection such as HIV or Varicella-zoster virus (VZV). A key breakthrough by the Ahmed laboratory several years ago demonstrated the striking differences in memory CD8 T cell differentiation during acute versus chronic viral infection resulting in the identification of the inhibitory receptor, PD-1, as a major mediator of T cell dysfunction during chronic infection. This work has directly translated into human clinical studies where PD-1 antibody blockade has since been used to treat both chronic infection and cancer. We are currently working on additional inhibitory receptors we have identified and also the roles of CD4 follicular helper T cells, memory B cells, and antibody play during chronic viral infection.
- o Another approach of the Ahmed laboratory is to understanding humoral memory development and maintenance. We have co-developed a novel method for rapidly generating human monoclonal antibodies after vaccination and have shown that broadly cross-reactive antibodies that recognize multiple influenza viruses can be generated after influenza vaccination in humans. These studies and those currently on going which include understanding the mechanisms that regulate the development of neutralizing antibody give rise to the possibility that a universal influenza vaccine could be developed in the near future.
- o http://vaccines.emory.edu/faculty/ahmed rafi.html
- Larry Kessler
- o ScD Johns Hopkins University, 1978 (Health Services Admin)
- o BS Boston University, 1973 (Mathematics)
- o Professor, Health Services (Washington University)
- Adjunct Professor, Pharmacy (Washington University)
- o Kessler is a former Chair of the Department of Health Services. He served as Director of the Office of Surveillance and Biometrics, Center for Devices and Radiological Health, FDA until 2008. From 1984 to 1995, he headed and developed the Applied Research Branch at NCI. In 2001, he spent a year as a visiting scientist at the Fred Hutchinson Cancer Research Center and served on the faculty of the Department of Health Services.
- o Research Interests: Cost-effectiveness and diagnostic value of medical technology in screening for cancer and other diseases
- o http://depts.washington.edu/hserv/faculty/Kessler Larry

Thanks,

Dan