

ETA *PER FAX*

To: (unknown), 103737,1466
From: Katherine Mulholland, INTERNET:kmulholl@sysplan.com
Date: 12/2/96, 8:40 AM
Re: DARPA Unconventional Pathogen Countermeasures Meetings in Santa Fe

Sender: kmulholl@sysplan.com
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Date: Mon, 2 Dec 1996 08:36:14 -0500
To: 103737.1466@compuserve.com
From: kmulholl@sysplan.com (Katherine Mulholland)
Subject: DARPA Unconventional Pathogen Countermeasures Meetings in Santa Fe

Message from CDR Shaun B. Jones, M.D., DARPA/DSO:

Dear Admiral Zumwalt:

The time for the unofficial launch of our first competitive round of high-impact projects is just around the corner. We have an exciting, fast-paced series of meetings planned for Santa Fe, and we look forward with great anticipation to your involvement in this strategic event.

The tranquil setting of the Hotel Santa Fe, off the Plaza's well-beaten path, will help assure the productivity of these meetings. Please dress casually to assure your own comfort. We look forward to you joining us from 6:00 to 8:00 PM on December 4 in the Kiva B Room for a welcoming reception that will include a tasty selection of Native American appetizers. If your spouse (or another individual) is accompanying you on your journey to Santa Fe, we look forward to meeting them on Wednesday evening, as well.

In addition to a review of current and future projects in the DARPA UPC Program, we plan to explore some basic strategy and technology issues. For your pre-meeting imagineering, please consider answers to these questions relevant to our biological warfare defense focus:

ADVISORY STATEGIC PLANNING SESSIONS:

- * What will happen if the US experiences adversarial surprise in the field of biotechnology....what might the surprises and consequences be ? (21st century bio-Sputnik)
- * How can the US anticipate and neutralize any such surprises?
- * What is the biotech community doing to protect against biotechnological surprise?
- * How would the US respond technologically (avoid the turf battles of first and emergency responders - fire, police, FEMA, FBI, DOD, etc.) to an attack with a biological warfare agent?
- * What is industry doing that is DoD-esque?
- * What is industry doing that is DARPA-esque?
- * What are the basic science and technological limiters?
- * What are the best architecture(s) to leverage the academic and industrial communities?

(Biocomputing and weapons (lethal or non-lethal) are purposely omitted.)

Biosensors

- * Bio-based multi-spectral (e.g., sharks E/M, pigeons UV, canine chemical)
- * Non-traditional (e.g., transgenic AgBio, abiotic "sensored" insects, \ infoplasm)

Biomaterials

- * Environmentally reactive, biomimetic materials for personnel or weapons systems (e.g., ballistic protective or anti-weapon, exo/endo skeletons, camouflage/stealth)
- * Abiotic materials

Bioproduction, Preservation and "Pharming"

- * Abiotic self-assembling or bio/abio systems
- * Transgenic flora and fauna for renewable resources (e.g, water, food, fuel, therapeutics)

Bioremediation and Terraforming

- * Microbes to shape (e.g., block/clear/softening) or unfoul (e.g., chem-bio, mines) terrain

Biolabeling

- * Target IFF and response (e.g., "tagging" with EGFP or LUX genes)

Human Performance Enhancement

- * Genetic and non-genetic prognosticators for susceptibilities and aptitudes (e.g., threat agents, stresses, information processing and reaction) vs. genetic manipulation
- * Paradigms for complex, collective human behaviors (e.g, hive and swarm)
- * Information processing (e.g., canine olfaction to molecular biological drivers)
- * Biomaterials
- * Trait modulation (e.g., genetic and non-genetic)
- * Metabolic and sensory modification (e.g., mega-calorie bar with appetite suppressant)

The US must be extremely circumspect regarding the implications of biotechnology research, both at home and abroad. Nonetheless, it is essential to consider the defense against and mitigation of biotechnologies and their effects. It is clear even today, that current and future enemies may not be bound or may violate treaties the US observes.

Thank you for accepting our invitation to be a part of these meetings. Steve Morse and I look forward to working with you in Santa Fe.

Regards,

Shaun

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Katherine Mulholland
System Planning Corporation
1429 N. Quincy Street, TCI
Arlington, VA 22207

Senior Engineer
voice: (703) 351-8617
fax: (703) 351-8662
email: kmulholl@sysplan.com