DARPA's Insidious Eclectic Transformation of Humanity into Synthetic Entities

https://shepherdsheart.life/blogs/news/darpas-insidious-eclectic-darpas-transformation-of-humanity-into-synthetic-entities

https://www.youtube.com/watch?v=nJn7IY2y8C0

The program is about protecting you from biological, chemical and viral threats. It is utilizing a completely new approach. The program was initiated by DARPA on December 4, 2019, 8:00 AM EST. The Personalized Protective Biosystem (PPB) program aims to reduce protective equipment needs while increasing protection against existing and future CB threats with:

1) reactive materials that prevent threat agent access to the body;

2) a configurable barrier countermeasure that neutralizes threat agents at vulnerable points of entry (i.e., skin, airway, ocular).

The program will leverage molecular components or commensal organisms at key points of vulnerability to remove protective equipment burden from the user. Successful PPB technologies would therefore change how the military and public health communities perform in unpredictable threat environments.

Building reactive materials that you can wear. Skintight materials like a snakeskin, less that a pound with no thermal ability. It must be worn at the eyes, throat, and whole skin to be safe. It would be a shroud that protects you from known and emerging chemical and biological threats.

The second part of the program is using synthetic biology that would live or in you to protect you at your tissue barriers. Barriers were created by God to keep you safe but as these barriers are degraded science is offering you a synthetic barrier.

There is a wave of SynBio right now. SynBio is where scientists use bacteria and other products to work for us. That usually happens in a Bioreactor or fermenter in a factory or warehouse somewhere but now it is coming to your microbiome. DARPA is going to use the same bacteria and processes that are used in drug manufacturing and other industrial processes. In other words, you literally become a synthetic factory! Your body becomes the factory manufacturing the compounds that they promise will protect you. In its primitive state this is what GMO food does to your gastrointestinal system, turns it into a living pesticide factory. We all know how well that worked out for humanity with a surge in detrimental health problems.

Given DARPA's proclivity for swarming these synthetic entities will have swarming capability that can rapidly overtake a normal human.

There are companies actually doing clinical trials right now where you can take in certain bacteria that can live in your body that make product to protect you from toxins, treat irritable bowel disorder, and even go so far is to replace your organ function such as your kidneys. These bacteria in theory would process the toxic waste products from your blood that the kidneys would typically accomplish. DARPA believes that this is fantastic.

In essence, what this is doing is engineering your own synthetic microbiome. You must understand that your microbiome controls your whole body, everything from your organs, blood, brain, hormones, and more. You are translated into a synthetic or artificial being or entity.

DARPA wants to bring in other types of organisms that can live on and in you. These are foreign invaders who have "evolved" over millions of years and have potential to live within you in a proposed symbiotic way (you scratch my back, I will scratch yours) known as commensal relationship. Commensalism is a type of relationship where one of the organisms benefits greatly from the symbiosis. The other is not helped but is not harmed or damaged from the relationship. In other words, this is a one-sided symbiotic relationship.

DARPA is going to engineer and gene-edit these ancient entities that they plan to make ubiquitous to protect us. They can produce antibodies, vaccines, compounds that interact with bacteria or viruses or even chemical agents and enzymes. Once again, supposedly breaking them down before they can hurt us.

A BCM that when inhaled or applied to the eyes or skin must neutralize diverse chemical and biological agents before they can impact the individual.

a. BCM solutions should be a 'plug and play' format; such that the platform will accommodate reconfiguration against different agents.
b. Increasing the "catalog" of threats protected against by BCM should not compromise breadth of CB threat protection.

c. Rapid (within minutes), and long-lasting (30 days) protection will be required.

d. Living organism-based BCM approaches should include multiple safeguards such as "toggle switches" for activation and deactivation in the body.

In essence, we have a constant circulating or "presence" within our body. This presence enters us through the air, our eyes, absorbed through our skin, or ingested. This commensal action will give a person 30-day protection.

PPB is a physical solution and a biological "Solution" that will live on us and in us to protect us thereby eliminating the need for God's protection.

At this time, it is a temporary alteration as they work the bugs out but it could become permanent at any time. There is an "on and off switch" or a kills witch as it is known. That may sound good but your controllers can turn these switches on and off at will. The teams designing this system have been given orders to demonstrate the ability to turn off their system within 1 hour. You also have to be able to turn this SynBio within an hour.

This is a 5-year program and all of humanity will merge with SynBio by 2025. Proposing teams must be multidisciplinary with expertise in

nanocomposite, smart textiles, smart molecular or nanoscale sorbents, commensal organisms, gene and protein expression systems, immunogenicity, metabolomics, and medical device development. Proposing teams are strongly encouraged to include expertise across fields, as well as with industry partners familiar with FDA or equivalent regulatory approvals.

Personalized Protective Biosystem (PPB) Proposers Day (Archived) (Archived)

Personalized Protective Biosystem (PPB)

Dr. Eric Van Gieson

The Proposers Day will include brief overview presentations by government personnel as well as an information session to respond to questions from participants.

The Biological Technologies Office is holding a Proposers Day meeting and webinar covering the new Personalized Protective Biosystem (PPB) program. PPB aims to develop technology that reduces the need for burdensome protective equipment while increasing individual protection against chemical and biological threats. The program comprises two technical areas: 1) reactive materials that prevent threat agent access to the body; 2) a configurable barrier countermeasure that neutralizes threat agents at vulnerable points of entry (i.e., skin, airway, ocular).

Additional details, including registration instructions, are available at https://go.usa.gov/xp8dU. The registration deadline is November 26, 2019, at 12:00 PM EST or when capacity is reached. We will continue to accept webinar only registrations through December 2, 2019, or until webinar capacity is reached.

Please address administrative questions to DARPA-SN-20-10@darpa.mil and refer to the PPB Proposers Day (DARPA-SN-20-10) in all correspondence.

DARPA hosts Proposers Days to provide potential performers with information on whether and how they might respond to the Government's research and development solicitations and to increase efficiency in proposal preparation and evaluation. Therefore, the PPB Proposers Day is open only to registered potential applicants, and not to the media or general public.

DARPA anticipates sharing additional program details in a forthcoming Broad Agency Announcement to be posted to the https://beta.sam.gov/ website.

Special Notice (SN) DARPA-SN-20-10: Personalized Protective Biosystem (PPB) Proposers Day

Inactive
Contract Opportunity
Notice ID
DARPA-SN-20-10
Related Notice
Department/Ind. Agency
DEPT OF DEFENSE
Sub-tier
DEFENSE ADVANCED RESEARCH PROJECTS AGENCY (DARPA)
Office
DEF ADVANCED RESEARCH PROJECTS AGCY

General Information

- **Contract Opportunity Type:** Special Notice (Original)
- **All Dates/Times are:** (UTC-04:00) EASTERN STANDARD TIME, NEW YORK, USA
- **Original Published Date:** Nov 18, 2019 01:16 pm EST
- **Original Response Date:** Nov 26, 2019 12:00 pm EST
- **Inactive Policy:** 15 days after response date
- **Original Inactive Date:** Dec 11, 2019
- **Initiative:**
    - None

Classification

- **Original Set Aside:**
- **Product Service Code:**
- **NAICS Code:** 541714 - Research and Development in Biotechnology (except Nanobiotechnology)
- **Place of Performance:**

Description

The Biological Technologies Office (BTO) of the Defense Advanced Research Projects Agency (DARPA) is hosting a Proposers Day for the potential proposer community in support of a planned Broad Agency Announcement (BAA) for the PPB Program. The Proposers Day will be held on December 4, 2019 from 8:00 AM to 3:00 PM ET at the George Mason University Auditorium. Advance registration is required. The event will be webcast to provide limited interaction for those who would like to participate remotely. Presentations and discussion will be broadcast via the webcast; however, interaction with webcast attendees will limited. Webcast attendees will have the chance to submit questions prior to close of the meeting. It is strongly encouraged to attend the Proposers Day in person. Advance registration is required for both the physical meeting and the webcast. Note, all times listed in this announcement and on the registration website are Eastern Time. Please see Special Notice attachment for more detailed information.

PPB Program Overview: DARPA is soliciting innovative proposals that will simultaneously reduce protective equipment needs, while increasing protection for the individual against chemical and biological (CB) threats.

The capability to provide unburdened CB protection will maximize time on target for the stability operator, provide operational flexibility, and enable prolonged military operations in remote and diverse threat environments regardless of the threat. The program comprises two Technical Areas (TAs): TA1 - reactive materials that prevent CB agent access to the body; and TA2 - a configurable barrier countermeasure (BCM) that neutralizes CB agents at vulnerable points of entry (i.e., skin, airway, ocular). TA1 Prevent contact: Performers will develop platforms that, when applied or worn, instantly prevent the wearer from coming in contact with CB threats. The design should also reduce the donning process to less than 10 minutes. Additionally, these platforms will be available to the warfighter or stability operations operator with near-zero logistical burden. Further, accidental crosscontamination should be eliminated by the platform's ability to inactivate, sequester, and/or eliminate attachment of agents. TA2 Configurable barrier countermeasure: This technical area will provide neutralization at one or all of the vulnerable tissue barriers (airway, ocular, or skin interfaces), as necessary, to protect against agent exposure from DARPA-selected agents. This will supplement TA1's protective barrier by providing persistent, offsetting, and orthogonal protection against threats that may penetrate the outer layer material or contact the wearer during doffing procedures. Additionally, the BCM will be expected to function independently of the TA1 system for certain Concept of Operations (CONOPS) where a material-based platform is not possible. Newly adapted BCM platforms will increase CB protection breadth and specificity without sacrificing the protection against the original catalog of CB agents. Proposals for the PPB program should include approaches to achieve the following: 1. Biological, molecular, or nano composite smart textiles that prevent multiple toxic chemical and biological agents from penetrating, and coming in contact with the body. a. Material solutions should be lightweight, breathable, and both weather and abrasion resistant. b. Deployability and repeated use for up to 30 days in austere and low-infrastructure environments should be considered. c. Near instantaneous protection will be required. 2. A BCM that when inhaled or applied to the eyes or skin must neutralize diverse chemical and biological agents before they can impact the individual. a. BCM solutions should be a 'plug and play' format; such that the platform will accommodate reconfiguration against different agents. b. Increasing the "catalog" of threats protected against by BCM should not compromise breadth of CB threat protection. c. Rapid (within minutes), and long-lasting (30 days) protection will be required. d. Living organism-based BCM approaches should include multiple safeguards such

as “toggle switches” for activation and deactivation in the body. Specifically excluded is research that involves: 1. Repurposing or elaboration of textiles or material composites that burden the operator with thermal, mechanical, or operational logistics. 2. Approaches that are individualized and precision medicine based (i.e., autologous). 3. Platforms incapable of reconfiguration. 4. Platforms without ‘Off’ switches for either organism gene expression control or organism population management. 5. Formulation and delivery solutions incompatible with hand-held delivery and storage considerations associated with austere, low-infrastructure environments. 6. Sole use of animal model systems or model system assays that are not generally accepted as representative of the respective indication. Proposals that employ the approaches described in the above list may be deemed non-responsive and may not be considered for review. TEAMING DARPA highly encourages teaming before proposal submission, highly suggesting proposers mediate the active formation of teams with the necessary expertise in advance of, or during Proposers Day. Proposers Day registrants may choose to participate in either, none or both of the following options: 1. Attendee List (Publicly available): participant contact information (name, organization, email address) will be included on a Proposers Day Attendee List published on the BTO Opportunities website. The registration website will ask registrants to indicate whether they approve publication of their contact information. 2. Proposer Profile List (Limited distribution): interested parties shall submit a one-page profile consisting of their contact information (name, organization, email, telephone number, mailing address and, if applicable, organization website); a brief description of their technical competencies; and, if applicable, their desired expertise from other teams/organizations. PRESENTATIONS Interested attendees are invited to present a brief one-slide PowerPoint summary of their interests and capabilities (see Attachment 1 – lightning talk slide template). These will be presented during 3-minute “lightning” presentations at Proposers Day. Presentations consisting of multiple slides will not be granted a time slot. Attendees may also choose to present a poster (see Attachment 2 – poster template) describing their research interests that will be available for viewing and interaction for the duration of Proposers Day. Those interested may submit both a lightning talk and a poster. Lightning talk and/or poster submissions will be accepted on a first-come, first-serve basis until time constraints (lightning talks) or physical capacity (posters) is reached. Lightning talk submissions are restricted to those attending the physical meeting. Profiles, presentations, and posters must be emailed to DARPA-SN-20-

10@darpa.mil no later than 12:00 PM EST on November 26. 2019. On November 27, 2019 beginning at 5:00 PM EST, those registered will be able to view all profiles, presentations, and posters to facilitate collaboration and teaming discussions prior to Proposers Day. Specific content, communications, networking, and team formation are the sole responsibility of the participants. Neither DARPA nor the Department of Defense (DoD) endorses the documents submitted, nor does DARPA or DoD exercise any responsibility for improper dissemination of information provided in profiles, presentations, or posters. Registration Information: PLEASE NOTE: Registration for in-person attendance closes on November 26. 2019 at 12:00 PM EST or when capacity is reach and webinar registration will close on December 2, 2019 at 12:00 PM EST or when webinar capacity is reached. Registration is limited by the venue capacity, and early registration is strongly recommended. There will be no on-site registration. Participants must register in advance through the registration website. There will not be a registration fee for the Proposers Day. Early registration is strongly recommended. Due to space limitations, attendance for the Proposers Day will be limited to the first 300 registrants. Remote participation via webcast is limited to 500 participants. Interested parties are encouraged to coordinate attendance internally within their organizations prior to registration. Attendance is limited to no more than two representatives per division/department. Individuals who are unable to register because the deadline has occurred or capacity has been reached, will be added to a waitlist. If slots remain open after registration closes or become available due to cancellations, the slots will be filled on a first-come, first-served basis from the waitlist. An online registration form and various other meeting details can be found at the registration website, http://events.sa-meetings.com/PPBProposersDay. All attendees are required to present government-issued photo identification upon entry to the event. Non-US citizens are required to submit a DARPA Form 60 (U.S. Permanent Resident and Foreign National Visit Request) no later than Tuesday, November 26, 2019 at 12:00 PM ET. This form and submission instructions will be provided in the registration confirmation email. Further administrative questions should be addressed to DARPA-SN-20-10@darpa.mil. Please refer to the PPB Proposers Day (DARPA-SN-20-10) in all correspondence. This announcement is not a request for proposals; any sent will be disregarded. DARPA hosts Proposers Days to provide potential performers with information on whether and how they might respond to the Government’s research and development solicitations; and to increase efficiency in proposal preparation and evaluation. Therefore,

Proposers Days are open only to registered potential proposers. This SN is issued solely for information and potential new program planning purposes; the SN does not constitute a formal solicitation for proposals or proposal abstracts. In accordance with FAR 15.201(e), responses to this notice are not offers and cannot be accepted by the Government to form a binding contract. Submission is voluntary and is not required to propose to subsequent Broad Agency Announcements (if any) or research solicitations (if any) on this topic. DARPA will not provide reimbursement for costs incurred in responding to this SN. Respondents are advised that DARPA is under no obligation to acknowledge receipt of the information received, or provide feedback to respondents with respect to any information submitted under this SN. NO CLASSIFIED INFORMATION SHOULD BE INCLUDED IN THE SN RESPO