PROTECTION - SCIENCE AND TECHNOLOGY ADVANCES FOR CHEMICAL AND BIOLOGICAL PROTECTION

Rapid Biotechnology Prototyping Consortium

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The Rapid Biotechnology Prototyping Consortium (RBPC) represents the effort to modernize the biotechnology laboratory infrastructure and capabilities that is funded by the Triservice Biotechnology for Resilient Supply Chains Program. Consisting of research groups and subject matter experts at several DoD service laboratories across the United States, the RBPC is designed to employ best practices drawn from industry and academia to execute a complete biotechnology design-build-test-learn cycle from gene synthesis, strain engineering, process development, through to scale-up. Data sharing and technology transfer across the RBPC is facilitated by a robust, secure, and flexible digital backbone that will exploit the extensive resources of the High-Performance Computing Modernization Program to enable computation-intensive operations such as metabolic modeling. By employing “Begin with the End in Mind” and “Scale-down to Scale-up” systems engineering principles and implementing interdisciplinary integrated product teams for specific molecules or materials, the RBPC will compress the timeline of military-relevant biotechnology products from ideation to prototypes that incorporate biomanufactured materials.

The RBPC is funded by the Triservice Biotechnology for Resilient Supply Chains Program from OUSD(R&E).