**DARPA’s Biological Technologies Office - Interests**

- Discovering and leveraging novel findings from neuroscience, psychology, cognitive science, and related disciplines to advance treatment and resilience in neurological health and optimize human performance.

- Understanding and improving interfaces between the biological and physical world to

enable seamless hybrid systems.

- Developing and leveraging fundamental understanding of the underlying design rules

that govern the behavior of biological systems.

- Developing new tools and capabilities for forward engineering of biological systems,

such as cells, tissues, organs, organisms, and complex communities, to both develop

new products and functional systems, as well as to gain new insights into underlying

mechanisms.

- Developing new platform technologies that integrate, automate, and miniaturize the

collection, processing, and analysis of biological samples.

- Developing technologies that leverage ecological diversity and/or help support human

operations in extreme environments (ocean, desert, space, etc.).

- Developing and validating new theories and computational models that identify

factors and principles underlying collective and interactive behaviors of biological

organisms at all scales from individual cells to global ecosystems.

- Understanding the dynamics of population and ecosystem behavior to preserve

equilibrium, provide strategic opportunity, or avoid catastrophe.

- Developing and leveraging new technologies that can be applied to agricultural

ecosystems for production stabilization, by improving quality or reducing losses from

pathogens or pests.

- Developing and leveraging new insights into non-human biology across and between

populations of microbes, insects, plants, marine life, and other non-human biologic

entities.

- Developing new technologies and approaches that ensure biosafety, biosecurity, and

protection of the bioeconomy.

- Understanding emerging threats to global food and water supplies and developing

countermeasures that could be implemented on regional or global scales.

- Developing new technologies to treat, prevent, and predict the emergence and spread

of infectious diseases that have the potential to cause significant health, economic,

and social burden.

- Other biological technology topic areas that fit the national security scope of BTO’s

mission.