



CounterACT Ocular Therapeutics Screening (COTS) Program

The NIH Chemical Countermeasures Research Program (CCRP) offers an in vivo screening model to accelerate research and development of novel medical countermeasures (MCMs) to treat sulfur mustard (SM)-induced ocular injuries. This model is available through the CounterACT Ocular Therapeutics Screening (COTS) program to support translational studies evaluating the potential in vivo efficacy of investigational MCMs against eye injuries after exposure to SM. Studies are conducted at no cost to the investigator/supplier.

The primary purpose of the COTS program is to provide investigators with pre-application, pilot proof-of-principle efficacy data in support of potential follow-on research efforts. The proposed studies may not overlap with, but may be performed in concert with, studies conducted through other CCRP resources. The COTS program does not replace the need to establish direct collaborations with laboratories certified to work with restricted chemical agents in follow-on research efforts.

Participants will retain custody of and have primary rights to the data developed, subject to government rights of access consistent with current HHS, U.S. Public Health Service, and NIH policies. All information provided to the NIH contractor will be treated as confidential.

Program Description and Goal

Vesicants such as the chemical warfare agent SM damage the eyes, skin, and mucous membranes. The goal of the COTS program is to identify novel ocular therapeutics that may be administered in a civilian first-responder or emergency care setting to effectively suppress and/or mitigate eye pathologies after SM exposure.

Screening Model

The COTS program employs an in vivo screening model in rabbits to determine the efficacy of investigational compounds in mitigating SM-induced ocular damage. Investigators may propose up to two therapeutic regimens for evaluation. NIH will deliver a final study report to the investigator at the end of the study. Upon request prior to study start, biological samples may be obtained and provided to the investigator for further evaluation. Only samples that have been determined to be nontoxic will be shipped.

Eligibility Criteria

In general, the COTS program is available to all investigators with promising MCMs responsive to the mission of the CCRP. NIH will accept applications from individual principal investigators (PIs) from academic institutions, government laboratories, and companies. PIs from foreign institutions and non-U.S. components of U.S. organizations are not eligible to apply. PIs may consult with NIH to determine eligibility.

The supplier of the test compound must provide information regarding its toxicity, solubility, and purity, as well as evidence of ex vivo or in vivo efficacy as a potential ocular therapeutic. This information is required before testing of individual analogs and congeners as well. The supplier must be able to provide a sufficient quantity of the compound with $\geq 95\%$ purity (nuclear magnetic resonance [NMR] or high-performance liquid chromatography [HPLC] analysis) for evaluation in up to 15 animals based on the highest median effective dose (ED_{50}) of the previous efficacy studies.



Who To Contact

For additional information or an application to enroll in the COTS program, please contact (preferably by email)

Dave Yeung, Ph.D.
NIH/NIAID
Tel: 301-761-7237
dy70v@nih.gov

Houmam Araj, Ph.D.
NIH/NEI
Tel: 301-451-2020
arajh@nei.nih.gov