Current Research Support

Vaccine-Based Prophylaxis for Protection Against Organophosphorus Nerve Agent (OPNA) Exposure
Defense Threat Reduction Agency (RPP-19-06), in contract negotiation with MRIGlobal
C. Crouth (PhD, MRIGlobal, PI) and C. A. McElroy (PhD, OSU lead PI), C. M. Hadad (PhD, OSU co-PI), C. S. Callam (PhD, OSU co-I)
$6,071,789 (OSU total costs)
7/1/2020 – 6/30/2025

Chemical Libraries for Enhanced Recovery of Activity from Organophosphorus Inhibited and Aged Cholinesterases in the Peripheral and Central Nervous Systems
Defense Threat Reduction Agency (RPP-19-05), subcontract from MRIGlobal
C. Crouth (PhD, MRIGlobal, PI) and C. M. Hadad (PhD, OSU lead PI), C. A. McElroy (PhD, OSU co-I), C. S. Callam (PhD, OSU co-I)
$5,321,558 (OSU total costs)
12/27/2019 – 10/30/2024

Improved Therapeutics for the Resurrection of the Aged Form of Acetylcholinesterase
National Institutes of Health (CounterACT, 1U01-NS12101)
C. M. Hadad (PhD, lead PI), C. A. McElroy (PhD, co-I), C. S. Callam (PhD, co-I), C. L. Cadieux (PhD, co-I, USAMRICD)
$1,217,297 (total costs)
07/15/2019 – 06/30/2022

Development of BPA-free coatings for extended shelf life of canned foods
National Institute of Food and Agriculture (20176701726469)
M. A. Pascall (PhD, lead PI), G. S. Frankel (PhD, co-PI), C. M. Hadad (PhD, co-PI)
$454,964 (total costs)
6/1/2017 – 5/31/2021

Pending Grant Submissions

Porcinated Human Organophosphate-Eliminating Next-Generation Catalytic Scavengers (PHOENICS)
Defense Threat Reduction Agency, in review (Battelle as lead organization)
R. Moyer (PhD, Battelle PI), D. Wood (PhD, OSU co-PI) and C. M. Hadad (PhD, OSU co-PI)
$1,472,884 (OSU total costs)
10/1/2020 – 9/31/2023
Recently Ended Grant Support

SusChEM: Tunable molecular mimics of MoS$_2$ edge sites for electrocatalytic hydrogen production
National Science Foundation (CHE-1566106)
Y. Wu (PhD, lead PI) and C. M. Hadad (PhD, co-lead PI)
$427,000 (total costs)
9/1/2016 – 8/31/2020

Collaborative Research: The chemistry of lignin's photochemical transformation in the environment: implications for global carbon cycling
National Science Foundation (CHE-1609889)
P. G. Hatcher (PhD, Old Dominion, lead PI), S. Myneni (PhD, Princeton, co-PI), C. M. Hadad (PhD, co-PI)
$180,000 (total costs for OSU)
8/1/2016 – 7/31/2020

Preparation of Aza-Peptide Ketones as Protease Inhibitors
Technology Commercialization Office, Ohio State University
O. Dogan Ekici (PhD, lead PI) and C. M. Hadad (PhD, co-PI)
$100,000 (total costs)
12/1/2018 – 1/31/2020

Development of a novel treatment for organophosphorus chemical nerve agent poisoning
Ralph and Marian Falk Medical Research Trust Catalyst Awards Program (20012328)
C. M. Hadad (PhD, lead PI), C. A. McElroy (PhD, co-I), C. S. Callam (PhD, co-I)
$300,000 (total costs)
11/30/2018 – 11/29/2019

Reactivation of Aged Acetylcholinesterase: Design and Development of Novel Therapeutics against Exposure to Organophosphorus Chemical Nerve Agents
National Institutes of Health (CounterACT, U01–NS087983)
C. M. Hadad (PhD, lead PI), O. Dogan Ekici (PhD, co-PI), R. J. Yoder (PhD, co-PI), C. A. McElroy (PhD, co-PI)
$1,129,636 (total costs)
8/15/2014 – 7/31/2017

Gated molecular baskets as new dynamic hosts for investigating the recognition and hydrolysis of toxic organophosphorus compounds
Defense Threat Reduction Agency (HDTRA1-11-1-0042)
J. D. Badjic (PhD, lead PI) and C. M. Hadad (PhD, co-PI)
$2,407,303 (total costs)
8/22/2011 – 8/21/2017

Rational engineering and modification of PON1 and OPH for altered substrate specificity and improved drug-like properties (Subcontract from Center for Catalytic Bioscavenger Medical Defense Research II: Discovery, Formulation and Preclinical Evaluation)
National Institutes of Health, Center of Excellence Proposal (U54-NS058183)
D. M. Cerasoli (USAMRICD) and T. J. Magliery (OSU), lead PIs
T. J. Magliery (lead PI for Project 2 of CoE), C. M. Hadad, and P. G. Wang (Georgia State)
$2,914,666 (total costs for OSU)
10/01/2012 – 9/30/2015

Catalytic Antibody Vaccine Development for Nerve Agent Hydrolysis
Defense Threat Reduction Agency (HDTRA1-13-C-0062)
$171,575 (total costs for OSU as sub-contract from MRIGlobal)
8/19/2013 – 8/18/2014
D. Read (PhD, MRIGlobal, lead PI), C. M. Hadad (PhD, PI at OSU), C. A. McElroy (PhD, co-I)

Reactivation of Aged Nerve Agent-AChE Adducts
Defense Threat Reduction Agency, sub-contract from USAMRICD (Sean Palmer, lead PI)
C. M. Hadad
$471,834 (total costs for sub-contract)
5/14/2010 – 5/13/2013

Biodistribution of Biological Agents by Electron Paramagnetic Resonance Imaging
Defense Threat Reduction Agency
C. M. Hadad
$589,328 (total costs)
6/14/2010 – 5/13/2013

Ultrafast Time-Resolved Studies of Reactive Intermediates
National Science Foundation (DMR-1212842)
C. M. Hadad (PhD, lead PI) with M. S. Platz (PhD)
$634,000 (total costs)
9/1/2012 – 8/31/2016

Ultrafast Time-Resolved Studies of Reactive Intermediates
National Science Foundation (CHE-0743258)
C. M. Hadad with M. S. Platz
$820,000 (total costs)
2/1/2008 – 1/31/2013