Current Research Support

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 – 7/31/2019

SusChEM: Tunable molecular mimics of MoS₂ 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 – 8/31/2019

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 – 5/31/2020

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 – 5/31/2019

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

Pending Grant Submissions

Development and evaluation of biodegradable polypropylene for food packaging
National Institute of Food and Agriculture, in review
M. A. Pascall (PhD, lead PI), C. M. Hadad (PhD, co-PI), V. B. Alvarez (PhD, co-PI), J. Li (PhD, co-PI), Y. Xia (PhD, co-PI)
$998,231 (total costs)
6/1/2019 – 5/31/2023
The Safety and Eco-Friendly Evaluation of a Biodegradable Polypropylene Film Developed for Food Packaging Applications
US Department of Agriculture, AFRI program, in review
M. A. Pascall (PhD, lead PI), C. M. Hadad (PhD, co-PI), J. Li (PhD, co-PI), Y. Xia (PhD, co-PI)
$499,998 (total costs)
6/1/2019 – 5/31/2022

Improved Therapeutics for the Resurrection of the Aged Form of Acetylcholinesterase
National Institutes of Health (CounterACT), in review
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)
$1,292,835 (total costs)
07/01/2019 – 06/30/2022

Tunable molecular mimics of MoS$_2$ edge sites for electrocatalytic hydrogen production
National Science Foundation, in review
Y. Wu (PhD, lead PI) and C. M. Hadad (PhD, co-lead PI)
$524,007 (total costs)
9/1/2019 – 8/31/2022

Novel Compounds to Treat the Toxicological Causes Associated with Organophosphate Pesticide Poisoning
National Institutes of Environmental Health Sciences (1-R01-ES030826-01), in review
C. M. Hadad (PhD, lead PI), C. A. McElroy (PhD, co-I), C. S. Callam (PhD, co-I), J. M. McGuire (co-I, ECBC)
$2,367,892 (total costs)
07/01/2019 – 06/30/2024

Recently Ended Grant Support

Reactivation of Aged Acetylcholinesterase: Design and Development of Novel Therapeutics against Exposure to Organophosphorus Chemical Nerve Agents
National Institutes of Health (CounterACT, 1U01–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