Christopher M. Hadad Current Research Funding (July 29, 2019)

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), <u>C. M. Hadad</u> (PhD, co-PI)

\$180,000 (total costs for OSU)

8/1/2016 - 7/31/2020

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 - 8/31/2020

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), <u>C. M. Hadad</u> (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 <u>C. M. Hadad</u> (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

Improved Therapeutics for the Resurrection of the Aged Form of Acetylcholinesterase National Institutes of Health (CounterACT, 1U01-NS112101)

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

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 <u>C. M. Hadad</u> (PhD, OSU co-PI) \$1,472,884 (OSU total costs)

1/1/2020 - 12/31/2022

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), in review (MRIGlobal as lead organization) C. Croutch (PhD, MRIGlobal, PI) and <u>C. M. Hadad</u> (PhD, OSU PI), C. A. McElroy (PhD, OSU co-I), C. S. Callam (PhD, OSU co-I)

\$9,600,000 (proposed total costs)

1/1/2020 - 12/31/2024

Vaccine-Based Prophylaxis for Protection Against Organophosphorus Nerve Agent (OPNA) Exposure

Defense Threat Reduction Agency (RPP-19-06), in review (MRIGlobal as lead organization) C. Croutch (PhD, MRIGlobal, PI) and C. A. McElroy (PhD, OSU PI), <u>C. M. Hadad</u> (PhD, OSU co-PI), C. S. Callam (PhD, OSU co-I)

\$10,075,000 (proposed total costs)

1/1/2020 - 12/31/2024

Development and Evaluation of an Eco-Friendly Biodegradable Polypropylene Film for Food Handling, Processing, Packaging and Distribution

US Department of Agriculture, Agriculture and Food Research Initiative, in review

M. A. Pascall (PhD, lead PI), J. Li (PhD, co-I), <u>C. M. Hadad</u> (PhD, co-I), Y. Xia (PhD, co-I), X. Wang (PhD, co-I)

\$499,998 (OSU total costs)

7/1/2020 - 6/30/2023

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 <u>C. M. Hadad</u> (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), <u>C. M. Hadad</u>, 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