CURRICULUM VITAE

**Daniel Olson, M.D.**

CURRENT POSITION Associate Professor 2015-present

 Department of Pediatrics

Section of Infectious Diseases

University of Colorado School of Medicine

Senior Investigator 2015-present

Center for Global Health

Colorado School of Public Health

Associate Professor 2016-present

Department of Epidemiology

Colorado School of Public Health

Fellowship Director 2018-present

Center for Global Health

Colorado School of Public Health

Associate Professor 2020-present

Department of Bioengineering

CU-Denver School of Engineering

OFFICE ADDRESS: Section of Infectious Diseases

 University of Colorado

13123 East 16th Avenue, Box 055

Aurora, CO 80045

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**EDUCATION AND PROFESSIONAL TRAINING**

Bachelor of Arts 1998-2002

Grinnell College

Grinnell, IA

Doctorate of Medicine 2003-2007

Michigan State University College of Human Medicine

East Lansing, MI

Internship and Residency, Pediatrics 2007-2010

University of Wisconsin School of Medicine and Public Health

American Family Children’s Hospital

Madison, WI

International Clinical Research Fellowship 2010-2011

Fogarty International Center, National Institutes of Health

University of North Carolina Project – Malawi

Kamuzu Central Hospital
Lilongwe, Malawi

Registrarship, Pediatrics 2011-2012

Starship Hospital

Auckland District Health Board

Auckland, New Zealand

Fellowship, Pediatric Infectious Diseases 2012-2015

Children’s Hospital of Colorado

University of Colorado Denver

Aurora, CO

Doctorate of Clinical Science (PhD) 2013-present

Colorado School of Public Health

Aurora, CO

Passed Prelim Exams: June 2020

**ACADEMIC APPOINTMENTS**

Assistant Professor 2015-2021

Associate Professor 2021-present

Department of Pediatrics

Section of Infectious Diseases

University of Colorado School of Medicine

Senior Investigator 2015-present

Center for Global Health

Colorado School of Public Health

Assistant Professor 2015-2021

Associate Professor 2021-present

Department of Epidemiology

Colorado School of Public Health

Fellowship Director 2017-present

Center for Global Health

Colorado School of Public Health

Assistant Professor 2020-2021

Associate Professor 2021-present

Department of Bioengineering

CU-Denver School of Engineering

NON-ACADEMIC APPOINTMENTS

Summer Research Intern 1999

Bone Marrow Transplant Clinic

Fairfax Hospital

Fairfax, VA

Summer Research Intern 2000

Laboratory of Human Carcinogens

National Cancer Institute,

Bethesda, MD

Summer Research Intern 2001

Puget Sound Blood Center

Seattle, WA

Community Outreach Specialist 2002-2003

Americorps Volunteer in Service to America (VISTA) Program

ElderHealth Northwest

Seattle, WA

Tutor, Human Physiology 2004-2005

Michigan State University College of Human Medicine

East Lansing, MI

Consultant 2015-2016

Takeda Vaccines Inc.

San Diego, CA

**HONORS, SPECIAL RECOGNITION, AND AWARDS**

Student Traineeship Award 2010

Cystic Fibrosis Foundation

Bethesda, MD

Resident Teaching Award 2010

Department of Pediatrics

University of Wisconsin School of Medicine

Madison, WI

Fogarty International Clinical Research Fellowship Award 2010

Fogarty International Center

National Institutes of Health

Bethesda, MD

Travel Award 2013

Pediatric Infectious Disease Research Conference

St Jude/Pediatric Infectious Disease Society

Memphis, TN

Travel Award 2013

NIH Academic Research Workshop

Bethesda, MD

ID Week Pediatric Case Award 2014

Philadelphia, PA

ID Week Trainee Award 2014

Philadelphia, PA

ID Week Trainee Award 2015

San Diego, CA

Trainee Award 2015

American Academy for the Advancement of Science

Society of Pediatric Research (SPR) Co-Mentoring Program Award 2016

Pediatric Academic Society

Baltimore, MD

Research Scholar Award 2016

Children’s Research Institute

Aurora, CO

**MEMBERSHIP AND PROFESSIONAL ORGANIZATIONS**

* International Health Project 2003-2007

Michigan State University

Co-leader in 2007

* Physicians for Social Responsibility 2003-2007

Michigan State University

Chapter co-leader in 2007

* American Academy of Pediatrics (AAP) 2007-present
* Infectious Disease Society of America 2012-present
* Pediatric Infectious Disease Society 2012-present
* Colorado Clinical & Translational Sciences Institute 2013-present
* American Society of Tropical Medicine & Hygiene 2013-present
* American Academy for the Advancement of Science 2015-present
* Society for Pediatric Research 2015-present
* Colorado Children’s Immunization Coalition 2016-present
* Global Dengue & Aedes-Transmitted Diseases Consortium 2018-present
* American Committee on Arthropod-Borne Viruses 2018-present

**MAJOR COMMITTEE AND SERVICE RESPONSIBILITIES**

Departmental Committees

* Fellowship Education Committee 2013-present

University of Colorado Denver, Section of Pediatric Infectious Diseases

* Fellowship Recruitment Committee 2014-present

University of Colorado Denver, Section of Pediatric Infectious Diseases

* Fellowship Rank Committee 2015-present

University of Colorado Denver, Section of Pediatric Infectious Diseases

* Indirect Cost Review Committee 2019-present

University of Colorado Denver, Section of Pediatric Infectious Diseases

Extramural and Non-Departmental Committees

* NIH/Pediatric Dengue Vaccine Initiative (PDVI) Committee on Dengue 2015-present

Vaccine Trial Clinical Endpoints

* NIH/Pediatric Dengue Vaccine Initiative (PDVI) Committee to Develop 2015-present

Dengue Endpoints for Disease Severity

* Colorado Children’s Immunization Coalition 2016-present
* Pediatric Infectious Diseases Society (PIDS) Telehealth Working Group, 2018-2020 Founder and Chair
* Colorado Arbovirus Research Consortium, Steering Committee 2018-present

**LICENSURE AND BOARD CERTIFICATION**

* Medical License: State of Wisconsin 2008-2011
* New Zealand Annual Practicing Certificate 2011-present
* Medical License: State of Colorado 2012-present
* United States Medical Licensing Exam Certification

USMLE Step 1: 235 (Pass) 2005

USMLE Step 2 CK: 239 (Pass, 2006); CS: N/A (Pass) 2006

USMLE Step 3: 236 (Pass) 2008

* American Board of Pediatrics Certification 2011-present
* Guest Researcher Certification 2013-2016

Centers for Disease Control and Prevention

* Biosafety Level 3 Certification 2013-present

Laboratory of Dr. David Beckham

University of Colorado Denver

* American Board of Pediatric Infectious Disease Certification 2015-present

**REVIEW AND REFEREE WORK**

Invited Peer-Review Journal Reviewer

* Journal of Neurovirology 2017-present
* American Journal of Tropical Medicine and Hygiene 2017-present
* Clinical Infectious Diseases 2018-present
* BMC Infectious Diseases 2018-present
* Journal of Medical Internet Research 2018-present
* Journal of the American Medical Association – Dermatology 2019-present
* Nature Protocols 2020-present
* PLOS NTD 2021-present

Grant Study Section(s)

* NIH Grant Review Committee; Rapid Assessment of Zika Virus (ZIKV) Apr 2017

Complications (R21)

**INVITED EXTRAMURAL LECTURES/PRESENTATIONS**

Local/Regional

1. Treatment outcomes in perineal streptococcal dermatitis. University of Wisconsin Grand Rounds. Madison, WI. May 2010
2. What you need to know about Zika. Conference on Pediatric Infectious Diseases. Vail, CO. Aug 2016.
3. Infectious Disease Jeopardy. Conference on Pediatric Infectious Diseases. Vail, CO. Aug 2016.
4. What you need to know about Zika. Colorado Lactation Journal Club. Denver, CO. Oct 2016.
5. Rapid Active Sampling (RAS) Surveys: a Tool for Estimating Norovirus Disease Burden in Resource-Limited Settings. University of Colorado Global Health Symposium. Oral Presentation. Aurora, CO. Oct 2016.
6. Zika Virus. Physician Assistants for Global Health Conference. Aurora, CO. Feb 2017.

1. Zika: a Virus Threatening a Whole Generation, Update from the Field. Global Health Lecture Series. Colorado School of Public Health. Nov, 2017.
2. Infectious Disease Jeopardy. Pediatric Infectious Diseases in Colorado: Update 2017. Aurora, CO. Nov 2017.
3. Zika Virus and Other Emerging Pathogens in our Global Society – Staying Up to Date. Bugs & Drugs Symposium. University of Colorado School of Pharmacy. Aurora, CO. Nov 2017.
4. Pediatric Infectious Disease Cases. Family Medicine Review Course. Aurora, CO. Nov 2018.
5. High Yield Pre-Travel Counseling for the Primary Care Provider. Conference on Pediatric Infectious Diseases. Vail, CO. Aug 2019.
6. Expanding a One Health Surveillance System in Rural Guatemala. One Health Institute. Colorado State University, Nov 2019.
7. High Yield Pre-Travel Counseling for the Primary Care Provider. Colorado ID Update. Aurora, CO. Nov 2019.
8. Mycoplasma… Just walk it off? Conference on Pediatric Infectious Diseases. Vail, CO. Aug 2021.
9. Mycoplasma… Just walk it off?. Colorado ID Update. Aurora, CO. Nov 2021.

National

1. Invited Research Presentation; Novel Surveillance Strategies for Measuring Long Term Vaccine Effectiveness: Preparing for a Dengue Vaccine, University of North Carolina, Section of Pediatric Infectious Diseases, Chapel Hill, NC. Jan 2015
2. The UCD Trifinio Research Site and Preliminary Data on Acute Febrile Illness Surveillance Study for Dengue and Zika in Children. Centers for Disease Control and Prevention (CDC) Division of Vector Borne Diseases Weekly Seminar. Fort Collins, CO. Sep 2016.

1. Rapid Active Sampling (RAS) Surveys: a Tool for Estimating Norovirus Disease Burden in Resource-Limited Settings. CDC Enteric Diseases Branch. Atlanta, GA. Nov 2016.
2. Country Experience on Arboviral Field Surveillance: Guatemala. George Washington University Arbovirus Group of Experts (GAGE) Meeting. Washington DC. Jun 2018.
3. Optimizing Pediatric ID Telehealth Service. Pediatric Infectious Disease Society. Online Webinar. Dec 2020.

International

1. Overview of streptococcus pneumonia and emerging serotypes in New Zealand. Pediatric Grand Rounds. Starship Hospital, Auckland, New Zealand. Mar 2012.
2. Vaccine Hesitancy Workshop Speaker, Pasteur Institute, Ho Chi Minh City, Vietnam. Mar 2016.
3. Update on clinical outcomes of chikungunya virus infection. International Symposium on Emerging Arboviruses. Guadalajara, Mexico. Aug 2017.
4. Congenital and perinatal arbovirus infections beyond Zika virus. International Symposium on Emerging Arboviruses. Guadalajara, Mexico. Aug 2017.
5. Update on Zika virus from the Americas. The 19th Scientific Conference: Emerging Infectious Diseases. Pasteur Institute. Ho Chi Minh City, Vietnam. Dec 2017.
6. Epidemiology and Burden of COVID-19 and Influenza in Children. 1er Congreso Internacional de Pediatría del SNTISSSTE. Mexico City. Dec 2020.

**TEACHING RECORD**

Course Directorships

1. Co-Director. EPID 6670: Global Health and Disasters Course, Colorado School of Public Health,.2 credits. 2016-present.

2. Consultant. BIOE 3090: Introduction to BioDesign. School of Engineering. University of Colorado – Anschutz Medical Campus. 3 Credits. 2018-present.

3. Co-Director. BIOE 4420/5420: Design Hack for Global Health. School of Engineering. University of Colorado – Anschutz Medical Campus. 3 credits. 2019-present.

4. Co-Director. EPID 6649: Vaccine Science, Application and Policy. Colorado School of Public Health. 3 credits. 2019-present.

Undergraduates

1. Zika and other Emerging Pathogens. Regis University. Nursing Interest Group. Nov 2017.
2. Guest Lecturer and Consultant. BIOE 3090: Intro to Biodesign. Provided specifications and evaluations for water testing devices designed by students, performed midpoint and final reviews of student projects. Spring 2018, 2019.

Medical Students

1. Medical Student topic review: fever and rash. University of Colorado School of Medicine. Aurora, CO. Apr 2013
2. Infectious Disease Case Discussion: Small Group Faculty Leader. University of Colorado School of Medicine, Aurora, CO. May 2016.
3. Global Health Course Guest Lecturer: Zika virus and Emerging Infectious Diseases. University of Colorado School of Medicine, Aurora, CO. Nov 2016.
4. IDPT 6665 Introduction to Global Health: Emerging Infectious Diseases. University of Colorado School of Medicine, Aurora, CO. Oct 2018.
5. IDPT 6665 Introduction to Global Health: Zika and Emerging Arboviruses in Latin America. University of Colorado School of Medicine, Aurora, CO. Dec 2019.

Graduate Students

1. Applied Global Health and Epidemiology Class Guest Lecture: Dengue and Norovirus Surveillance. Colorado School of Public Health. Aurora, CO, Dec 2015.
2. Global Health and Disasters Course Lecture: Chagas, African Sleeping Sickness, and Leishmaniasis. Colorado School of Public Health. Aurora, CO. Nov 2015; Nov 2016.
3. Global Health and Disasters Course: Small Group Discussion Leader. Colorado School of Public Health. Aurora, CO, Nov 2015, Nov 2016, Oct 2017.
4. Zika, Emerging Pathogens, and the Environment. Guest Lecture, Infectious Disease, Environmental Contexts (EHOH 6624), Colorado School of Public Health, Aurora, CO. Jan 2018.
5. Zika and Emerging Infectious Diseases: Is this the New Normal? University of Denver. Masters Certificate in Global Health Program. Jan 2019.
6. Infectious Diseases – a Common Pattern. INTS 4516 Major Diseases in Global Health: From Pathophysiology to Action. University of Denver Global Health Affairs Certificate Program. 15-20 students, 2019-present.
7. Emerging Infectious Diseases. EHOH 6624: Infectious Disease, Environmental Contexts. Colorado School of Public Health. Feb 2020.
8. COVID-19 Discussion. BIOE 5041: Clinical Experiences- Graduate Course. Apr 2020.
9. Travel Medicine. MPAS 6: Hematology/Infectious Disease/Immunology/Malignancy. CU CHA/PA Program. Sep 2020.
10. Lessons Learned from the COVID-19 Pandemic. University of Denver. Masters Certificate in Global Health Program. Jan 2019, 2020.
11. Xenosurveillance and One Health. EPID 6645 - One Health - EcoHealth - Planetary Health. Colorado School of Public Health. Mar 20201.

House Officers

1. Syphilis in Pregnancy and Neonates, Perinatal Conference. University of Wisconsin. Madison, WI. Dec 2008.
2. Respiratory Distress, Intern Fundamentals. University of Wisconsin. Madison, WI. Jul 2009.
3. Pandemic H1N1: what you can do for swine flu. Topic Review. University of Wisconsin, Madison, WI. Sep, 2009.
4. Management of Empyema. Emergency Medicine Intakes. University of Wisconsin. Madison, WI. Feb, 2010.
5. Congenital CMV. Neonatal Intensive Care Topic Review. University of Wisconsin, Madison, WI. Apr 2010.
6. Pneumococcal-associated Hemolytic Uremic Syndrome and emerging serotypes in the post vaccine era. Starship Hospital, Auckland, NZ. Oct 2011.
7. Cool infectious diseases: Registrar Lecture. Starship Hospital. Auckland, NZ. Apr 2012.
8. Resident Academic Half Day: Management Issues for Residents in ID and Jeopardy! University of Colorado. Aurora, CO. Mar 2015.
9. Preventive Medicine Seminar Journal Club: Faculty Discussant. University of Colorado School of Medicine, Aurora, CO. Sep 2016.

Fellows/Faculty

1. Infectious Disease Case Conference: Rabies encephalitis. University of Colorado. Aurora, CO. Feb 2013.
2. Infectious Disease Case Conference: S. pneumonia-associated infectious aortitis. University of Colorado. Aurora, CO. Apr 2013.
3. Infectious Disease Case Conference: DRESS Syndrome. University of Colorado. Aurora, CO. Oct 2013.
4. Infectious Disease Case Conference: Rat bite fever. University of Colorado. Aurora, CO. Mar 2014.
5. Infectious Disease Case Conference: Neuromyelitis optica secondary to primary HIV infection. University of Colorado. Aurora, CO. May 2014.
6. Infectious Disease Case Conference: Cerebral aspergillosis following Influenza (H1N1) in an Asthmatic. University of Colorado. Aurora, CO, Aug 2014.
7. Infectious Disease Case Conference: Botryomycosis. University of Colorado. Aurora, CO, Feb 2015.
8. Infectious Disease Case Conference: Invasive Fusarium. University of Colorado. Aurora, CO, Apr 2015.
9. Novel surveillance strategies for measuring vaccine effectiveness and the development of an arboviral and diarrheal research platform in Guatemala. Research in Progress. University of Colorado. Aurora, CO. Mar 2016.
10. Participatory Syndromic Surveillance (PSS) and Rapid Active Sampling (RAS) Surveys to estimate dengue and norovirus prevalence and risk factors in the Southwest Trifinio Region of Guatemala. Research in Progress. University of Colorado. Aurora, CO. Feb 2017.
11. Clinical Predictors of Absenteeism and Impact of Influenza Vaccine in a Cohort of Guatemalan Agricultural Workers. Research in Progress. University of Colorado. Aurora, CO. Jun 2018.

Ward/Clinic Attending Duties

2015-present: Supervision and bedside teaching of fellows, house officers, and students, inpatient infectious disease service – 7-8 weeks/year

2015-present: ID Clinic - Supervision and bedside teaching of fellows, house officers, and students, infectious disease clinic – 4 clinics/year

2015-present: Travel Clinic - Supervision and bedside teaching of fellows, travel clinic disease clinic – 6 clinics/year

Key Administrative Positions

Section Lead on Telemedicine/Telehealth, Section of Pediatric Infectious Diseases, Department of Medicine, University of Colorado School of Medicine, 2016-present

Director, Global Health Fellowship, Center for Global Health Colorado School of Public Health, 2017-present

**GRANT SUPPORT**

Active Grants

CU SOM SIRC Olson/Asturias (PI) 7/1/2021-6/30/2024 0.0 Cal Mo
Sponsor: CU SOM SIRC Direct Costs: $150,000
Role: Co-PI

Project Title: The Trifinio Molecular Field Laboratory and Clinical Trials Center for Excellence: Expanding the Scope of Research at the Trifinio Center for Human Development, Guatemala.

Description: These infrastructure funds include those provided by the SIRC Committee and multiple partners. The funds will be used to implement an advanced molecular field research laboratory at the Trifinio Center for Human Development in Guatemala.

CDC\_GH002243\_NGS Olson (PI) 11/1/2021-10/31/2022 0.0 Cal Mo
Sponsor: CDC CGH/NCIRD Direct Costs: $180,543
Role: PI

Project Title: Real-time sequencing of SARS-CoV-2 and influenza virus in rural Guatemala
Description: Investigators at CU, CSU, UVG, and FSIG will establish a next generations sequencing platform at the Trifinio Center for Human Development and carry out real-time NGS surveillance for influenza and SARS-CoV-2, disseminate genomic (variant) data, and conduct regional NGS training and capacity-building in Guatemala.

Roche IIS\_RD005669 (PI) 10/30/2020 – 10/29-2024 0.12 Cal Mo

Sponsor: Roche Diagnostics Direct Costs: $296,609
Role: PI

Title: Clinical and economic impact of respiratory infections in a cohort Guatemalan agricultural workers, and the natural history and protection of the SARS-CoV-2 and seasonal coronavirus antibody response.

Project Description: To assess annual seroprevalence and evaluate persistence of serologic immunity in 3K23AI143967-01, we propose a laboratory-based study on the CU campus, using well-characterized samples collected from Guatemala. All annual serum samples (est. 2,500/year) and PCR-confirmed SARS-CoV-2 samples (est. 200/year) will be tested on the anti-SARS-CoV-2 Elecsys IgG assay in the Beckham Laboratory. Following this first step, we will perform a more comprehensive evaluation on sub-populations of interest. We received notification from Roche that the project will be funded, but it has to be routed through the Dept of Pediatrics and Roche needs to re-review with indirect costs added.

CDC\_GH002243 Olson (PI) 8/1/2021-2/28/2023 0.12 Cal Mo
Sponsor: CDC CGH (CARES Act Global) Direct Costs: $1,058,477
Role: PI

Project Title: Community-Based Natural History and Household Transmission of SARS-CoV-2 in Rural Guatemala.
Description: Using existing population-based cohorts of pregnant women, young children, and agricultural workers with underlying medical conditions in rural Guatemala, we aim to implement prospective surveillance for COVID-like illness (CLI), perform SARS CoV-2 RT-PCR testing, and then complete comprehensive household investigations to characterize clinical outcomes, identify risk groups, and evaluate household transmission, including among asymptomatic, pre-symptomatic, and symptomatic adults and children.

1K23AI143967-01 Olson (PI) 9/1/2019 – 8/31/2024 9 Cal Mo

Sponsor: NIAID Direct Costs: $875,200

Role: PI

Title: Predictors of Influenza-Associated Absenteeism and Impact of Vaccination in a Cohort of Guatemalan Agricultural Workers.

Description: This project aims to study the impact of influenza in a large, existing cohort of agricultural workers in rural Guatemala, focusing on predictors of influenza-associated disease severity, absenteeism, and reduced work productivity. We will then measure the effectiveness of a workplace-based influenza vaccination program in reducing disease incidence, severity, and absenteeism.

SP-IIS-GRC00105 Olson (PI) 1/1/2022 – 12/31/2023 0 Cal Mo
Sponsor: Sanofi Pasteur Direct Costs: $0 (3,000 doses of Fluzone vaccine)
Role: PI

Title: Impact of Influenza Vaccination on Agricultural Worker Absenteeism and Productivity in Rural Guatemala
Description: This Material Transfer Agreement (MTA) will provide a total of 3,000 doses (and shipping) of Fluzone quadrivalent influenza vaccine to AgroAmerica Inc. in Guatemala. AgroAmerica will then provide the influenza vaccine to the agricultural workers. The K23 will observe the effectiveness of the work-based vaccination program in study years 3 and 4.

3K23AI143967-01S1 Olson (PI) 9/1/2019 – 8/31/2021 0 Cal Mo

Sponsor: NIAID Direct Costs: $211,513

Role: PI

Title: Administrative Supplement to “Predictors of Influenza-Associated Absenteeism and Impact of Vaccination in a Cohort of Guatemalan Agricultural Workers.”

Project Description: This Administrative Supplement aims to add SARS-CoV-2 Testing to the existing Influenza Surveillance System described in award number in 1K23AI143967-01.

LIAT-IIS-010\_RMS MTA Olson (PI) 10/30/2019 – 10/29-2023 0 Cal Mo

Sponsor: Roche Molecular Systems, Inc. Direct Costs: $185,731

Role: PI

Title: Measuring the Clinical and Economic Impact of Influenza in Guatemalan Agricultural Workers: A Case Study for Point-of-Care Testing in Remote, Resource-Limited Settings.

Project Description: This is an MTA with Roche Molecular Systems to provide 4 cobas Liat Influenza A/B & RSV Instruments and reagents to our site in Guatemala for 500 tests/year over a 4-year prior. The tests will be used for the K23 award.

1R21AI154011-01 Ebel (PI) 09/01/2020 – 08/31/2022 0.36 Cal Mo
Sponsor: NIAID Direct Costs: $275,000
Role: Co-I

Title: Expanding xenosurveillance capabilities in Latin America

Project Description: In this proposal we seek to further our efforts to use mosquitoes as blood sampling devices for surveillance in hard-to-reach, resource poor environments. We propose field studies at a rural site in Guatemala and laboratory studies of the efficiency of common tropical mosquitoes as blood samplers. If successful, our project could make surveillance in the tropics, where many new diseases emerge, (a) easier because painful sampling of humans is minimized and (b) safer by reducing the contact of veterinarians with fearful and angry animals.

CT44-GSOP-RF03 Asturias (PI) 6/2018-6/2023 ­­­0.6 Cal Mo Sponsor: Pfizer Direct Costs: $1,018,735

Role: Co-I

Title: Pfizer Investigator Initiated Research Study: Determination of the utility of Pfizer’s pneumococcal urine antigen test in children 5 years of age or younger with community acquired pneumonia in Guatemala.

Project Description: The goal of this study is to determine if urine antigen test cut-points can be identified that will discriminate Pneumococcal Pneumonia from Carriage in children 5 years of age or younger.

Pending Grants

XXXXXX Olson (PI) 1/1/2022-12/31/2022 0.0 Cal Mo

Sponsor: CDC-NCEZID Direct Costs: $15,602

Title: Seroprevalence of influenza A viruses in domestic animals in the Trifinio region of southwest Guatemala, 2019-2022: Banked Sample Analysis

Project Description: We aim to leverage existing swine and poultry samples collected from an ongoing community-based xenosurveillance study in rural, SW Guatemala to evaluate the seroprevalence of influenza strains in backyard domesticated animals. We will evaluate household-level epidemiologic risk factors for seropositivity and characterize trends in seroprevalence before and during the COVID-19 pandemic.

XXXXXX Olson (PI) 1/1/2022 -12/31/2026 0.0 Cal Mo

Sponsor: NAMRU6 Direct Cost: project-based

Title: Cooperative Research and Development Agreement (CRADA) for One Health surveillance at the Trifinio Region of Southwest Guatemala.

Project Description: The US Navy Medical Research Unit – 6, CSPH CGH, and FSIG agree to conduct surveillance, laboratory studies and clinical trials to support development of rapid diagnostics to improve the identification, characterization, diagnosis and treatment of infectious diseases such as influenza, Covid-19, Zika, dengue, chikungunya, malaria, leishmaniosis, diarrheal infections, nosocomial pathogens and drug resistant pathogens.

Completed Grants

OLSON09H0 Olson (PI) 1/2010-3/2010 ­­­0.0 Cal Mo Sponsor: Cystic Fibrosis Foundation Direct Costs: $1,500

Role: PI

Title: Student Traineeship Grant

Project Description: The goal of this pilot study was to validate a novel multiplex PCR platform in the detection of respiratory viruses in children with cystic fibrosis and to assess the role of including DNAse to improve virus detection.

Results and Key Publications: (Abstract) The role of DNAse in improving multiplex PCR respiratory virus isolation among children with cystic fibrosis. Olson, D, T Pappas, W Lee, M Rock, DB Sanders, J Gern. Pediatric Academic Society. Denver, CO. Apr 2011.

R24 TW007988 Vermund (PI) 7/2010-6/2011 ­­­9.0 Cal Mo Sponsor: Fogarty Center, NIH Direct Costs: $62,405

Role: Trainee

Title: Fogarty International Clinical Research Fellowship

Project Description: This training grant supports a 1 year mentored clinical research experience for young investigators interested in global health research. My host institution was UNC Project in Lilongwe, Malawi. I participated in several research projects and was primary author on a Phase 1 trial of valacyclovir with cyclophosphamide in endemic (EBV+) Burkitt’s lymphoma as well as 2 studies implementing routine vital signs and an inpatient scoring system that triaged patients at high risk of death.

HEH IIS-Olson Olson (PI) 10/2010-8/2012 ­­0.0 Cal Mo

Role: PI

Sponsor: Health Empowering Humanity Direct Costs: $31,208

Title: Investigator Initiated Sponsored Research Grant

Project Description: The goal of this study was to improve pediatric inpatient surveillance at a busy hospital in Malawi with new equipment, the development of an inpatient triage program (ITAT), and task-shifting this program to a new cadre of health care workers called “Vital Sign Assistants.”

IISR-2014-100647 Asturias (PI) 10/2014-6/2016 ­­­­­21 Cal Mo Sponsor: Takeda Pharmaceuticals Direct Costs: $657,060

Role: CoI (unable to be PI as a Fellow)

Title: Investigator Initiated Sponsored Research Grant

Project Description: The goal of this project was to implement and validate 2 alternative surveillance strategies, Rapid Active Seroprevalence Surveillance (RAS) and Participatory Syndromic Surveillance (PSS), for dengue virus and norovirus surveillance. We also determined local prevalence incidence rates of these pathogens. A specimen biobanked was created. Dr. Edwin Asturias the official PI since I was a fellow, though I wrote the grant and led the study.

CHC 1501460 Olson (PI) 6/2016-6/2019 ­­­­­18 Cal Mo

Sponsor: Children’s Hospital of Colorado Research Institute Direct Costs: $200,000

Role: PI

Title: The Arboviral Transmission and Immunity in Children (ATIC) Study

Project Description: The goal of this grant is to bridge successful junior investigators between the completion of their training and an Early Career Award. This award provided salary support for me as I generated preliminary data for Zika research proposals and my K23 proposal.

SP-MTA Olson (PI) 05/01/2018 – 4/31/2019 0.6 Cal Mo
Sponsor: Sanofi Pasteur Direct Costs: $20,555
Role: PI

Title: Evaluation of Biobanked Samples from Children in Guatemala to Determine Dengue and Zika Virus Seroprevalence by Neutralization Testing.

Project Description: Our dengue seroprevalence study (Takeda IISR-2014-100647) was unable to accurately determine the prevalence of dengue virus because Zika virus antibodies cross-react with dengue virus. We have agreed to provide a subset of samples to Sanofi Pasteur, which will allow them to validate flavivirus diagnostic assays under development, while at the same time performing neutralization testing on our samples to more accurately determine the seroprevalence of dengue virus vs Zika virus. Estimated costs of testing 370 samples is $100,000, which will be provided for free by Sanofi.

­­­­CSU OHI Pilot (Co-PI) 8/2018 – 12/2019 ­­­0 Cal Mo

Sponsor: CSU One Health Institute Direct Costs: $50,000

Role: Co-PI

Title: CSU One Health Institute Pilot Award: Pilot Study using Novel Surveillance Approaches to Assess Burden and Transmission Dynamics of Emerging Pathogens among Human, Mosquito, and Domestic Animal Populations in Rural Guatemala.

Project Description: We aim to pilot novel approaches developed by CU/CSU investigators within the newly established Colorado One Health Research Consortium to study the burden and household transmission dynamics of emerging pathogens at the CU Center for Human Development (CHD) site in Guatemala. Beginning in July 2019, we will enroll a cohort of twenty households from the well characterized community surrounding the CHD site.

RTOP 16-0057 Asturias, Munoz (PI) 12/2016-7/2019 ­­­­­44 Cal Mo Sponsor: NIAID Direct Costs: $3,772,776

Role: Co-I

Title: Natural History and Prospective Cohort Study to Describe the Neurological, Neurodevelopmental and other Clinical Outcomes in Children after Zika Virus Infection in Rural Guatemala

Project Description: The study will describe the epidemiology and natural history, including the clinical and neurological outcomes and the risk of antibody dependent enhancement, in children after Zika virus infection in rural Guatemala. The study completed field activities in June 2019 and analysis is ongoing.

Selected Unfunded Grants

PAR 14-049 Olson (PI) 2/2016

Sponsor: NIAID Direct Costs: $875,809

Role: PI

Title: Mentored Patient-Oriented Research Career Development Award (K23)

Project Description: This is an application for a K23 Patient-Oriented Mentored Career Development award. The proposed research focuses on the dynamics of transmission, clinical outcomes and immunologic responses to chikungunya virus (CHIKV) infection in children in a population-based, acute febrile illness (AFI) surveillance site in rural Guatemala. The grant received a score of 36.

R21HD091924 Olson (Co-PI) 8/2016

Sponsor: NIAID Direct Costs: $275,000
Role: Co-PI

Title: Rapid Assessment of Zika Virus (ZIKV) and Complications (R21)

Project Description: We aimed to pilot and evaluate a screening program to assess Zika virus-exposed infants for developmental problems and hearing impairment. The program will use community nurses and smartphones to conduct evaluations in the community. We will assess the feasibility and cost of the program and see how well it performs compared it to the more costly and time-consuming “gold standard” tests. The study had an impact score of 36.

SM201A Olson (PI) 12/2017

Sponsor: Biomerieux (BioFire) Direct Costs: $41,524
Role: PI

Title: Investigator Initiated PAR 16-106: Rapid Assessment of Zika Virus (ZIKV) and Complications (R21)

Project Description: Our primary objective was to evaluate how FilmArray can be combined with our Rapid Active Sampling surveillance methodology to obtain rapid enteric burden of disease and epidemiologic data in resource-limited areas.

RFA-GH-18-004 Olson (PI) 3/2018

Role: PI

Sponsor: CDC Direct Costs: $500,000 (Year 1)
Title: Advancing Public Health Research in Central America (Belize, Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Nicaragua, Panama)

Project Description: Working with CSU, we proposed a surveillance system with two components: 1) a population-based One Health Household Surveillance system, which will include human, mosquito, domestic animal, and environmental components; and 2) a Workers’ Health Surveillance System, which will focus on the health and economic impacts of emerging diseases on agricultural workers. I took the lead on writing the proposal.

­­­­PREEMPT (138578) Olson (CU PI) 3/2018

Sponsor: DARPA Direct Costs: $453,212 Subcontract (2 years)
Role: Local PI

Title: Detecting, Tracking and Suppressing Emerging Diseases using Artificial Ecosystems

Project Description: We will work as a subcontract on the CSU proposal with two aims 1) prospective surveillance of animal (i.e. bat) and mosquito species at the CU site in Guatemala, conducted over 3 rainy seasons (2019, 2020, 2021) and 2) the one-time use of biobanked samples of children with acute febrile illness collected during a previous dengue surveillance study at the Center for Human Development site in Guatemala, for next generation sequencing (NGS). Overall Budget: $14 million.

Gates Grand Challenges Olson (Co-PI) 4/2018

Sponsor: BMGF Direct Costs: $923,641
Role: Co-PI

Title: A Community-based Observational Study to Evaluate Campylobacter Household Transmission, Pathologic Intestinal Response, and the Association with Malnutrition in Children Under 2 Years Living in Rural Guatemala

Project Description: This was a prospective community-based natural history study evaluating the household transmission dynamics and gut response to Campylobacter infection among young Guatemalan children, and the association with malnutrition.

RFA U01 AI-18-010 Ramilo (PI) 6/2018

Sponsor: NIAID Direct Costs: $2,662,400 (CU Subcontract)
Role: Local PI

Title: Evolution of Antibody Immunodominance and Multiomics Immune Profiling of Infants with Repeated Exposures to Influenza Vaccination and Infection

Project Description: This is a prospective, longitudinal birth cohort study to evaluate the immunologic responses to influenza vaccination and infection in infants and young children. The University of Colorado will serve as a clinical site, enrolling 150 subjects over 3 years and performing data management for the study.

RFA-AI-19-028 Jaenisch (PI) 6/2019

Sponsor: NIAID Direct Costs: $ 7,149,752.00
Role: Co-I

Title: Emerging Infectious Diseases Research Centers: Emerging Arboviruses Bridging the Americas and Africa – ARBOBRIDGE

Project Description: The overall goal of our research approach is to better understand the short to long-term drivers associated with arthropod-borne virus emergence and spread. Our project is an unprecedented multidimensional collaborative approach connecting human-virus-mosquito studies to understand why diseases appear/disappear during non-outbreak ‘quiescent mode’ and rapidly pivot to an ‘outbreak mode’ to begin the needed natural history cohort studies to understand the reasons for and consequences of the outbreak.

221018/Z/20/Z Olson/Asturias (Co-PI) 3/2020

Sponsor: Wellcome Direct Costs: $1,242,020
Role: Co-PI

Title: DFID - Wellcome Epidemic Preparedness – Coronavirus

Project Description: Leveraging existing cohorts of pregnant women, infants, and agricultural workers in rural Guatemala to study the natural history, drivers of disease severity, and household transmission dynamics of COVID-19.

RFA-AI-19-029 Jaenisch (PI) 6/2020

Sponsor: NIAID Direct Costs: $2,529,748.00
Role: Co-I

Title: Emerging Infectious Diseases Research Centers – Coordination Center: Coordination of Multicentric Programs for Disease X (COMP-X)

Project Description: Infectious diseases such as the Ebola and Zika viruses pose significant risks to global public health. The coordinating center for emerging infectious disease research (COMP-EX) is the central nucleus of the NIH network of centers for emerging infectious disease research. The coordinating center assures that the network has the centralized infrastructure for research into approaches to predict, prevent, detect and respond to infectious disease epidemics. It provides the leadership, the centralized study databases, and the biospecimen and diagnostic tools for the network studies. COMP-EX also assures that the network is a full collaborator in the global public health research efforts to control emerging infectious disease and to prevent the epidemics stemming from their emergence.

3K23AI143967-01 Olson/Asturias (Co-PIs) 9/1/2019 – 8/31/2021 0.12 Cal Mo

Sponsor: NIAID Direct Costs: $1,058,477

Project Title: Evaluating the natural history and household transmission dynamics of SARS-CoV-2 in cohorts of pregnant women, young children, and adult agricultural workers in rural Guatemala.

Role: Co-PI

Project Description: Using existing population-based cohorts of pregnant women, young children, and agricultural workers with underlying medical conditions in rural Guatemala, we aim to implement prospective surveillance for cough and fever (ILI), perform SARS CoV-2 RT-PCR testing, and then complete comprehensive household investigations to characterize clinical outcomes, identify risk groups, and evaluate household transmission, including among asymptomatic, pre-symptomatic, and symptomatic adults and children.

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27. *Telehealth Practices, Barriers, and Future Interest among Pediatric Infectious Disease Clinicians in the United States: Results from the 2019 Pediatric Infectious Diseases Society (PIDS) Telehealth Working Group Survey*. Hakim A, Gaviria-Agudelo C, Edwards K, Sabella C, Fanella S, Arun A, Russo M, Kronman M, Adler F, Holzman-Pasgal G, Sanderson SK, Phillips T, Siddiqui J, Bryant K, **Olson D**. ID Week. Poster Presentation. Washington DC. Oct 2019.
28. Colbert, A.M., Lamb, M.M., Bauer, D., Hernández, S., Martínez, M.A., Arroyave, P., Paniagua-Avila, A., **Olson, D**., Calvimontes, M., Bolaños, G.A., El Sahly, H.M., Muñoz, F.M., Asturias, E.J. & Connery, A.K.  *Interrater Reliability of an Adapted and Translated Version of the Mullen Scales of Early Learning (MSEL) in Rural Guatemala.*ASTMH. Poster presentation. National Harbor, MD. Nov 2019
29. *Predictors of Zika Virus Seropositivity among Rural Guatemalan Children Early in the 2015-16 Epidemic, Using Rapid Active Sampling Surveys and the ZIKV NS1 IgG Blockade-of-Binding Assay.* Lamb M, Paniagua-Avila MA, Zacarias A, Rojop N, Chacon A, Huleatt JW, Bonaparte, MI, Lopez MR, Cordon-Rosales C, Asturias EJ, **Olson D**. ASTMH. Poster Presentation. National Harbor, MD. Nov 2019.
30. *Performance of Two Zika Virus Neutralizing Antibody Titer Classification Schemes against Zika NS1 Blockade-of-Binding Assay during the 2015-2016 epidemic in Guatemala.* **Olson D**, Lamb MM, Huleatt JW, Bonaparte MI, Paniagua-Avila MA, Zacarias A, Rojop N, Chacon A, Natrajan M, Waggoner J, Lopez MR, Cordon-Rosales C, Asturias EJ. ASTMH. Poster Presentation. National Harbor, MD. Nov2019.
31. *Rapid Active Seroprevalence (RAS) Surveys as a Tool to Measure Arbovirus Disease Burden in Resource-Limited Settings*. **Olson D**, Lamb MM, Paniagua-Avila MA, Zacarias A, Rojop N, Chacon A, Hodge S, Bonaparte MI, Lopez MR, Cordon-Rosales C, Asturias EJ. ASTMH. Oral Presentation. National Harbor, MD. Nov 2019.
32. *“Caricaturas que generan ideas” (Cartoons that Generate Ideas).* Barrios Reyes, EE, Howard C, **Olson, D**. Graphic Medicine Conference. Oral Presentation (accepted, conference canceled). Toronto, Canada. Jul 2020.
33. *Cytomegalovirus (CMV) infection in the first year of life in a cohort of infants in rural Guatemala.* Munoz FM, Lamb MM, Waggoner J, Bauer D, Paniagua-Avila MA, Connery AK, **Olson D**, Natrajan MS, Anderson EJ, Calvimontes M, Bolaños GA, El Sahly HM, Asturias EJ. ID Week. Poster Presentation. Philadelphia, PA. Oct 2020.
34. *Association between cumulative febrile, respiratory and diarrheal illness in the first year of life and neurodevelopmental and growth outcomes among a cohort of children in rural Guatemala*. **Olson D**, Lamb MM, Connery AK, Bauer D, Paniagua-Avila MA, Colborn KL, Natrajan MS, Waggoner J, Anderson EJ, Calvimontes M, Bolaños GA, Pettibone S, El Sahly HM, Munoz FM, Asturias EJ. ID Week. Poster Presentation. Philadelphia, PA. Oct 2020.
35. *Testing Different WHO Head Circumference Z-Score Cutoffs for Association with
Neurodevelopmental Outcomes in Infants and Young Children in Rural Guatemala*. Lamb M, Connery AK, Colbert A, Bauer D, **Olson D**, Paniagua-Avila A, Arroyave P, Hernández S, Martinez MA, Holliday A, El Sahly HM, Munoz FM, Asturias EJ. AJTMH. Online. Nov 2020.
36. *Business Not as Usual: Virtual Global Health Partnership Initiatives (V-GHPI) During the COVID-19 Pandemic*. Umphrey L, Paasi G, Abongo G, Evert J, Haq HA, Keating E, Lam SK, McHenry MS, Ndila C, Nwobu C, **Olson D**, Rule A, Tam R, Windsor W and Oloput-Oloput P Consortium of Universities for Global Health (CUGH) 12th Annual Global Health Conference; March 2021; virtual. (Poster presentation).
37. *Impact of COVID-19 Pandemic on Telehealth Practices in Pediatric Infectious Diseases from PIDS Telehealth Working Group (TWG) Survey*. Kalyoussef S, Mohandas A, **Olson D**, Fanella A, Hakim A, Gaviria-Agudelo G, and the Telehealth Working Group. IDWeek 2021. Virtual. Poster presentation.
38. *Clinical and Economic Impact of COVID-19 on Plantation Workers: Preliminary Results from the Guatemala Agricultural Workers and Respiratory Illness Impact (AGRI) Study*. **Olson D**, Calvimontes DM, Lamb MM, Guzman G, Barrios E, Chacon A, Rojop N, Arias K, Gomez M, Bolanos GA, Monzon J, Chard AN, Iwamoto C, Quicke K, Ebel G, Fineman M, Lesteberg K, Beckham D, Santiago M, Zielinski Gutierrez E, Azziz-Baumgartner E, Hayden FG, Mansour H, Edwards K, Newman LS, Asturias EJ. ISIRV November 2021. Virtual. Poster Presentation.
39. *During and After the COVID-19 Pandemic: The Roles and Perceived Benefits of Virtual Initiatives in Building Resilient Global Health Partnerships*. Umphrey L, Paasi G, Abongo G, Evert J, Haq HA, Keating E, Lam SK, McHenry MS, Ndila C, Nwobu C, **Olson D**, Rule A, Tam R, Windsor W and Oloput-Oloput. American Academy of Pediatrics Conference. Oct 2021. Poster Presentation.
40. *The Guatemala Agricultural Workers and Respiratory lllness Impact (AGRI) Study: Clinical and Socioeconomic Impact of Respiratory Illness in a Cohort of Guatemalan Agricultural Workers.* **Olson D**, Calvimontes DM, Lamb MM, Guzman G, Barrios E, Chacon A, Rojop N, Arias K, Gomez M, Bolanos GA, Monzon J, Chard AN, Iwamoto C, Quicke K, Ebel G, Fineman M, Lesteberg K, Beckham D, Santiago M, Zielinski Gutierrez E, Azziz-Baumgartner E, Hayden FG, Mansour H, Edwards K, Newman LS, Asturias EJ. ASTMH 2021. Virtual. Oral Presentation.
41. McMinn RK, Chacon A, Rückert C. Scorza V, Worthington D, Lamb MM, Castilla Cifuentes JR, Medrano RE, Harris EK, Arias K, Lopez MR, Asturias EJ, **Olson D\***, Ebel G.\* (\*co-senior author). Feeding behavior of mosquitos from Guatemala and the efficacy of Xenosurveillance. ASTMH 2021. Virtual. Poster Presentation.
42. Harris E, Chacon S, Anaya J, Gonzalez C, Sanchez D, McMinn R, Worthington D, Foy B, Lamb MM, Scorza A, Olson D, and Ebel G. Expanding xenosurveillance capabilities using longitudinal data collected from households in rural Guatemala. ASTMH 2021. Virtual. Poster Presentation.

**INTERVIEWS**

1. USA Today. *Battling Zika...and armchair critics with wacky suggestions*. Nov 4 2016.
2. SheKnows.com, *Meet a mom who moved clear across the country to escape Zika*. Aug 30 2016.

**INVITED EXPERT PANELS AND WORKSHOPS**

1. NIAID/Pediatric Dengue Vaccine Initiative (PDVI) Dengue Workshop. June 2013

Rockville, MD.

1. Takeda Dengue Summit Advisory Board. ASTMH, New Orleans, LA Nov 2014
2. Dengue Vaccine Effectiveness Workshop, Sabin Institute. Washington D.C. June 2014
3. Dengue Case Definition Workshop, ASTMH, Philadelphia, PA Oct 2015
4. Vaccine Hesitancy Workshop, Co-Director. Pasteur Institute, Ho Chi Mar 2016

Minh City, Vietnam.

1. Expert Consultation on Dengvaxia (Sanofi Pasteur) Vaccination Strategies Dec 2017

– Regional. Washington DC.

1. Expert Consultation on Dengvaxia (Sanofi Pasteur) Vaccination Strategies Feb 2017

– Global. Paris, France.

1. George Washington University (GWU) Arbovirus Group of Experts Jun 2018

(GAGE) Meeting. Washington DC.

1. Global Dengue & Aedes-Transmitted Diseases Consortium (GDAC) Nov 2018
Symposium: Present and Future of Dengue Vaccines
2. University of Colorado Influenza Advisory Group of Experts Virtual Oct 2020

Meeting on Seasonal Influenza: Vaccination, Prevention, and Control.

1. OHI and SoGES Climate Change and One Health Symposium. May 2021

Workshop Panelist.

**OTHER WORKSHOPS AND GLOBAL HEALTH EXPERIENCE**

1. Dengue Outbreak Investigation (Epi-Aid) Jul-Aug 2013

CDC – Dengue Branch

Dar es Salaam, Tanzania

1. Mycoplasma and Stevens Johnson Syndrome (Epi-Aid) Nov-Dec 2014

CDC – Respiratory Diseases Branch

Children’s Hospital of Colorado

Aurora, Colorado

1. University of Colorado Co-Mentor Program, CCTSI, Aurora, CO Oct 2014
2. Advanced Vaccinology Course (ADVAC), Fundacion Merieux, May 2019

Annecy, France

Signature: XXXX