Sarah M. Richart, Ph.D.
Professor
Department of Biology and Chemistry
Azusa Pacific University

EDUCATION

Colorado State University — 1996-2001
Fort Collins, Colorado
Doctor of Philosophy, Microbiology

University of Illinois — 1990-1994
Urbana, Illinois
Bachelor of Science, Biochemistry

PROFESSIONAL EXPERIENCE

Azusa Pacific University — 2006-present
Azusa, California
Professor

The King's University College — 2004-2006
Edmonton, Alberta, Canada
Assistant Professor

University of Alberta — 2002-2004
Edmonton, Alberta, Canada
Post-doctoral Fellow

Colorado State University — 2001-2002
Fort Collins, Colorado
Post-doctoral Fellow

PUBLICATIONS

* Underlined names denote undergraduate students

S. M. Richart, Y.-L. Lin, Y. Mizushina, Y.-Y. Chang, T.-Y. Chung, G.-H. Chen, J. Tzen, K.-S. Shia, and W.-L. Hsu. 2018. Synergic effect of curcumin and its structural analogue (Monoacetylcurcumin) on anti-influenza virus infection. *Journal of Food and Drug Analysis* 26: 1015-1023.

G. Hansen, T. Laird, E. Woertz, D. Ojala, D. Glanzer, K. Ring and **S. Richart**. 2016. *Aspergillus sclerotiorum* fungus is lethal to both western drywood (*Incisitermes minor*) and western subterranean (*Reticulitermes hesperus*) termites. *Fine Focus* **2**(1):23-38

P. Loprinzi and **S. Richart**. 2014. White blood cell counts mediate the effects of physical activity on prostate-specific antigen levels. *Research Quarterly for Exercise and Sport* **85**(3):409-13

H.C. Chiou, **S. Richart**, W.L. Hsu, and H.J. Liu. 2014. The interplay of reovirus with autophagy. *BioMed Research International* **2014**: 1-8

S. Kinnes and **S. Richart**. 2012. *What Would Pasteur Do?* (2nd edition). Kendall Hunt Publishers, Dubuque, Iowa

S. Kinnes and **S. Richart**. 2009. *Microbiology Laboratory Manual.* Bent Tree Press, Reno, Nevada

S. Richart, S. Simpson, C. Krummenacher, C. Whitbeck, L. Pizer, G. Cohen, R. Eisenberg, and C. Wilcox. 2003. Entry of herpes simplex virus type 1 into primary sensory neurons in vitro is mediated by Nectin-1/HveC. *Journal of Virology* **77**(5):3307-11

RECENT PRESENTATIONS WITH UNDERGRADUATE STUDENTS

*__Bolded names__ denote presenters, underlined names denote undergraduate students

Paige Colligan and Sarah M. Richart. "*Aspergillus sclerotiorum* fungus induces cell cycle disruption in *Drosophila melanogaster* fruit fly cells." American Society for Microbiology Annual Microbe Meeting, Los Angeles, CA, 2025.

Paige Colligan and Sarah M. Richart. "*Aspergillus sclerotiorum* fungus induces cell cycle disruption in *Drosophila melanogaster* fruit fly cells." APU's STEM Research Symposium and Southern California Branch American Society for Microbiology Annual Meeting, La Jolla, CA, 2024.

Julieta Sasiana Balseca Vivanco and Sarah M. Richart. "Investigating an optimal environment, delicate handling techniques, and inoculation techniques with *Aspergillus sclerotiorum* fungal spores and *Reticulitermes flavipes* termites." APU's STEM Research Symposium, 2024.

Joseph Hsieh and Sarah M. Richart. "Investigating new methods and models of experimentation of *Aspergillus sclerotiorum* fungus treatment on *Reticulitermes flavipes* termites and *Drosophila melanogaster* fruit fly cells." Beta Beta Beta National Biological Honor Society Pacific District Convention, Orange, CA, 2024.

Paige Colligan and Sarah M. Richart. "Exploring the pro-cytotoxic and anti-proliferative effects of *Aspergillus sclerotiorum* on *Drosophila melanogaster* S2 cells." Beta Beta Beta National Biological Honor Society Pacific District Convention, Orange, CA, 2024.

Katelyn C. Telmo, **Zuleika Daniela Franco-Montano**, **Juan Luis Flores-Ramirez**, and Sarah M. Richart. "Investigating ultraviolet-inactivated *Aspergillus sclerotiorum* spores as a negative control for *Drosophila melanogaster* and *Reticulitermes flavipes* entomopathogenic effects." APU's STEM Symposium, 2022.

S. Latuno and S. M. Richart. "Investigating the susceptibility of the termite species, *Reticulitermes flavipes*, to *Aspergillus sclerotiorum* fungus and a mechanism of host antifungal immunity." APU's STEM Symposium, 2021

S. Maddon, D. Hussey, J. Carter, and S. M. Richart. "Determining if *Drosophila melanogaster* S2 cells die from apoptosis from exposure to *Aspergillus sclerotiorum* fungal supernatant." APU's STEM Symposium, 2021

J. Carter, D. Hussey, and S. M. Richart. "Investigating the mode of death of *Drosophila melanogaster* (fruit fly) cells in response to treatment of *Aspergillus sclerotiorum* (fungus) by determining the activation of the apoptosis-specific proteins drICE and DCP-1." Annual Biomedical Research Conference for Minority Students, Anaheim, CA, 2019.

F. Lovcik and S. M. Richart. "Ochratoxin A not detected in strain of entomopathogenic *Aspergillus sclerotiorum* fungus." Beta Beta Beta National Biological Honor Society Pacific District Convention, San Francisco, CA, 2019. (poster presentation)

H. Valencia and S. M. Richart. "Determining the effects of *Aspergillus sclerotiorum* on cell cycle progression in *Drosophila* cells." Beta Beta Beta National Biological Honor Society Pacific District Convention, San Francisco, CA, 2019. (poster presentation—*awarded 1st place*)

D. Hussey, J. Carter, R. Viloria, and S. M. Richart. "Investigating the mode of death of *Drosophila melanogaster* (fruit fly) cells in response to treatment of *Aspergillus sclerotiorum* (fungus) by determining the activation of the apoptosis-specific proteins drICE and DCP-1." Beta Beta Beta National Biological Honor Society Pacific District Convention, San Francisco, CA, 2019. (poster presentation)

N. W. Manetta and S. M. Richart. "Confirming the presence of antifungal gene GNBP1 in termite species *Reticulitermes hesperus* and *Incisitermes minor*." APU's STEM Symposium, 2018. (poster presentation)

H. Valencia and S. M. Richart. "Determining the effects of *Aspergillus sclerotiorum* on cell cycle progression in *Drosophila* cells." APU's STEM Symposium, 2018.

L. Grasioso and S. M. Richart. "Exploring cytotoxic mechanisms of *Aspergillus sclerotiorum* in insect and mammalian cell lines." Southern California branch American Society for Microbiology meeting, La Jolla, CA, 2017, and APU's Fall Research Day, 2017. (poster presentation)

T. Ellstrom and S. M. Richart. "Investigation of the presence of termite genes for the production of termicin, GNBP1 and GNBP2 in two termite species." APU's Fall Research Day, 2017.

L. Mordicini and S. M. Richart. "Sequencing antimicrobials, termicin and GNBP, in termites." APU's Fall Research Day, 2016.

T. S. Laird and S. M. Richart. "The entomopathogenic fungus *Aspergillus sclerotiorum* as a potential biocontrol agent of western subterranean termites (*Reticulitermes hesperus*)." American Society for Microbiology general meeting, Boson, MA, 2016. (poster presentation)

***T. S. Laird** and S. M. Richart. "Entomopathogenecity of the fungus (*Aspergillus sclerotiorum*) on subterranean termites (*Reticulitermes hesperus*) and the effect of glucono delta lactone on termite survival." Beta Beta Beta National Biological Honor Society National Convention, St. Paul, MN, 2016 (oral presentation—*won Frank G. Brooks award for top presentation in microbiology*)

K. Uehara, T. S. Laird and S. M. Richart. "Testing the cytotoxicity of components of an entomopathogenic fungus on an insect cell line." Beta Beta Beta National Biological Honor Society Pacific District Convention, Pomona, CA, 2016. (poster presentation)

L. Capers, T. S. Laird, K. Uehara, and S. M. Richart. "Determining the sequences of antifungal genes in *R. hesperus* and *I. minor.*" Beta Beta Beta National Biological Honor Society Pacific District Convention, Pomona, CA, 2016. (poster presentation)

T. S. Laird and S. M. Richart. "*Aspergillus sclerotiorum* entomopathogenic fungus is able to be transmitted from infected to uninfected subterranean termites in planar arenas." Fall Research Day, APU, 2015. (poster presentation)

***T. S. Laird** and S. M. Richart. "Entomopathogenicity and transmissibility of the fungus (*Aspergillus sclerotiorum*) on subterranean termites, and the development of planar arenas to better replicate field conditions." Beta Beta Beta National Biological Honor Society Pacific District Convention, Monterey Bay, CA, 2015. (oral presentation— *won Frank G. Brooks award for top presentation in organismal/ecological section*)

RECENT PRESENTATIONS, INVITED TALKS, AND PANEL DISCUSSIONS

"History of Smallpox Inoculation and the Church in the 18th Century," presented at the Methodist Theological Seminary of Ohio in Church History class (CH 501) as Science Advisor for AAAS/DoSER , 2021 and 2022

"Creation Care at APU," presented at Azusa Pacific University in Spanish class (SPAN 315), 2021

"Facts and FAQs on the Vax," presented during *Immunized for Love* panel discussion event sponsored by Azusa Pacific University Seminary, as Science Advisor for AAAS/DoSER, 2021

"It's the Little Things that Count: Microorganisms, Plastics, and Climate Change," presented as one of a series of lectures by the Creation Care Council at APU, 2020.

"Coronavirus Unmasked," panelist at panel discussion sponsored by Azusa Pacific University Seminary, as Science Advisor for AAAS/DoSER, 2020

"Microbes and Being Human," presenter during Azusa Pacific University Seminary's AAAS/DoSER curriculum meeting, 2020

"Our Plastic Footprint," presented at Azusa Pacific University in Biblical Studies class (UBBL 496), 2020

"Creation Care at APU," presented at Azusa Pacific University in Spanish class (SPAN 315), 2020

"Exploring connections between environmental plastics and microorganisms and beyond: a semester-long assignment engaging learning, faith and action." American Scientific Affiliation Annual Meeting, Wheaton, IL, 2019.

"Our Plastic Footprint: Plastics, Microorganisms and Climate Change." Azusa Pacific University's Common Day of Learning, 2019.

"Integrating marine plastics into an undergraduate general microbiology class." Southern California Branch American Society for Microbiology Conference, La Jolla, CA, 2018.

"Human Produced Plastics: Counterproductive to Ecological Shalom?" Azusa Pacific University's Common Day of Learning, 2018.
"Small Mercies: the Goodness of Microorganisms," presented at Azusa Pacific University Homecoming event for the College of Liberal Arts and Sciences, 2017.

"The practice of smallpox inoculation in Colonial Boston and the response from the medical and religious communites in the colonies and Britain, 1721-30." American Society for Microbiology general meeting, Boson, MA, 2016. (poster presentation)

"A semester-long project in reducing student personal plastic usage." American Society for Microbiology Conference for Undergraduate Educators, Danvers, MA, 2014.

GRANTS/FELLOWSHIPS

Faculty Research Council, 6 grants funded — 2008, 2011, 2013, 2016, 2017, 2024

Beta Beta Beta National Biological Honors Society — 2014-15, 2018-19, 2021-22
Worked with 7 undergraduate research students to write supplies grants

American Society for Microbiology Undergraduate Research Fellowship, $6,000 — 2019
Fellowship to work with Hannah Valencia ('20)

Innovative Teaching Grant, $3,000 — 2017
Grant paid for equipment to integrate authentic research into microbiology labs.

Assessment mini-grant, $300 funded — 2008
Wrote a grant for faculty time to develop 4 assessment tools for departmental undergraduate research program, S2S.

UNIVERSITY SERVICE

Student Club Faculty Advisor — 2024-present
Pre-Dental Club

Student Club Faculty Advisor — 2024-present; 2016-2020
Pre-Veterinary Club

Lily Fellows Program — 2020-present
STEM representative

Philosophy, Faith and Culture Learning Collaborative — 2020-2021

Small group leader

Panel Moderator, Shalom for a Changing Climate 2019
Sponsored by Center for Research in Science

Environmental Studies program committee 2018-present
Member of committee working to start academic environmental studies program(s)

Faith Integration Committee, Dept Biology & Chemistry 2018-present

Advisory Board member 2018-2023
Center for Research in Science

Student Club Faculty Advisor 2016-2022
Sustainability Club

Creation Care Council 2016-2023
Member

"Mr. Darwin's Tree" play panel member 2016
Sponsored by Centers for Research on Ethics and Values

Workload and Compensation Committee 2015-2020
Elected representative of CLAS

"**Experiment with an Air Pump"** table reading 2014
Co-sponsored with Rachel Tracie a Theater Arts-Biology event

Term Tenure and Rank Promotion Committee 2012-2015
Elected representative of CLAS

Philosophy and Science Colloquium 2011
Presented and led discussion on "Rights of Microbes"

Biology and chemistry undergraduate research symposium committee/ STEM undergraduate research symposium program committee 2008-2018
Helped organize annual symposium and coordinated judging

Department Assessment 2008-2014
Established and implemented departmental assessment

EXTERNAL ACADEMIC SERVICE

American Association for the Advancement of Science/Dialogue on Science, Ethics and Religion (AAAS/DoSER) 2020-2021
Science Advisor for Azusa Pacific University Seminary

Annual Biomedical Research Conference for Minoritized Scientists Anaheim, CA 2019 & 2022
Judged student poster presentations

Association of Christian Schools International Science Fair 2018

Azusa, CA
Judged 8th grade biology science fair posters.

Intel International Science and Engineering Fair 2017
Los Angeles, CA
Judged microbiology science fair posters.

Maranatha High School 2017
Pasadena, CA
Judged 9th grade biology science fair posters.

American Scientific Affiliation 2016
Azusa, CA
Co-hosted ASA's general meeting at APU.

Dalton Elementary School 2016
Azusa, CA
Led laboratory exercises and discussion on APU campus with 3rd grade students.

Giano Intermediate School 2013
Covina, CA
Taught on the scientific method and presented my termite research to 6th grade science students.

Sellers Elementary School 2010
Glendora, CA
Taught kindergarten immunology and germ lesson

Kabale Trinity College 2008, 2009
Kabale, Uganda
Biology Teacher Training

Women in Scholarship, Engineering, Science and Technology (WISEST) 2005
Edmonton, Canada
Role-model and mentor for high school student summer research program

PROFESSIONAL MEMBERSHIPS

American Association for the Advancement of Science

American Scientific Affiliation (Fellow since 2018)

American Society for Microbiology

Southern California Branch American Society for Microbiology