

Stanford



Susan Vleck

Assistant Director Lab and Bio Safety, Biosafety Officer, EH&S, Environmental Health and Safety (EH&S)

CONTACT INFORMATION

- **Alternate Contact**

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Bio

BIO

Susan E. Vleck, PhD, RBP/CBSP(ABSA), is an EH&S Assistant Director overseeing the Laboratory Chemical and Physical Safety, as well as the Manager of the Animal Research Occupational Health & Safety Program, in the Department of Environmental Health & Safety at Stanford University. She earned her B.A. in Biology with Honors from Grinnell College in 2004, and her Ph.D. in Microbiology and Immunology at Stanford University in 2010. Her Ph.D. research centered on viral pathogenesis relating to functional and structural domains of Varicella-Zoster virus glycoproteins, and her Post-Doctoral research focused on investigating Hepatitis C virus and antiviral drugs, utilizing a humanized-liver mouse model. She now applies her background in scientific research to aiding Stanford researchers in incorporating safety into their everyday work. She leads the ongoing development and implementation of Stanford's Laboratory Chemical and Physical Safety Program, and ensures safe practices, understanding, and compliance for work done in a wide array of research labs. She leads and directs a team of 9 management and professional personnel to oversee a broad spectrum of environmental, health and safety programs of significant scope and complexity. As Manager of the Animal Research Occupational Health & Safety Team, she partners within EH&S and across Stanford to enact and advise on health and safety policies, trainings, institutional accreditation preparation, and inspections relating to work with and around animals. In these capacities, she works with Stanford's research community of faculty, staff, post-doctoral scholars and grad students, other groups within Environmental Health & Safety, other departments at Stanford, and local, state and federal institutions that provide regulatory or guidance documentation. She currently lives in Santa Clara, CA, with her husband and two children, and likes to run, read and scuba dive in her spare time.

CURRENT ROLE AT STANFORD

Current Role: Assistant Director, Laboratory Chemical and Physical Safety Program, and Manager, Animal Research Occupational Health and Safety Program, Department of Environmental Health and Safety

I have been a part of the Department of Environmental Health and Safety at Stanford University since 2012. My original role was as a Biosafety and Biosecurity Specialist to support the ongoing development and implementation of Stanford's Biosafety and Biosecurity Program and ensure safe practices, understanding, and compliance for work done using infectious agents and recombinant DNA. I was promoted to Senior Biosafety and Biosecurity Specialist in 2017, and became Program Manager for the Animal Research Occupational Health and Safety Program. In 2020, I transitioned to my current role of Assistant Director, Laboratory Chemical and Physical Safety Program.

I lead the ongoing development and implementation of Stanford's Laboratory Chemical and Physical Safety Program, and ensure safe practices, understanding, and compliance for work done in a wide array of research labs. I lead and direct a team of 9 management and professional personnel to oversee a broad spectrum of environmental, health and safety programs of significant scope and complexity, and oversee subordinate managers with large program responsibilities. I define and direct the overall activities of the group, and allocate appropriate staffing and other resources to achieve objectives, including development and direction of related policies.

I also directly oversee the Animal Research Occupational Health & Safety Program, which serves a centralized point of contact for people seeking help relating to animal and EH&S issues. This program helps bring together groups within EH&S, as well as EH&S and other Stanford departments, to address safety and health issues relating to animals. These issues can fall under a wide range of topics, including biosafety, chemical safety, ergonomics, occupational injury & illness, trainings, lab safety, radiation safety, housing requirements, animal allergies, lasers and PPE. This program serves the research community, but also any staff, student or faculty who interacts with or work in proximity to animals on campus.

My overall goal in my role as Assistant Director is to support the Stanford research community in performing innovative and exciting research safely.

HONORS AND AWARDS

- Stanford Staff Academy, Stanford University (2016)
- Molecular Basis of Host-Parasite Interactions Training Grant, Stanford University (2008-2009)
- Katherine McCormick Travel Award, Stanford University (2007)
- National Science Foundation Graduate Research Fellowship Honorable Mention, NSF (2005)
- Cell and Molecular Biology Training Grant, Stanford University (2004-2008)
- Florence Smith-Sifferd Science Scholarship, Grinnell College (2002-2004)
- Grinnell National Merit Scholarship, Grinnell College (2000-2004)
- Grinnell Trustee Honors Scholarship, Grinnell College (2000-2004)

EDUCATION AND CERTIFICATIONS

- CBSP, American Biological Safety Association (ABSA) , Certified Biosafety Professional (2022)
- RBP, American Biological Safety Association (ABSA) , Registered Biosafety Professional (2017)
- Post-Doctoral Scholar, Stanford University , Gastroenterology and Hepatology (2012)
- Ph.D., Stanford University , Microbiology and Immunology (2010)
- B.A., Grinnell College , Biology, with Honors (2004)

PERSONAL INTERESTS

Science: viruses, genetics, fusion proteins, glycoproteins

Life: running, scuba diving (PADI Master Scuba Diver, PADI Divemaster), road biking

LINKS

- EH&S Biosafety: <https://ehs.stanford.edu/topic/biosafety-biosecurity>
- Environmental Health and Safety: <https://ehs.stanford.edu/>
- LinkedIn profile: <https://www.linkedin.com/in/susan-vleck-255a0b12>

Professional

PROFESSIONAL AFFILIATIONS AND ACTIVITIES

- Member, Research Policy Group, Stanford University EOC COVID-19 (2020 - 2022)
- Member, Laboratory Acquired Infections Database, Publications Committee, ABSA (2019 - present)
- Member, Labs, Libraries and Shared Facilities Policy Working Group, Stanford University EOC COVID-19 (2020 - 2022)
- Associate Chair, Research Operations Continuity Committee, Stanford University EOC COVID-19 (2020 - 2022)
- Member, Stanford University Emergency Operations Center (EOC) for COVID-19 (2020 - 2022)
- Member, Front Range Biosafety Association (FRaBSA) (2020 - present)
- Member, Scientific Program Committee, ABSA (2020 - present)
- Member, Midwest Area Biosafety Network (MABioN) (2018 - present)
- Member, Northern California Biosafety Association (NorCal) (2018 - present)
- Member, American Biological Safety Association (ABSA) (2013 - present)
- Member, Campus Safety, Health and Environmental Management Association (CSHEMA) (2012 - present)
- Divemaster, Professional Association of Dive Instructors (PADI) (2010 - present)
- Member, American Society of Microbiology (2007 - present)

Publications

PUBLICATIONS

- **Biosafety Practices When Working with Bats: A Guide to Field Research Considerations.** *Applied biosafety : journal of the American Biological Safety Association*
Aguilar-Setien, A., Arechiga-Ceballos, N., Balsamo, G. A., Behrman, A. J., Frank, H. K., Fujimoto, G. R., Gilman Duane, E., Hudson, T. W., Jones, S. M., Ochoa Carrera, L. A., Powell, G. L., Smith, C. A., Triantis Van Sickle, et al
2022; 27 (3): 169-190
- **Safety Considerations When Working with Humanized Animals** *ILAR JOURNAL*
Villano, J. S., Vleck, S. E., Felt, S. A., Myers, D. D., Lester, P. A.
2018; 59 (2): 150–60
- **Structure-function analysis of varicella-zoster virus glycoprotein H identifies domain-specific roles for fusion and skin tropism** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Vleck, S. E., Oliver, S. L., Brady, J. J., Blau, H. M., Rajamani, J., Sommer, M. H., Arvin, A. M.
2011; 108 (45): 18412-18417
- **Anti-Glycoprotein H Antibody Impairs the Pathogenicity of Varicella-Zoster Virus in Skin Xenografts in the SCID Mouse Model** *JOURNAL OF VIROLOGY*
Vleck, S. E., Oliver, S. L., Reichelt, M., Rajamani, J., Zerboni, L., Jones, C., Zehnder, J., Grose, C., Arvin, A. M.
2010; 84 (1): 141-152
- **Analogs design, synthesis and biological evaluation of peptidomimetics with potential anti-HCV activity** *BIOORGANIC & MEDICINAL CHEMISTRY*
Lasheen, D. S., Ismail, M. A., Abou El Ella, D. A., Ismail, N. S., Eid, S., Vleck, S., Glenn, J. S., Watts, A. G., Abouzid, K. A.
2013; 21 (10): 2742-2755
- **Structural Linkage between Ligand Discrimination and Receptor Activation by Type I Interferons** *CELL*
Thomas, C., Moraga, I., Levin, D., Krutzik, P. O., Podoplelova, Y., Trejo, A., Lee, C., Yarden, G., Vleck, S. E., Glenn, J. S., Nolan, G. P., Piehler, J., Schreiber, et al
2011; 146 (4): 621-632
- **Structure-Function Profiles of Nine Varicella-zoster Virus Glycoproteins: Endocytosis, Entry and Egress** *ALPHAHERPESVIRUSES: MOLECULAR VIROLOGY*
Grose, C., Vleck, S., Karlsen, O., Montalvo, E. A., Weller, S. K.

2011: 153-74

- **Varicella-Zoster Virus T Cell Tropism and the Pathogenesis of Skin Infection** *VARICELLA-ZOSTER VIRUS*
Arvin, A. M., Moffat, J. F., Sommer, M., Oliver, S., Che, X., Vleck, S., Zerboni, L., Ku, C.
2010; 342: 189-209
- **Intramolecular and intermolecular uridylylation by poliovirus RNA-dependent RNA polymerase** *JOURNAL OF VIROLOGY*
Richards, O. C., Spagnolo, J. F., Lyle, J. M., Vleck, S. E., Kuchta, R. D., Kirkegaard, K.
2006; 80 (15): 7405-7415
- **Rapid communication: Physical and linkage mapping of the porcine calcitonin (CALC) gene** *JOURNAL OF ANIMAL SCIENCE*
Neil, J. E., Vleck, S. E., Helm, J. M., Ciobanu, D. C., Rothschild, M. F.
2002; 80 (6): 1700-1701

PRESENTATIONS

- Structure-Function Analysis of Varicella-Zoster Virus Glycoprotein H Determines Domain Independent Roles for Fusogenicity and Skin Tropism - XVth International Congress of Virology, IUMS (2011)
- Mutational analysis of predicted structural and functional domains of Varicella-zoster virus glycoprotein H - 35th Annual International Herpesvirus Workshop, Varicella-Zoster Virus Satellite Meeting (2010)
- Antibody interference with glycoprotein H function impairs the pathogenicity of Varicella- Zoster virus in skin xenografts in the SCID mouse model - Department of Microbiology and Immunology Seminar, Stanford University (2009)
- The requirement of Varicella-Zoster virus glycoprotein H for replication and spread in vitro and in SCIDhu skin xenografts in vivo - 34th Annual International Herpesvirus Workshop, Varicella-Zoster Virus Satellite Meeting (2008)
- Varicella-Zoster virus glycoprotein H contributes to pathogenesis in vivo - 33rd Annual International Herpesvirus Workshop (2007)
- Mapping of type-II diabetes and obesity-related genes in the pig - Senior Honors Presentation, Grinnell College (2004)