The animal agriculture industry, U.S. universities, and the obstruction of climate understanding and policy, *Climatic Change,* Viveca Morris (Yale University; viveca.morris@yale.edu) and Jennifer Jacquet (University of Miami; jjacquet@miami.edu).

ESM Table 2: Former PhD Students of Dr. Frank Mitloehner

Many of Dr. Frank Mitloehner's former students have gone on to influential sustainability roles in livestock corporations, trade associations, and universities. The table below includes Mitloehner's former doctoral students with dissertations available via ProQuest Dissertations & Theses Database as of May 2023.

Name	**PhD Grad. Year**	**Subsequent & Current Roles**	**Dissertation Topic**	**Dissertation Funders**
Kimberly Stackhouse-Lawson	2011	**Colorado State University,** Professor of Animal Sciences & Director of CSU AgNext (2020-present) **JBS USA**, Director of Sustainability (2016-2020) **National Cattlemen's Beef Association**, Executive Director for Global Sustainability (2011-2016)	"Assessment and Mitigation of Greenhouse Gases and Air Emissions from Beef Production" This dissertation seeks to quantify methane, nitrous oxide, and carbon dioxide emissions from industry typical feedlot cattle and on how growth-promoting technologies for beef cattle affect greenhouse gas and other emissions per kilogram of product.	Second chapter acknowledges funding from California Cattlemen's Association Feeder Council, California Beef Council, and Arizona Cattle Feeders Association.

Sara Place	2012	**Colorado State University**, Associate Professor of Animal Sciences (2022-present) **Elanco Animal Health**, Chief Sustainability Officer (2019-2022) **National Cattlemen's Beef Association**, Senior Director of Sustainable Beef Production Research (2016-2019)	"Effects of Monensin on Gaseous Emissions, Microbial Populations, and Animal Performance of Lactating Dairy Cattle" This dissertation examines the effectiveness of adding varying doses of monensin to dairy cattle feed to reduce methane emissions. Monensin is a common ingredient in supplementary feeds used since 2004 in the U.S. to increase milk production and is sold by Elanco Animal Health.[1]	Elanco Animal Health ("for the funding that supported all of my research presented in this dissertation")

[1] https://www.elanco.com.au/products-services/dairy-cattle/products/dairy-rumensin

Michelle Calvo-Lorenzo	2012	**Elanco Animal Health,** Chief Animal Welfare Officer (2019-present) **Elanco Animal Health,** Technical Consultant Animal Well-Being (2015-2019) **Oklahoma State University,** Assistant Professor of Animal Well-Being (2012-2015)	"Effects of Housing Strategies to Improve Calf Well-being" This dissertation researched current dairy calf housing systems and potential alternative systems if similar legislation to the 2008 California Proposition-2 - which prohibited veal, gestational sow, and layer hen cages - were implemented in the beef and dairy industries.	California Cattlemen's Association; Western United Dairymen; an anonymous Tulare County bull calf ranch
Qian Wang Mitloehner	2013	**California Air Resources Board**, Air Pollution Specialist (2018-present)	"Nutritional Strategies to Mitigate Greenhouse Gas Emissions from Cattle Production" This dissertation investigates methane and nitrous oxide mitigation strategies for livestock through modifying animal diets and microbial/enzymatic activity in soil.	Alltech Company; Novus International Inc.

Carlyn Peterson	2020	**Nutreco,** Western Dairy Technical Manager - Selko USA (formerly Micronutrients) **Adisseo NCA**, Dairy Technical Services Manager (2020-2022)	"Effects of Feed and Waste Additives on Dairy Cattle's Impact on Greenhouse Gases and Air Quality" This dissertation reports results from three studies aimed at reducing emissions from enteric fermentation and waste with commercial feed additives (SOP LAGOON, BiOWiSH products, and Agolin).	No funding sources are acknowledged in the dissertation.
Samantha Werth	2021	**National Cattlemen's Beef Association**, Senior Director of Sustainability (2022-present) **U.S. Roundtable for Sustainable Beef**, Executive Director (2022-present) **University of Idaho,** James A. & Louise McClure Center for Public Policy Research, Idaho Science &	"An Economic and Environmental Assessment of Ground Beef in Response to the Introduction of Plant-Based Meat Alternatives in the United States" This dissertation compares the	Elanco Animal Health; National Cattlemen's Beef Association According to a 2021 version of Dr. Werth's CV available on the UC Davis CLEAR website[2], Werth and Mitloehner together received two grants totaling

[2] "Samantha J Werth," CV file dated March 2021, accessed March 9, 2023. https://clear.ucdavis.edu/sites/g/files/dgvnsk7876/files/media/documents/Werth_CV_31Mar2021.pdf

		Technology Policy Fellow (2021-2022)	sustainability of ground beef to the sustainability of Beyond Burgers and Impossible Burgers, and concludes that it "remains difficult to draw clear conclusions on which product might be superior, but it is clear that BB and IB will not produce the profound positive impacts suggested by their respective companies."	$210,000 from the National Cattlemen's Beef Association. Notably, these grants are not listed on Mitloehner's CV.[3]
Elizabeth Ross	2021	**California Air Resources Board**, Air Pollution Specialist (2021-present)	"Mitigation of Gaseous Emissions from Beef and Dairy Cattle Through Feed Additives and Manure Supplements" This dissertation investigates the emissions mitigation efficacy and other impacts of a SOP	SOP; Zoetis; VGRID Energy

[3] "Frank Mitloehner PhD," CV file dated April 2021, accessed March 9, 2023. https://clear.ucdavis.edu/sites/g/files/dgvnsk7876/files/media/documents/Frank%20Mitloehner%20CV%202021.pdf

			commercial feed additive and ractopamine hydrochloride, and tests the potential of adding pistachio shell biochar to anaerobic digesters as a means of reducing NH3 emissions.	
Angelica Carrazco	2022	**California Air Resources Board,** Air Pollution Specialist (2022-present)	"Mitigation Strategies of Agricultural Air Emissions" Not yet available on ProQuest Dissertations & Theses Global.	Not yet available on ProQuest Dissertations & Theses Global.