

Achieving a Net Zero Farm Through Genomic Innovation

Brad Ringeisen (IGI)

The Innovative Genomics Institute has a multidisciplinary team of scientists developing next generation genomic tools to enable a net zero farm. Research thrusts include enhancing crop photosynthesis, reducing agricultural emissions (rice, ruminants), reducing farmer inputs (irrigation, pesticide, nitrogen), and increasing agricultural soil carbon capture and sequestration. We will discuss the innovative genomic tools and approaches being used to precisely control both plant and microbial function to create climate resilient agricultural systems while increasing yields and enabling quantitative carbon capture.

Brad Ringeisen is the Executive Director of the Innovative Genomics Institute (IGI), founded by Jennifer Doudna in 2014 on the University of California, Berkeley campus. The mission of the IGI is to bridge revolutionary gene editing tool development to affordable and accessible solutions in human health and climate. Brad's primary role is to guide IGI's scientific and development strategy, but his duties also include promoting entrepreneurship, working with biotech investors and companies to ensure commercial translation of our technologies, donor outreach and development, scientific project development and teambuilding, communication with campus leadership, personnel management and mentoring, program management, and reporting and engagement with both our Governance and Scientific Advisory Boards.

Brad is a physical chemist with a Ph.D. from the University of Wisconsin-Madison, a pioneer in the field of live cell printing, and an experienced administrator of scientific research and product development. Before joining the IGI, Brad was Director of the Biological Technologies Office at DARPA, where he managed a division working at the cutting edges of biology, physical sciences and engineering. Programs in Brad's office included research in genome editing, epigenetics, neurotechnology, food security and biomanufacturing, as well as diagnostics and therapeutics development. Prior to DARPA, Brad ran his own research group at the U.S. Naval Research Laboratory as the head of the Bioenergy and Biofabrication Section.