

CV-bio

Stuart Denman is a Principal Research Scientist and team leader of the Gut Ecosystem and Function team within CSIRO Agriculture and Food, leading research projects under the theme of ruminant efficiency for livestock production. The group's research interests are in using 'omics' technologies to produce new insights into the microbial world, and from which, improved methods for monitoring and adjustment of the gut microbiota might be achieved. This includes the culturing and isolation of bacterial species with specific functional roles and the use of omics techniques to understand the control of these functions. For several years the focus has been on investigating the effectiveness of methane abatement strategies by understanding the variations in microbial population structure and functions in ruminant species and drawing parallels with other low methane gut systems. Similar methodologies are now being turned towards understanding the contribution of the microbiome to rumen efficiency and the role of maternal nutrition on offspring and early life intervention in the rumen. Dr Denman leads the animal productivity area within CSIRO's Microbiome Future Science Platform that is investigating the connectivity between the host animal and the microbiome.

Dr Denman is currently an area lead for the Meat and Livestock Australia - Carbon Neutral 2030 initiative (MLA CN30) national Emission Avoidance Partnership, and an advisor to the Australian governments Livestock Emission Framework Working Group. He has published over 100 papers in the field of ruminant microbiology and biotechnology and has active collaborations both nationally and internationally with universities and research organisations focused on rumen microbiome research.