

CMB NEWS | NORTH DAKOTA STATE UNIVERSITY

A biannual newsletter brought to you by the Cellular and Molecular Biology Graduate Program

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CMB Students Pass Final Defense!



Congratulations to **Dr. Philip Salu** who earned his PhD in CMB this summer! Philip's dissertation was titled, "Advancing pancreatic cancer research: Integrating patient-derived xenografts, organoids, circulating tumor cells, and investigating the role of anterior gradient 2 in tumor growth ". Philip was mentored by CMB faculty member **Dr. Katie Reindl** (Biological Sciences). Thank you to the following NDSU faculty for serving on Philip's examining committee: **Dr. Jiha Kim** (Biological Sciences), **Dr. Estelle Leclerc** (Pharmaceutical Sciences), and **Dr. Megan Orr** (Statistics). Dr. Salu has joined the Moores Cancer Center at the University of California San Diego School of Health Sciences as a Postdoctoral Fellow in the lab of Dr. Tatiana Hurtado de Mendoza. Congratulations, Dr. Salu!



Congratulations to **Dr. Kafi Mia** who also earned his PhD in CMB this summer! Kafi's dissertation was titled "Introducing vasoactive intestinal polypeptide (VIP): A potential approach for enhancing commercial ruminant production". Kafi was mentored by CMB faculty member **Dr. Kendall Swanson** (Animal Sciences). Thank you to the following NDSU faculty for serving on Kafi's examining committee: **Dr. Glenn Dorsam** (Microbiological Sciences), **Dr. Samat Amat** (Microbiological Sciences), and **Dr. Alison Ward** (Animal Sciences). Congratulations, Dr. Mia!

CMB Students Publish Papers



Philip Salu published two first-author review papers and was a co-author on a research paper. “Advancements in preclinical models of pancreatic cancer” was published in the journal *Pancreas*. “Advancements in circulating tumor cell research: Bridging biology and clinical applications” was published in the journal *Cancers*; <https://www.mdpi.com/2072-6694/16/6/1213>. “Nanocarrier mediated entinostat and oxaliplatin combination therapy displayed enhanced efficacy against pancreatic cancer” was published in *Biomedicine & Pharmacotherapy*; <https://www.sciencedirect.com/science/article/pii/S0753332224006279?via%3Dihub>. Philip’s research advisor, **Dr. Katie Reindl** (Biological Sciences), also co-authored these manuscripts. Congrats, Philip!



Kafi Mia published a first-author paper titled “Influence of vasoactive intestinal polypeptide on growth performance, nutrient digestibility, nitrogen balance, and digestive enzyme activity in lambs” in *Journal of Animal Sciences*; <https://doi.org/10.1093/jas/skaf112>. **Dr. Kendall Swanson** is a co-author. Congrats, Kafi!



Kazi Sarjana Safain co-authored a paper titled “Influence of maternal nutrition and one-carbon metabolite supplementation during early pregnancy on bovine fetal small intestine vascular and cell proliferations” in the journal *Veterinary Sciences*; <https://doi.org/10.3390/vetsci11040146>. Additional co-authors included CMB faculty **Drs. Larry Reynolds** and **Carl Dahlen**. Congrats, Sarjana!



Tariqul Islam co-authored a research paper and a book chapter. The research paper titled “Trans-replicase helper activity of porcine circoviruses promotes the synergistic replication of torque teno virus” was published in the journal *Frontiers in Microbiology*. The book chapter titled, “Circoviral reverse genetics systems for vaccine development” was published in *Methods in Molecular Biology*, Springer Nature. Tariqul’s graduate advisor **Dr. Sheela Ramamoorthy** (Microbiological Sciences) is also a co-author on these publications. Congratulations!

CMB Students Present Research and Receive Awards



Kazi Sarjana Safain presented two research projects at the annual conference of the American Society for Nutrition (ASN) in Chicago, IL. Her projects were titled “Tissue-specific impact of one-carbon metabolite supplementation and nutrient restriction in gestating heifers on fetal mitochondrial-related gene profiles” and “One-carbon metabolite supplementation influence fetal liver metabolites and metabolic pathways in a diet-dependent manner during early pregnancy in heifers”. She received three awards at this meeting including 1st place in the Emerging Leaders in Experimental Animal Nutrition poster competition, 2nd place in the Emerging Leaders in Energy Macronutrient Metabolism poster competition, and 3rd place in the Youth Investigators Underrepresented in Nutrition Science oral competition. Sarjana also received a CMB travel award. She is mentored by **Dr. Kendall Swanson** (Animal Sciences). Congratulations, Sarjana!



Shubhashri Ambhore presented a research poster titled “Targeted combination drug therapy for triple-negative breast cancer employing hypoxia-responsive polymer nanoparticles” at the 2024 NDSU Graduate Student Council Research Day. She received 2nd place in the graduate student poster competition. Shubhashri is mentored by **Dr. Sanku Mallik** (Pharmaceutical Sciences). Congratulations, Shubhashri!



Philip Salu presented his research titled “AGR2 knockdown reduced cell proliferation and increases endoplasmic reticulum proteotoxic stress in pancreatic cancer” at the American Association for Cancer Research (AACR) annual meeting in San Diego, CA. He is mentored by **Dr. Katie Reindl** (Biological Sciences). Philip received a CMB Travel Award to help offset costs associated with attending the meeting. Philip was also a recipient of the NDSU Suzy Schmoll Graduate Student Scholarship. Congrats, Philip!



Jenna Duttenhefner gave an oral presentation of her research titled “Unraveling GSTP1’s role: Implications for metabolic regulation in PDAC” at the NDSU Graduate Student Council Research Symposium in April. She is mentored by **Dr. Katie Reindl** (Biological Sciences). Jenna was also a recipient of the NDSU Suzy Schmoll Graduate Student Scholarship. Congrats, Jenna!



Jacob Tesch presented his research titled “KISS1R activation alters intracellular calcium in airway smooth muscle during inflammation: Th2 biased effect” at the American Thoracic Society (ATS) international conference in San Diego, CA. Jacob is mentored by **Dr. Sathish Venkatachalem** (Pharmaceutical Sciences). Jacob received a CMB Travel Award to support his research presentation. Congrats, Jacob!

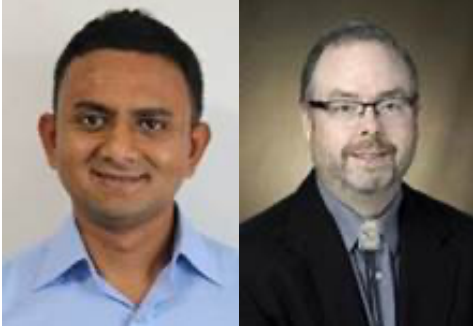


Tariqul Islam presented his research titled “Exploring a mouse model for Torque teno sus-1 virus” at the Conference of Research Worker on Animal Disease (CRWAD) annual meeting. Tariqul also participated in the 3-minute thesis (3MT) competition at the meeting where he was one of 17 students selected to present their research. The title of his talk was “Friend for life: How porcine circovirus (PCV) replicase facilitates the replication of Torque-teno viruses (TTV)”. Tariqul is mentored **by Dr. Sheela Ramamoorthy** (Microbiological Sciences). Congrats, Tariqul!

CMB Students and Faculty Receive Grant



Congratulations to **Sarjana Safain** and **Dr. Kendall Swanson** (Animal Sciences) who were awarded a grant from the North Dakota State Board of Agricultural Research and Education (SBARE) for their project titled “Impact of supplemental amino acids on muscle proteome and serum amino acids in neonatal heifer calves fed milk replacer”.



Congratulations to **Kafi Mia** and **Dr. Kendall Swanson** who were awarded a grant from the North Dakota State Board of Agricultural Research and Education (SBARE) for their project titled “Mechanisms regulating how vasoactive intestinal polypeptide (VIP) improves growth performance in lambs fed high-grain diets”.
