

Caroline Kuo, MD

Speaker Biography

Dr. Caroline Kuo is an Assistant Professor of Pediatrics within the Division of Allergy, Immunology, and Rheumatology specializing in clinical immunology. She leads a translational research program, primarily focused on advancing gene modification approaches for the treatment of rare immune deficiencies. Dr. Kuo's research is dedicated to the precise editing of hematopoietic stem cells to address monogenic inborn errors of immunity (IEI), utilizing programmable nucleases such as TALENs and CRISPR/Cas9. As PI of several university- and state- funded grants, her ongoing objectives include advancing the translation of CRISPR/Cas9-based gene editing for X-linked Hyper IgM Syndrome across different phases of Investigational New Drug (IND) development. Dr. Kuo also oversees various pre-clinical projects in their early stages, exploring gene modification strategies for other rare IEI. Additionally, she serves as investigator for clinical trials of lentiviral vector gene therapy for several inborn errors of immunity including X-Linked Chronic Granulomatous Disease and Leukocyte Adhesion Deficiency Type I.