In Person Seminar: When Your Heart Skips More Than a Beat: Connexin Hemichannels in Cardiac Pathology

Connexin 43 (Cx43) is the most abundant gap junction channel-forming isoform in cardiac ventricles. In multiple cardiac pathologies, Cx43 is found to be remodeled to the lateralized side of interacted discs of unhealthy cardiomyocytes. We recently demonstrated that these remodeled Cx43 proteins function as non-junctional channels (hemichannels). The opening of remodeled Cx43 hemichannels mediates cardiac stress-induced arrhythmias and ventricle infarction. We propose that Cx43 hemichannels are an important therapeutic target for the prevention of arrhythmogenic phenotypes displayed in many cardiovascular pathologies.