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**TITLE:**
“New insights into atrial fibrillation progression”

**Abstract:**
Atrial fibrillation (AF) is the most common atrial arrhythmia in clinical practice. A combination of electrical, structural, and calcium handling remodeling contributes to the progression of AF from self-terminating episodes (paroxysmal AF) towards more persistent states (chronic AF). Dr. Wehrens will present new insights into the cellular mechanisms underlying arrhythmogenesis during the early phases of AF development. This work revealed distinct changes in calcium handling proteins as compared to those seen in more advanced (chronic) AF. In addition, new evidence will be presented implicating calcium leak from the sarcoplasmic reticulum as a key signal underlying some aspects of atrial remodeling underlying disease progression. Observations from human-based studies and experimental work in mouse models will be presented in this presentation.