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GUEST SPEAKER SEMINAR

SEPTEMBER 6, 2024
2:00PM TO 3:00PM

In Person

Room 3H01, Sir Charles Tupper Medical Building, Halifax

Room 218, DMNB, Saint John (Virtual)

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DALHOUSIE UNIVERSITY

Department of Pharmacology

"Mechanisms underlying sex differences in atrial fibrillation"

Synopsis

This talk will present findings that male mice, like humans, are more vulnerable to atrial fibrillation (AF) and show significant sex differences in the mechanisms of AF initiation and maintenance. Sex differences have been observed in the regulation of calcium handling. Specifically, males showed higher sodium-calcium exchanger (NCX1) expression and function and more frequent spontaneous calcium releases. Additionally, male mice showed greater lateralization of atrial connexins and increased atrial mass and atrial myocytes. Orchiectomy reduced AF susceptibility and eliminated these sex differences, indicating that androgens may regulate these AF substrates. Importantly, these results, observed in healthy young adult mice, highlight inherent sex differences in AF mechanisms, independent of age-related comorbidities, suggesting that male atria are more prone to AF, which may help explain the higher prevalence of AF in males.

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