UC DAVIS HEALTH | SCHOOL OF MEDICINE

Department of
Physiology and Membrane Biology

Distinguished Lecture Series in Physiology

Romulo Hurtado, Ph.D.

Assistant Professor of Research
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Weill Medical College of Cornell University

"Doxorubicin induced cardiotoxicity of cardiac pacemakers"

Doxorubicin is a potent, broad-spectrum chemotherapeutic used to treat both solid tumor and hematological cancers. Implementation of doxorubicin facilitated raising the 5-yr survival rate in childhood cancers to >80%, and it remains among the most effective treatments for breast cancer. Despite its impressive efficacy, the utility of doxorubicin is limited due to doxorubicin-induced cardiotoxicity (DIC). DIC is estimated to cause some form of cardiac impairment in 65% of patients, ranging from moderate decreases in cardiac output to congestive heart failure. In this seminar, recent findings on DIC of the specialized cardiac conduction system will be discussed, which remains elusive as compared to well-described DIC of the myocardium. Using human pluripotent stem cells (hPSCs) and murine model systems, it was discovered that doxorubicin induces acute cell death of cardiac pacemakers. Moreover, doxorubicin caused dysrhythmia of the murine heart. These findings may begin to provide insight into the etiology of arrhythmias exhibited by patients treated with doxorubicin, which has recently become increasingly recognized.

Monday, June 27, 2022
Zoom
12 p.m.

June
27

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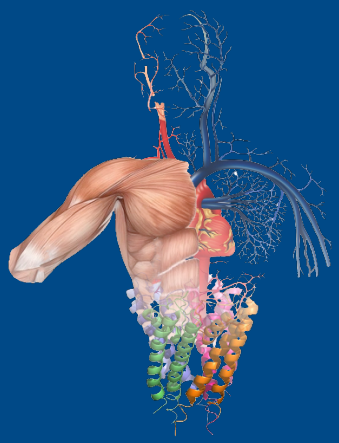

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