



Muscle stem cells get a new look: Dynamic cellular projection as sensors of the stem cell

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Abstract

Mechanisms whereby quiescent stem cells sense tissue injury and transition to an activated state are largely unknown. Quiescent skeletal muscle stem cells (MuSCs) have elaborate, heterogeneous projections that rapidly retract in response to muscle injury; the cytoskeletal events that drive retraction in turn promote downstream MuSC activation events. These projections may provide a surveillance function for muscle damage as direct sensors of their niche environment. These concepts may extend to other types of quiescent stem cells.

Bio

Rob Krauss received his PhD from University of North Carolina at Chapel Hill and followed by postdoctoral studies with Bernie Weinstein at Columbia University. He is currently a Professor in the Department of Cell, Developmental, and Regenerative Biology at the Icahn School of Medicine at Mount Sinai in New York City. Two current areas of interest for his lab are: 1) the role of cell-cell contact and adhesion in regulating stem cell quiescence and activation, with skeletal muscle stem cells as a model system; and 2) the complex etiology of common birth defects, with holoprosencephaly (an often devastating developmental disorder associated with deficiency in Hedgehog pathway signaling), as a model system.

EVENT DETAILS

DATE:

September 18th, 2023

TIME:

3.00 – 4.00p.m.

VENUE:

G19, Opposite Cinque Lire
15 Innovation Walk
Monash University
Clayton Campus

HOST:

Dr. Peter Currie



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