

# DSV Seminars

# 2016



UNIVERSITÀ  
DEGLI STUDI DI TRIESTE

DIPARTIMENTO DI  
SCIENZE DELLA VITA

## *PhD Program in Molecular Biomedicine*

Friday, 30 September - 10.00

Seminar Room, I floor, Q Building – Via Giorgeri 5

### **Professor Levon Khachigian**

University of New South Wales  
Sydney, Australia

*Host: Gabriele Grassi*

### **Growth regulatory transcriptional networks in vascular pathobiology**

Early growth response-1 (Egr-1) is rapidly and transiently induced by artery injury, such as that caused by balloon catheter intervention (BCI). Egr-1 promotes vascular cell proliferation and migration. Knowledge of the mechanisms underpinning the control of Egr-1 are incompletely understood. We observed that in a rat model of carotid injury, Egr-1 overexpression can be down modulated by microRNA miR-191 mimic. Moreover, a “cocktail” of vascular endothelial growth factor (VEGF)-A, VEGF-D and cyclic RGD can inhibit Egr-1 expression and accelerate re-endothelialization following BCI. These findings indicate that miR-191 together with the VEGF/RGD cocktail may be used to minimize artery injury following BCI.

