

Wednesday, June 17th, 2015
LSC 3 - Life Sciences Centre
2350 Health Sciences Mall
12-1pm



Dr. Vladimir Muzykantov

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“Targeting biotherapeutics to vascular endothelium”

Endothelium, a thin monolayer of highly specialized “epithelium-like” cells lining lumen of blood vessels is the key regulatory interface between blood and tissues. Endothelial cells control vital functions and their abnormalities are implicated in many disease conditions. Biotherapeutics replenishing endothelial protective functions may improve management of these conditions, and targeting to molecules expressed on the endothelial luminal surface optimizes delivery and effects of drugs. Endothelial anchoring epitopes must be accessible to carriers, targeting must be safe and provide desirable addressing of drugs. Endowing drugs with an affinity to specific endothelial epitopes enables an unprecedented level of precision of control of drug delivery: binding to selected endothelial cell phenotypes, cellular addressing and duration of activity, providing effects unattainable by non-targeted counterparts. Factors of local microenvironment operating at cellular, sub-cellular and sub-molecular scales modulate endothelial targeting and effects of the biotherapeutics, often in unpredictable and sometimes fortuitously beneficial fashion. Understanding of these factors guides reiterative molecular engineering of targeted therapeutics, honing their utility as investigational tools and boosting their chances for translational success and medical use.

**Please contact Dr. Ed Conway (ed.conway@ubc.ca)
to network with the guest speaker.**