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The bradykinin luminal endothelial receptor (B2) flow and agonist sensitivities result from lectinoligosaccharide interactions

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Unclear is how flow acts on the luminal endothelial surface layer (LESL) GPCR's generating paracrine signals. LESL oligosaccharides (O) and lectinic transmembrane proteins (L) participate in flow detection hypothesizing flow acts disturbing the O + L <-> O-L and have found that several GPCR's = L's are flow sensitive. To test our hypothesis we need a preparation where flow is uniform and its LESL be directly access; the isolated guinea pig carotid artery Krebs-Henseleit perfused at two flows (11 ml/min or 16 ml/min). The effects of flow in the LESL B2 (L) were determined via alteration of its concentration-vascular response curve to bradykinin (Bdk). Bdk was used as a way of "tagging" B2 as a flow sensor. Flow effects on B2 were studied in four independent groups (Grp); in Grp's 1 & 2 (controls) the LESL glyosidic composition was not alter, but altered in Grp 3 (binding of saccharide polymer  $\Sigma$ Sac-Pol to LESL) and 4 (removal of heparinic LESL). In Grp's 1 and 2 flow enhanced the effects of Bdk while in Grp's 3 and 4 did not. Affinity chromatography ( $\Sigma$ Sac-Pol resin) isolated L's have B2 plus other GPCR's. Thus, LESL GPCR's signaling depends on the level of flow and its oligosaccharide environment.

## Biography

Ricardo Espinosa-Tanguma did his graduate studies at the University of San Luis Potosí and the Rosalind Franklin University School of Medicine in Chicago (MD and PhD respectively) and a Post-doctoral training at the University of Western ON in Canada. He has published 20 research papers in reputed journals.

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