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Regulation of tumor metastasis by endogenous metabolite

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Many endogenous anti-cancer metabolites, which are released from extracellular matrix, were identified as angioinhibitors of tumor growth. These endogenous metabolites bind to the cell surface integrins and transduce the signaling. Thus, cell surface integrins serve as trans-membrane linkers between the extracellular matrix and cytoskeleton for outside-in signaling. Such endogenous metabolites generated by MMPs from the C-terminal non-collagenous domain of $\alpha 6$ of type IV collagen was identified as an inhibitor of angiogenesis, but their mediated angioinhibitory and anti-metastatic signaling mechanism(s) are not known yet. Our findings suggest that this metabolite interacting with different cell surface integrins and cross talking with other receptors and inhibiting tumor angiogenesis and tumor metastasis both *in-vitro* and *in-vivo*.

Biography

Sudhakar Akul Yakkanti is an Associate Director/Senior Scientist at Centre for Cancer & Metabolism, Cell Signaling Laboratory, Bioscience Division, Stanford Research Institute (SRI) International, Menlo Park, California. He is also the President of OMICS Organization since 2012. He has been the founder Director of Cell Signaling, Retinal and Tumor Angiogenesis Laboratory at Boys Town National Research Hospital, Omaha, NE, USA (2004-2012). He did his postdoctoral training at Harvard Medical School, Boston, MA, USA (2003). He has been the recipient of prestigious fellowships like President's fellowship (1992), GATE (1996) and CSIR (1997-2000) fellowships from Government of India. He received Mahindra & Mahindra Educational Award (2000) and Young Clinical Scientist Awards from Flight Attendant Medical Research Institute (FAMRI) in 2007 and 2010. He also received Bio-Bio Young Scientist Award from OMICS publishing group; Michael A. O'Connor Young Investigator Award; RO1 grant Award from NIH/NCI and Research Scholar Grant Award from American Cancer Society (ACS -2010). He served as AIBS/NIH-RO1 Grant reviewer for DT study section. He has published more than 40 research articles in top notch peer reviewed journals which include Science, Cancer Cell, JCI, Blood, PNAS, Gastroenterology, Cancer Research, JBC, IOVS, PLOS One. He is a reviewer of many reputed journal such as JCI, Blood, Circulation, Circulation Research, Cancer research, Clinical Cancer research etc. He is serving as Editor-in-Chief, Executive Editor, Editor and Editorial committee member of reputed journals. He has been instrumental in organizing several Symposia and Conferences and honored as Honorable guest, Keynote Speaker, Session Chair, Co-chair and organizing committee member in several national and international events. His research Interests include Extracellular matrix derived endogenous angioinhibitors role in Cancer metastasis, tumor microenvironment, choroidal neo-vascularization in age related macular degeneration (CNV of AMD), and Integrin Signaling, Mechanism of endothelial apoptosis, Bioequivalence & Bioavailability of endogenous circulating angioinhibitors.

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