

## Endogenous angioinhibitors from Type IV collagen and their mechanism(s) of action

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Many endogenous anti-cancer molecules which are released from extracellular matrix /Type IV collagen were identified as angioinhibitors of tumor growth. These endogenous angioinhibitory molecules bind to the cell surface integrins and transduce the signaling. Thus, cell surface integrins serve as transmembrane linkers between the extracellular matrix and cytoskeleton for outside-in signaling. Four of such endogenous molecules derived from the C-terminal non-collagenous domain of alpha1, 3 and 6 type IV collagen were identified as an inhibitor of angiogenesis, but their mediated angioinhibitory signaling are not known yet. Our findings suggests that these molecules interacting with different cell surface integrins and inhibiting angiogenesis by inhibiting different signaling that leading to inhibition of tumor angiogenesis and tumor growth both in-vitro and in-vivo.

### Biography

Sudhakar Akul Yakkanti is the founder Director of Cell Signaling, Retinal and Tumor Angiogenesis Laboratory at Boys Town National Research Hospital, Associate Professor at University of Nebraska Medical Center, Omaha, NE, USA. He did his postdoctoral training at Harvard Medical School, Boston, MA, USA (2003). He received President's fellowship (1992), GATE (1996) and CSIR (2007-2000) 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 ACS (2010). He is serving as AIBS/NIH-RO1 Grant reviewer for DT study section. He has published more than 40 research articles in several top journals including Science, Cancer Cell, JCI, Blood, PNAS, Gastroenterology, Cancer Research, JBC, IOVS, Mol Vision, J Clinical & Experimental ophthalmology, JCST etc. He is serving as an Editor-in-Chief, Executive Editor, Editor and Editorial board member of reputed journals and is serving as a reviewer for more than 26 scientific journals including JCI, Blood, Circulation, Circulation Research, Cancer research, Clinical Cancer research etc. He was honored by giving a position as Keynote Speaker, Chairman, Co-chairman and organizing committee member for several national and international conferences.

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