

Metadichol and CD33 Expression in Umbilical Cord Cells

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Abstract

CD33 also known as Siglec-3 is endogenously expressed in stem cells and is a marker for the myeloid lineage of cells. Increased expression of CD33 thus allows it to bind to Sialic Acids (SIAs). These acids are binding sites for Pathogens and toxins. By binding to these acids, CD33 can prevent invasion of hosts by these pathogens. Down Regulation of CD33, increase the release of the pro-inflammatory cytokine TNF- α by monocyte that increases reactive Oxygen species that are involved in diseases like diabetes mellitus, Alzheimer's, cardiovascular diseases asthma, and Various cancers. Significant molecular interactions which regulate differentiation and proliferation have been discussed. Primarily, the up-regulation of CD33 using Metadichol® was studied using Wharton's Jelly Mesenchymal Stem Cells (MSCs) isolated from human umbilical cord and were grown in p-35 dishes until confluent and treatment was carried out With different concentrations. One dish was untreated and considered as control. The treated and untreated cells were Analyzed using Flow Cytometry. The cells treated at 100 pg. of Metadichol® has shown the highest increase in CD33++ expression (48.77%) compared to untreated control (0.11%).

Received: July 05, 2022; **Accepted:** July 13, 2022; **Published:** July 26, 2022

Biography

Palayakotai R Raghavan is the CEO and founder of Nanorx in new York, USA. He has Ph.D.in Organic chemistry from Oregon State University and an Ms. in Chemistry from the Indian Instituted of Technology Mumbai, India. He has worked on drug discovery for over 25

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