

BIOMECHANICS, BIOENGINEERING & AUDIOLOGY

November 07-08, 2016 Las Vegas, USA



Zodwa Dlamini

Mangosuthu University of Technology, South Africa

***RBBP6* is a multifunctional gene in human cancers: Role in mitosis and carcinogenesis**

RBBP6 is an alternately spliced gene that gives rise to three unique splice variants with diverse biological functions. Its gene products have been demonstrated to play a role in cell cycle regulation, apoptosis and protein processing. *RBBP6* homologues have been shown to be negative regulators of the guardian of cells, p53, linking it to tumourigenesis. We have shown that it is involved in lung carcinogenesis. We have also shown that *RBBP6* isoform 3 is a regulator of G2/M cell cycle arrest. We aimed to explore the function of *RBBP6* isoform 3 and its expression pattern in carcinogenesis. Cell cycle arresting agents, such as arsenic trioxide and cisplatin were used to arrest colon and cervical cells to study the role of the smallest *RBBP6* isoform. The expression and cell distribution of *RBBP6* were analysed using real-time PCR and western blotting and cell analysis flow cytometry, respectively. We used immunohistochemistry to establish the expression patterns of *RBBP6* in colon and cervical cancer tissues. *RBBP6* isoform 3 causes cell cycle arrest at G2/M and its diminished expression results in cell cycle progression. We have also shown that *RBBP6* isoform 3 plays a role in cell cycle regulation and carcinogenesis in cervical and colon tissues. These studies have shown that *RBBP6* isoform 3 has great potential as a therapeutic target for drug development.

Biography

Zodwa Dlamini is Deputy Vice Chancellor; Research, Innovation & Engagements at Mangosuthu University of Technology and a Professor of Molecular and Functional Genomics. She was previously Deputy Executive Dean at UNISA. She is also the current Vice-Chairperson of the South African Medical Research Council Board. She completed her BSc and BSc Hons. in Biochemistry at University of Western Cape, MSc at University of Natal and PhD at University of Natal. Her research interests include the "Omics technologies including the use of bioinformatics to provide unprecedented possibilities to identify the underlying molecular basis of cancer".

dlaminiz@mut.ac.za