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Exclusive self-destruction of triple negative breast cancer cells

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A newly - discovered mechanism involves the modification of specific proteins that affect the construction and stability of the spindle structure during mitosis. Their exclusive modification in human cancer cells prevented chromosomes segregation into daughter cells. Modifications of kinesins and NuMA, preventing their normal activity in the spindle of human cancer cells disrupted chromosomes alignment in the spindle mid-zone. This induces a rapid cell self-destruction while mitosis is prevented. Thus, the faster the cancer cells proliferate, the more quickly they die. Research was conducted using both cancer cell cultures and mice transplanted with human cancer cells. Mice transplanted with triple negative breast cancer cells revealed the arrest of tumor growth by agents causing their exclusive cell-death during mitosis, without affecting normal proliferating cells.

Biography

Cohen-Armon working in an Academic position at the Tel-Aviv University Life Science, Neurobiochemistry and Faculty of Medicine, Dept. of Physiology and Pharmacology and the Sagol School of Neuroscience . In 2001, she was appointed as visiting researcher in Columbia University, New York. She conferred with Human Frontiers award. She has published more than 30 papers in well reputed and high impact factor journals since 2000. Her research was supported by Novartis and the active molecule is prepared for use against triple negative breast cancers. She is an academic editor for several journals. Her interest lies in Signal transduction and Epigenetic mechanisms, protein modifications, drug discovery.

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