



UNIVERSITÀ
DEGLI STUDI
DI PADOVA



VENICE ASIAGO 2016

DATE: 27th August 2016

TIME: 10:30 - 12:00

LOCATION: Osservatorio Astronomico di Asiago, via dell'Osservatorio, 8; Asiago, Vicenza

Molecular control of cancer stemness and metastasis

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Abstract

YAP and TAZ are highly related transcriptional regulators pervasively activated in human malignancies. Recent work indicates that, remarkably, YAP/TAZ are essential for cancer initiation or growth of most solid tumours. Their activation induces cancer stem cells attributes, proliferation, chemo resistance and metastasis.

YAP/TAZ are sensors of the structural and mechanical features of the cell microenvironment. A number of cancer-associated extrinsic and intrinsic cues conspire to overrule the YAP-inhibiting microenvironment of normal tissues, including changes in mechanotransduction, inflammation, oncogenic signalling and inhibition of the Hippo pathway.

Addiction to YAP/TAZ thus potentially represents a central cancer vulnerability that may be exploited therapeutically.

FURTHER READINGS

- 1) Cordenonsi, M. et al., (2011). The Hippo transducer TAZ confers cancer stem cell-related traits on breast cancer cells. *Cell*, 147(4):759-72. doi: 10.1016/j.cell.2011.09.048.
- 2) Piccolo, S., (2014). Tugs and prods on a cell, not just its genes, determine its fate in the human body. *Scientific American*, October 2014, pp. 75-81.