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Elucidating the role of PIN1 interacting proteins, SUPT5H in the tumorigenicity of breast cancer**Yuba Raj Pokharel***South Asian University, India*

Abnormal activation of Kinases is a well-known process that occurs in a wider range of cancers. The phosphorylation of Serine/Threonine (Ser/Thr) preceding by Proline (Pro) is a frequent modification in most of the signalling pathways. The pSer/Thr-Pro motif in a protein adopts two completely distinct cis or trans conformations, a process catalysed specifically by prolyl isomerase PIN1 and determines the fate of proline-directed phosphoproteins in multiple pathways. PIN1 is an oncoprotein that is commonly overexpressed and/or overactivated in most human cancers and is associated with the distortions of the wider signalling network to fuel cancer progression. Abnormal PIN1 activation disrupts the balance in cancer to activate at least 40 oncogenes and inactivate at least 20 tumor suppressors. A study from our laboratory filters the top ten PIN1 interacting proteins with similar functions to PIN1. Out of the top ten PIN1 interacting, this study aimed to elucidate the role of SUPT5H in the tumorigenicity of breast cancer. We found that PIN1 specifically interacts with SUPT5H through the WW domain, and this interaction maintains the abundance and provides stability to SUPT5H. We further observed the elevated expression of SUPT5H in breast cancer tissues compared to adjacent normal tissues. Besides, we also demonstrated the role and molecular mechanism of SUPT5H in the tumorigenicity of breast cancer and how SUPT5H contributes to breast cancer cell proliferation, migration, invasion, cell cycle, apoptosis, and stemness, and revealed the oncogenic function of SUPT5H.

Biography

Yuba Raj Pokharel has completed his Ph.D. 2010 from Chosun University, Gwangju South Korea, and postdoctoral studies from Chosun University, South Korea, and Turku University and Abo Akademi, Turku Finland. He is an associate professor, at South Asian University, New Delhi India. He has published more than 55 papers in reputed journals and has been serving as an editorial board member of different journals.