

## Research Interests

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### ***Elisabeth White Ph.D.***

The White Laboratory has revealed that a conserved activity of the HPV E7 oncoprotein is to target the tumor suppressor PTPN14 for degradation. PTPN14 degradation activates the YAP1 oncoprotein and reduces transcription of genes associated with keratinocyte differentiation. Their data suggests that the ability to impair differentiation is a carcinogenic activity of E7. However, there is a gap in knowledge related to how PTPN14 degradation activates YAP1. One upstream activator of YAP1 is the striatin interacting phosphatase and kinase (STRIPAK) complex. Their lab and others have found that PTPN14 interacts with KIBRA, a protein adaptor of STRIPAK, which suggests that the transforming activity of HPV E7 requires an intact STRIPAK complex. They are testing the hypothesis that HPV E7-mediated PTPN14 degradation facilitates STRIPAK complex assembly to promote downstream YAP1 activation and inhibition of epithelial differentiation.

*Interactions with other trainers:* Dr. White has quickly become a critical member of the program. She interacts with Drs. Basu, You and Weitzman on HPV associated cancers of the head and neck. She is active in all program activities and her lab trainees are major contributors to our program.