

SPECIAL SEMINAR

“THE ARYL HYDROCARBON RECEPTOR (AHR) IN XENOPUS FROGS: FROM TOXICOLOGICAL SCREENING TO DEVELOPMENTAL BIOLOGY”

Friday, October 13th, 2023

9:00 a.m.

Whitehead Biomedical
Research Building
Room 600



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The aryl hydrocarbon receptor (AHR) is a ligand-activated transcription factor that mediates the toxic effects of numerous pollutants, including dioxins and PCBs from industrial sources and polycyclic aromatic hydrocarbons in weathered crude oil and cigarette smoke. AHR also plays non-toxicological roles in liver development, cardiovascular development, and immune cell differentiation. *Xenopus* frogs (*X. laevis* and *X. tropicalis*) are widely used in standardized screens for acute developmental toxicity. Does the AHR exhibit the same functions in developing frogs as it does in humans? An understanding of the molecular and developmental functions of frog AHRs is essential for establishing the validity of frog screening tools for human risk assessment. This seminar will describe work in *ahr*-knockout models, including cultured cells and a genome-edited frog line, in a lab group staffed entirely by undergraduates.



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