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**A Novel Role for Selenoproteins in Spheroid Formation.**

The methyltransferase domain of Alkylation Base Repair Homologue 8 (Alkbh8) mediates the last step in the formation of the wobble uridine modification 5-methoxycarbonylmethyl-uridine in tRNA. This modification is essential for efficient selenoprotein synthesis including glutathione peroxidase and thioredoxin reductases that serve as antioxidant enzymes that regulate cellular oxidative stress responses in mammalian systems. I will discuss recent findings in the lab related to a function for Alkbh8 in regulating the formation of 3D cell aggregates known as spheroids that are commonly used for modeling tissue and tumor microenvironments.