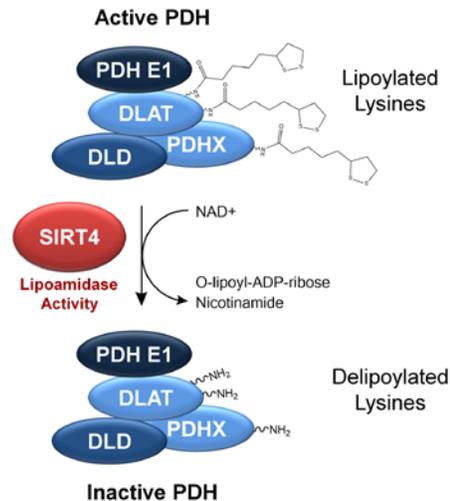




MicroRNA, pseudo-miRNA and a tale of new birth



Cellular and molecular mechanisms that suppress small RNAs in oocytes while maintaining them in zygotes remain unknown. Signal-mediated regulation of small RNA biogenesis pathway is emerging as a theme for regulating small RNA production. We recently reported that ERK-mediated phosphorylation of Dicer, a central player in small RNA biogenesis, induced Dicer to move from the cytoplasm to the nucleus, and critical for the process of oocyte to embryo transition in worms. Strikingly, signal-induced Dicer translocation from the cytoplasm to nucleus is evolutionarily conserved from worm, flies, mice to humans thereby suggesting the ERK-mediated control of Dicer activity may be a generalized mechanism for regulating small RNA biogenesis.

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Host: Dr. Julie Claycomb

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Time: 4PM

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