

## **USING NUMBERS TO DETERMINE NEW REGULATORS OF LIPID HOMEOSTASIS**

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Molecular scaffolds belonging to the 14-3-3 protein family have pleiotropic functions, as they facilitate protein-protein interactions, aid in forming transcriptional complexes, and control protein localization. Their ability to recognize and bind to numerous phosphorylated proteins results in large and diverse interactomes, which also permits them to influence physiological processes.

We recently uncovered a critical role of 14-3-3z in adipogenesis, or fat cell development, and given its diverse interactome, we hypothesized that it could influence other aspects of adipocyte function, such as lipolysis and thermogenesis. Through the use of unbiased approaches, such as proteomics, we elucidated the 14-3-3z interactome during adipogenesis and identified novel processes, that underlie adipocyte development. Moreover, genetic approaches to modify 14-3-3z expression also revealed a requirement of this scaffold protein in lipolysis and adipocyte maturity. By increasing our knowledge of how 14-3-3z influences adipocyte function, it may one day lead to novel approaches to treat metabolic diseases like obesity.