Skeletal muscle insulin signaling is a major regulator of glucose homeostasis. Classical studies suggest that a reduction in skeletal muscle AKT activity leads to systemic glucose intolerance and insulin resistance. Nevertheless, recent studies in mice and humans highlight the existence of a previously uncharacterized pathway in addition to AKT for the control of insulin-mediated skeletal muscle glucose uptake. Dr. Jaiswal’s study identified the unique new role of AKT in regulating insulin-mediated AMPK pathway to control glucose uptake.