**Decoding multifacets of myokine**

Myokines are a class of cytokines produced and released by skeletal muscle fibers in response to muscular contraction. These bioactive molecules play a significant role in mediating communication between skeletal muscle and other organs, exerting various physiological effects throughout the body. Research on myokines has expanded rapidly in recent years, unveiling their involvement in diverse pathophysiological processes such as metabolism, inflammation and neurological phenomenon. Moreover, myokines have emerged as potential therapeutic targets for disorders including obesity, insulin resistance, and other areas of medical unmet need. Understanding the intricate signaling pathways and functions of myokines holds promise for developing novel strategies to promote overall health and combat various chronic diseases.

In my research team, we aimed to identify and characterize a novel myokine secreted by skeletal muscle tissue. To accomplish this, we developed a novel ex vivo muscle contraction system. Through proteomic profiling, we discovered several previously uncharacterized proteins secreted by skeletal muscles. Further validation confirmed that this protein is actively secreted by muscle cells and exhibits characteristics indicative of a myokine. Functional assays were conducted to elucidate its mechanism. In this talk, I will discuss how our research at the MRC center expands the content and scope of this theme.