Regulation and homeostasis of post-translational modifications on histones and other chromatin proteins are involved in all stages of cell growth, development and faith both in physiological and pathological conditions. Among the many histone-modifying enzymes, lysine demethylases are emerging as crucial players in cell regulation and hot target candidates for epidrug development, especially in the context of cancer therapies. The talk will focus on the recent research on histone lysine demethylase 1: how does it interact with other chromatin factors? How does it recognize nucleosomal particles? How can we efficiently target this enzyme for therapy?