The manuscript entitled “**Senescence of mesenchymal stem cells: implications in extracellular vesicles, miRNAs and their functional and therapeutic potentials”** submitted by He and colleagues provided a comprehensive analysis of miRNAs, specifically a relatively detailed and in-depth insight into how senescence influences MSCs. Advances in understanding the role of miRNAs in aging may provide new ways to alleviate MSC senescence. However, the contents of this manuscript are not novel, with the vast majority of point well established and known in the relevant fields.

As important contributors to epigenetic regulation, miRNAs are frequently reported to affect the translation and stability of targeted mRNAs and regulate post-transcriptional gene expression. Mounting evidence has suggested the participation of individual miRNAs in regulation of target mRNAs and numerous cellular processes by modifying different signaling networks, including senescence-related signaling molecules and pathways.

As another part of this manuscript, the authors attempted to address that senescence-related EVs can transfer regulatory factors particularly miRNAs and proteins to promote the senescence process in autocrine, endocrine, and paracrine ways. Senescent cells secrete high levels of EVs and regulate their surrounding microenvironment, playing a critical role in promoting SASP, limiting the regenerative potential of surrounding cells and enhancing local inflammation levels. However, the heterogeneity of MSC-EVs is so far one of the most challenging issue affecting their therapeutic applications. Promoting or inhibiting expression levels of specific miRNAs in EVs can affect therapeutic efficiency for specific diseases. Indeed, both MSC senescence associated EVs and miRNAs have been comprehensively documented in recently published papers, and the manuscript lacks novelty and significant, with the timeliness much comprised.