Summary

Stem cells represent interesting approach in current therapies. However, their potential is not fully utilized. Their ability to differentiate into many types of tissues leave them as promising candidates for regenerative medicine. The field for therapy by mesenchymal stem cells is also the organ damage caused by bisphenols, the endocrine disruptors affecting mammalian reproduction and also the liver tissue.

In this work, the effect of bisphenol S, the common substituent of bisphenol A, on HepG2 cell line was monitored. HepG2 viability, proliferation and ATP production was analyzed under influence of bisphenol S with concentrations 1-1000 μM. In the following step, HepG2 stressed by bisphenol S were cocultured with mesenchymal stem cells (pMSCs) and the possible therapeutical effect or pMSCs on HepG2 functions was observed. Bisphenol S at concentrations 1000 and 500 μM decreased viability, proliferation and ATP production of HepG2. The addition of pMSCs into HepG2 culture partially reverses this negative role of bisphenol S in HepG2 functions.