Embryonal carcinoma cells, the archetype of cancer stem cells

Matin Maryam M.\textsuperscript{1,2,*}

\textsuperscript{1}Department of Biology, Faculty of Science, Ferdowsi University of Mashhad, Mashhad, Iran
\textsuperscript{2}Cell and Molecular Research Group, Institute of Biotechnology, Ferdowsi University of Mashhad, Mashhad, Iran

*Corresponding author's E-mail: matin@um.ac.ir

BACKGROUND: Cancer stem cells are a population of self-renewing stem cells, which are present in most, if not all, tumours. Teratocarcinomas are a type of germ cell tumours that provide a paradigm of stem cell concept of cancer. Embryonal carcinoma (EC) cells, which are the stem cells of teratocarcinomas, have been considered as the archetype of cancer stem cells. Transplantation of a single EC cell into a new host is sufficient to produce a new tumour. Here, the properties of EC cells and the ability to differentiate them will be discussed. This property might be a useful technique in differentiation therapy of tumours.

Keywords: embryonal carcinoma cells, cancer stem cells, differentiation