Stem Cell Therapy >> Intelligent Means for Stem Cell Therapy

The first Hungarian anti-cancer stem cell regenerative therapy method: using cordyceps species extracts and apigenin.

In Hungary, focus of interest has been placed on methods by which the volume of the stem cells circulating within the body can be increased with the aim of regenerating the damaged tissues (i.e. brain, cardiovascular system) of the accrued stem cells. However, the means by which the stem cells are increased makes a difference. Some methods may even have a carcinogenic effect, while others may have very powerful anti-cancer effects.

Regular physical activity can increase the amount of stem cells produced within bone marrow by up to 3-400%; these stem cells (EPC, Endothelial Progenitor Cells) help in regenerating the circulatory system. Physical activity not only increases the amount of stem cells, but also reduces the risk of developing cancer, since it begins significant anti-cancer processes within the body (i.e. increases sensitivity to insulin).

Certain medicinal mushroom extracts (i.e. the combination of Cordyceps species extracts, and Cordyceps 3 species) also have an anti-cancer stem cell increasing effect. Currently, it is these that provide the safest and most effective means of increasing stem cells for those with a limited capability to exercise, such as the elderly.

But why is it that stem cells may also be carcinogenic, why is it necessary to enhance anti-cancer stem cells?

Cancer cells behave similar to “open wounds:” amongst other things, they also attract stem cells produced in bone marrow. While stem cells promote healing of open wounds, cancer cells instruct the stem cells surrounding them to release substances (i.e. VEGF, CCL5) which promote the growth and metastases of cancer cells.

These released substances (VEGF) are also responsible for making the immune system unable to recognize and attack the invading cancer cells, since they prevent certain immune cells produced in the bone marrow (dendritic cells) from entering. It has also been shown that a certain type of stem cell (mast cell) promote the formatting of intestinal polyps, which may
lead to the formation of colon cancer. Another type of stem cells (EPCs) increases the severity of melanoma, breast, lung, and liver cancer and chances of metastasis.

The anti-cancer stem cell enhancing medicinal mushroom extracts, i.e. the Cordyceps species extracts, however, not only enhance the volume and functioning of stem cells but they also force a type of stem cell (dendritic cells) to enter and alert the immune system against the cancer cells, thus helping in the fight against cancer. Similar to physical exercise, the anti-cancer effect of certain medicinal mushroom extracts is made obvious through it’s ability to increase sensitivity to insulin.

In addition to promoting the immune system in the destruction of cancer cells, special medicinal mushroom extracts are especially effective in increasing the production of stem cells within bone marrow, and are also capable of significantly increasing reproduction of umbilical cord stem cells.

One of the key elements of the anti-cancer effect of the special stem cell increasing medicinal mushroom extracts are that they facilitate the production of the protecting stem cells which assist healthy immune system functioning, in addition to regenerating the damaged tissues. The regenerating effects on the nervous system and other tissues of the Cordyceps species extracts may be significantly increased by one of this year’s most significant anti-cancer developments, the flavonoid-enriched APIGENIN extract.

Due to the anti-inflammatory effect of apigenin (similar to that of ibuprofen), it may help to prevent the formation of Alzheimer’s and Parkinson’s disease and may slow the brain’s aging process.

Apigenin is capable of reducing the amount and metastasis effect of carcinogenic substances emitted by stem cells (VEGF, CCL5, IGF-I), thus helping the immune system to recognize and attack the cancer cells. In and of itself, what may be determined as having an anti-cancer or carcinogenic effect is determined by many factors: i.e. while having a significant carcinogenic effect, smoking dramatically reduces the amount of stem cells.

Nature has provided us with effective and reliable „stem cell enhancers” which have been used by folk medicine for thousands of years. Therefore, it is not necessary to use preparations with uncertain effects, as their dangers are not yet understood and their stem cell increasing effect may fall significantly far from the above mentioned methods.

These proposals only complement and do not replace the treatments prescribed by doctors.
Bibliography:


Mashayekhi, F.: Neural cell death is induced by neutralizing antibody to nerve growth factor: An in vivo study; In: Brain Dev., 2007.


Neurol Disord., 2003, 2(5):315-34.


Tepper, OM., et al.: Human endothelial progenitor cells from type II diabetics exhibit impaired proliferation, adhesion, and incorporation into vascular structures; In: Circulation, 2002, 106: 2781-86.


Caballero, S., et al.: Ischemic vascular damage can be repaired by healthy, but not diabetic, endothelial progenitor cells; In: Diabetes, 2007, 56: 960-967.


Cubal, Ch., et al.: Bone marrow stem cells have a potent anti-ischemic effect against myocardial cell death in humans; In: J Thorac Cardiovasc Surg, 2006, 132: 1112-8.

Uemura, R., et al.: Bone marrow stem cells prevent left ventricular remodeling of ischemic heart through paracrine signaling; In: Circulation Research, 2006; 98:1414.


Fadini, GP., et al.: Circulating endothelial progenitor cells are reduced in peripheral vascular complications of type 2 diabetes mellitus; In: J Am Coll Cardiol., 2005, 45(9):1449-57.


