

The patient's own bone marrow-derived stromal cells

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Postulations Thesis

“The patient’s own bone marrow-derived stromal cells: disease modifiers in (neuro)degenerative disorders” of Johannes de Munter

-I-

A stem cell is able to move, adapt, orchestrate responses in a micro-environment, which makes dose finding/dose response curves obsolete. The problem stem cells give in research is at the same time the opportunity of stem cells in treatment. (This thesis)

-II-

What a coordinator can do in the World as demonstrated in the Guinness World Records with the Jerusalema dance can stem cells do in the body with macrophages, astrocytes and/or oligodendrocytes. Coordination can reduce numbers, but up today it is not possible to measure coordination by/of stem cells (Fischbach 2013).

-III-

When Mesenchymal stem cells are used in research, the investigator has to demonstrate that these cells are able to adhere to plastic, express a certain range of CD-markers, can multiply and finally are able to differentiate into different lineages. All research in which these criteria are met is research not performed with naïve mesenchymal stem cells. We need criteria to describe naïve cells but at the moment they are not defined. (this thesis)

-IV-

Industry is more science driven than universities as they have to be 100% sure that the results of experiments can be verified in clinical trial and practice.

-V-

During the extensive reviewing in-vitro and in-vivo literature in which stem cells were involved, it became clear that processing outside the body, phase of the disease, route of administration and exact timing were more related to a possible outcome than numbers of cells. (this thesis)

-VI-

Not the absolute number of administrated stem cells but the condition of the individual stem cells at the moment of administration counts and determine the effects of stem cells in patients.

-VII-

A phase I clinical trial to test the safety of autologous naïve stem cells is obsolete as every healthy individual is already the proof of this safety.

-VIII-

The real power of innovation lies in the experiment which were not successful and failed. Studying their methods and materials and reading carefully their conclusions provided essential information for defining a successful strategy. It is disappointing that there are not more opportunities to read published research which failed.

-IX-

What steroids are in today's medicine, naïve stem cells will become in the nearby future.

-X-

As stem cells can make decisions of their own, non-homologous use without the presence of illness can provide a complete different picture.