

**Call for fellowship programs in stem cell-based regenerative and cellular medicine: new stem cell training is essential for physicians.**

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**Public Summary:**

Stem cell-based regenerative and cellular medicine is an exciting, emerging area of medical practice. While bone marrow transplantation, a stem cell-based therapy, has been a part of medicine for decades, in recent years newer and more diverse forms of stem cell-based therapies are being used to treat a rapidly growing population of patients in the USA as well as worldwide. Nonetheless, to this author's knowledge, there is currently not a single academic medical fellowship training program in the USA that specifically prepares physicians for treating patients with stem cell-based therapies other than bone marrow or hematopoietic stem cell transplantation. An increasing number of physicians untrained in stem cell-based regenerative and cellular medicine are nonetheless transplanting stem cells into hundreds if not thousands of patients for a striking diversity of conditions. Furthermore, as stem cell technology advances, a growing number of physicians with academic affiliations may look to legitimately practice regenerative and cellular medicine. What little training that physicians can currently obtain must be found on an ad hoc basis. This article should act as a call for the development of formal academic medical fellowship programs to train physicians in the practice of cellular and regenerative medicine. The USA is used here as an example of a medical sphere in which it can be argued that such training would be helpful, however such programs would be quite helpful globally.

**Scientific Abstract:**

Stem cell-based regenerative and cellular medicine is an exciting, emerging area of medical practice. While bone marrow transplantation, a stem cell-based therapy, has been a part of medicine for decades, in recent years newer and more diverse forms of stem cell-based therapies are being used to treat a rapidly growing population of patients in the USA as well as worldwide. Nonetheless, to this author's knowledge, there is currently not a single academic medical fellowship training program in the USA that specifically prepares physicians for treating patients with stem cell-based therapies other than bone marrow or hematopoietic stem cell transplantation. An increasing number of physicians untrained in stem cell-based regenerative and cellular medicine are nonetheless transplanting stem cells into hundreds if not thousands of patients for a striking diversity of conditions. Furthermore, as stem cell technology advances, a growing number of physicians with academic affiliations may look to legitimately practice regenerative and cellular medicine. What little training that physicians can currently obtain must be found on an ad hoc basis. This article should act as a call for the development of formal academic medical fellowship programs to train physicians in the practice of cellular and regenerative medicine. The USA is used here as an example of a medical sphere in which it can be argued that such training would be helpful, however such programs would be quite helpful globally.

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