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Making stem cell therapies a reality

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VeriStem trying hard to make stem cell therapies a reality



Real practical challenges persist in the development of stem cell therapies and chief among these are concerns for safety. Innovative technologies and processes are required to overcome these safety concerns and to fulfil the promise of stem cell therapy. VeriStem Technologies was established to provide support to such enabling technologies and applications. VeriStem seeks to enable developers of stem cell therapeutics through provision of highly-effective bioprocessing tools which will allow the development and manufacture of safe stem cell therapies. By harnessing proprietary biomaterials and methods amenable to compliant manufacturing, VeriStem plans to differentiate itself as one of the pioneering providers helping to advance stem cell therapies to clinical and commercial success.

VeriStem was founded in 2009 in Singapore by Mr W Alan Moore, president, and Mr Keith Wang, chief operating officer, with the aim of making use of stem cells widespread and safe. Some of the company's core technologies were developed at Singapore's Bioprocessing Technology Institute (BTI), a national research institute funded and managed by Singapore's Agency for Science, Technology and Research (A*STAR). VeriStem was spun-out to commercialize the new technologies discovered at the BTI by Dr Miranda Yap, Dr Andre Choo and Dr Steve Oh, who are credited with the revolutionary discovery of the processes capable of destroying undifferentiated stem cells.

VeriStem will benefit the life sciences industry by removing barriers to clinical and commercial development for some of the most promising forms of future stem cell therapies. For example, human embryonic and induced pluripotent stem cell-based therapies must pass regulatory agency scrutiny surrounding the tumorigenic potential of residual undifferentiated cells. VeriStem's leading Cellradication technology selectively targets and kills undifferentiated stem cells capable of forming teratomas, thus addressing this risk for promising products. Additional technologies may also broaden the potential robust processes available within a regulated manufacturing environment to selectively yield the desired cell populations.

VeriStem's leading Cellradication technology, built upon a decade of research in stem cells and core technology, developed at Singapore's BTI, has been successfully licensed for research use worldwide. VeriStem has generated extensive data detailing the precise mechanism of action, specificity of the technologies, destruction of only the undifferentiated (tumorigenic) cell populations and the conservation of these properties across various accepted bioprocessing formats.

"The company was invited to give a scientific seminar on the potential of its products in addressing tumor formation by undifferentiated stem cells by the United States Food and Drug Administration's (FDA) Center for Biologics Evaluation and Research (CBER). FDA's CBER has responsibility for approving the regulated stem cell therapies for clinical use and commercial licensure. With an understanding of the regulatory path forward, the company has devised commercialization and product development plans for its technologies targeting therapeutic sector," says Mr Alan Moore, president of the company.

The company intends to continue development of its leading technology with an eye on rapid introduction in the therapeutic arena. The company has also initiated discussions with potential development partners which may provide an accelerated commercial introduction, application, and marketing of its products. Under consideration are the potential pairing of one or more of VeriStem's products with existing technologies, products or platforms serving the bioprocessing field. The company is also planning to collaborate with researchers or partner with the industry to explore potential application of its proprietary biomaterials and technologies for destruction of cancer stem cells.