

## **Stem Cell Research Funded By StemLife Berhad Yields Potential for Stem Cells to form New Bone**

*StemLife Berhad and the National University of Singapore Nanoscience and Nanotechnology Initiative (NUSNNI) announces the successful publication of three research papers on stem cell expansion with nanofiber technology in international journals.*

Petaling Jaya, Selangor ([PRWeb](#)) November 8, 2007 -- Research on stem cell interaction with new biomaterial has yielded three (3) successful publications\* in international scientific journals by

National University of Singapore and [Nanoscience and Nanotechnology Initiative](#) (NUSNNI) and [StemLife Berhad](#). Support and funding from StemLife Berhad (StemLife), enabled the study of the interaction of novel nanofibers with bone-forming stem cells.

Based on the first presentation by the Chief Medical Officer of StemLife, Professor Dr. Aw Tar Choon shows how stem cell technology can be applied as a treatment for muscles and bones. These findings, plus other data obtained from the stem cell expansion project, prove that there is a big potential for the overall success of these research projects. "We hope that these advances in the understanding of biomaterial interaction with stem cells will lead to a revolution in orthopedic science in the future," he said.

The second presentation today entitled "Nanotechnology in Healthcare", by Professor Seeram Ramakrishna, Dean of Engineering, National University of Singapore (NUS). Professor Seeram Ramakrishna, explained the use of stem cells and two naturally occurring bone substances, collagen and hydroxyapatite that were successfully used in producing a new substance - that can mimic the action and function of natural bone substances - providing support and strength to the damaged bone when used to replace the inner core.

Prof. Seeram said that this new development "holds great potential for the construction of a new biomaterial that provides for the mineralization of osteoblasts (bone-forming stem cells) and hence the ability to regenerate new bone tissue."

According to the Journal of American Medical Association\*\*, the United Nations has declared the years 2000-2010 the "Bone and Joint Decade" to draw attention to the increasing impact orthopedic conditions will have on world health as life expectancy increases and to the potential for eliminating these problems through current and future research advances. The management and medical panel from StemLife believe that people should be educated and informed on the numerous possibilities that stem cell technology may provide in the future.

Many scientists and clinicians have been seeking ways to treat the world's major illnesses. Stem cell research harnessing the body's own naturally occurring stem cells has begun to show some promising results and possibilities that a treatment for some of these disorders may be within reach.

Homegrown and recently listed StemLife is one of the leading companies in the South East Asian region dealing with stem cell cryogenics. Its commitment to expanding the knowledge of stem cells and innovative technology to develop potential future treatments with credible academic institutions places it on the frontier of modern science and medicine.

The commitment to fund this particular research project, which is focused on stem cell expansion and its applications, was made before its listing exercise in 2005. StemLife pledged RM 300,000 over two (2) years to

NUS in support for this project. To date, they have numerous research projects in progress, with Professor Seeram Ramakrishna and his research team at the helm, aimed at finding innovative medical solutions using nanotechnology and stem cells.

\*Interaction of Cells and Nanofiber Scaffolds in Tissue Engineering. J Biomed Mater Res Part B: Appl Biomater 00B; 000-000, 2007

Electrospun-modified nanofibrous scaffolds for the mineralization of osteoblast cells. J Biomed Mater Res 00A; 000-000, 2007

Mineralization of osteoblasts with electrospun collagen/hydroxyapatite nanofibers. J Mater Sci: Mater Med; 19 Sep 2007

\*\*JAMA. 2001;285:619-623

#### About StemLife Berhad

StemLife is Malaysia's first stem cell service company started six years ago with the aim and mission to provide affordable and reliable stem cell banking services for the treatment of patients with hematological disorders. StemLife recognized the need to establish and build a large base of stem cells while creating awareness and the market for potential stem cell therapy users. StemLife also made a commitment to develop stem cell therapies in Malaysia, which would strategically place it as the front runner in Malaysia's stem cell and regenerative medicine market and the obvious choice to consult on stem cell applications. StemLife has supported more than 16 transplants for the treatment of leukemia, thalassaemia major and vascular conditions such as heart disease and diabetic foot ulcers.

For further information about StemLife Berhad's services, kindly visit [www.StemLife.com](http://www.StemLife.com) or call 603 2163 8800.

#### About NUS Nanoscience and Nanotechnology Initiative, Division of Bioengineering

The NUS Nanoscience and Nanotechnology Initiative (NUSNNI) was formed in 2002 with a focus on the science and engineering of nanofibers generated by electrospinning technology. The group comprises a strong and well established multi-disciplinary team with members from the fields of engineering, science and medicine. The group has published research papers in many renown scientific journals and developed an international reputation, ranking in the top 5% of more than 200 research groups working on electrospinning technology.

For further information about NUSNNI, kindly visit <http://www.bioeng.nus.edu.sg/nanobio/research/Healthcare/healthcare.html>

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