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PROFESSOR JULIE CAMPBELL – SUNDAY NOVEMBER 11, 2007

Like to grow your own spare parts?

Professor Julie Campbell – Australian Institute for Bioengineering and Nanotechnology, University of Queensland.

More than two millennia ago Hippocrates said, "heal thyself". Science is only now beginning to realize the full ramifications of this statement.

Professor Julie Campbell is a vascular biologist working on the generation of new veins. She is Director of the Centre for Research in Vascular Biology at the University of Queensland and Director of the Wesley Research Institute.

Exploring, over the last 30 years, the cell biology of vascular smooth muscle of artery walls in both normal and diseased state, Professor Campbell said, "The human body has a mixed capacity for self repair. In some organs, such as the skin and liver, regeneration of small wounds occurs spontaneously. However, in other organs such as the adult heart, regeneration is minimal".

Professor Campbell and her team have shown that smooth muscle cells in organs such as blood vessels are capable of regeneration and similarly, cells of bone marrow origin form capsules of smooth muscle-like tissue around tubular constructions implanted in the peritoneal cavity. These 'home grown' tissue tubes can be transplanted as vascular grafts in rats, rabbits and dogs with excellent results.

The same technique has been used to grow grafts for other smooth muscle organs such as the vas deferens, bladder and uterus with similar success.

Professor Campbell has found that the peritoneal cavity is a bioreactor in which many other organs can be grown or regenerated.

Biographical information available from www.asmr.org.au

Interview opportunities – Abstract Available

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