

**VICTORIAN HEALTH AND MEDICAL RESEARCH ON DISPLAY**  
**LEADERS FOR TODAY AND TOMORROW!**

**STEM CELLS FROM BABIES' CORD BLOOD – MULTIPLYING NUMBERS**

Babies' cord blood is a good source of hematopoietic stem cells, cells that can be used to treat a growing number of human conditions. Unfortunately, there are relatively low numbers of these special stem cells in cord blood, and as such researchers have been trying to increase those that do exist. *MELINDA TURKSY (Deakin University & Barwon Medical Research)* has developed special conditions in the laboratory to allow the cells to multiply to much larger numbers, which is extremely promising for future transplant success.

**FERTILITY FOR MEN, CONTRACEPTION FOR WOMEN!**

**IMMATURE CELLS LINKED TO INFERTILITY IN MEN**

*JENNA HAVERFIELD (Prince Henry's Institute of Medical Research & Monash University)* and colleagues are investigating male infertility. They have been closely looking at special cells called "Sertoli" cells, which need to be present in a mature form for sperm to develop, as they nurture the sperm cells. This team has discovered that men with infertility problems have immature Sertoli cells, meaning they cannot fulfill their nurturing role, and thus a man has difficulties producing sperm. Their study suggests that if the Sertoli cells could be encouraged to become mature, the degree of fertility in the men would also increase.

**A NEW FORM OF CONTRACEPTION FOR WOMEN?**

*HUITING HO* from the *Prince Henry's Medical Research Institute* has been studying a factor (proprotein convertase 6, PC6) that is critical for the implantation of embryos. PC6 also plays an important role in HIV infection. Huiting has been delivering an inhibitor of PC6 to the reproductive tract, and has shown that this blocks PC6, and leads to embryos failing to implant. Therefore this process may become an effective form of contraception for women.

**DECREASING BONE CANCER PAIN**

Pain in the affected bone is the most frequent symptom of bone cancer. *ANTON KOLOSOV* from the *Monash Institute of Medical Research* has been investigating drugs, and combinations of drugs, to determine how to best alleviate bone cancer pain. He has established that using the drug leconotide, along with morphine, significantly increases the pain-relieving action of morphine. Using the two drugs in combination allows lesser doses of morphine to be administered, thus decreasing the likelihood of any possible side effects.

**FUTURISTIC WAYS TO LOOK AT FISH ORGANS**

Zebrafish, popular tropical freshwater aquarium fish, are often used in scientific research. *ADAM PARSLAW (Ludwig Institute for Cancer Research)* and coworkers have been using advanced microscopy techniques ("multi-photon" microscopy) and cutting edge image software to look at special zebrafish that glow different fluorescent colours. Movies and 3D images can be generated as organs in the zebrafish develop, both outcomes which were previously only pipe dreams... This technology is helping unravel what is occurring in a zebrafish model with a disease that affects formation of the intestine, liver, pancreas and eyes.

Editors Note – **Photo Opportunities**

**The keynote speaker will be Prof David de Kretser AC, Governor of Victoria**  
**Plenary 12:30 to 1pm followed by 'meet the students' 1pm to 2pm**

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