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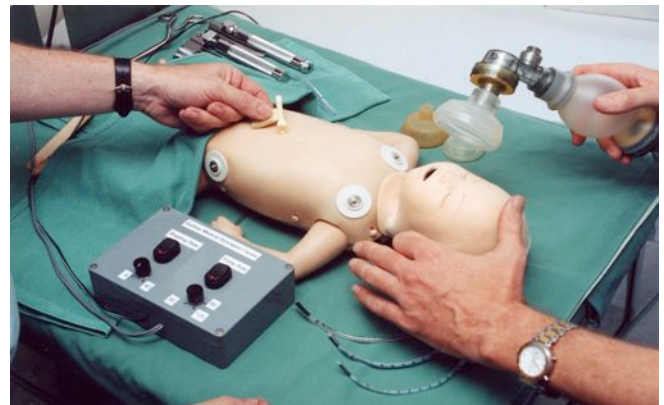
## **Research Success at NSCCH**

### *Augmented Baby Simulator for use in Emergency Life Support*

In emergency life support situations for babies, there are only a few elements that really count. This invention by Dr Richard Morris, formerly head of research at the Sydney Medical Simulation Centre at Royal North Shore Hospital, uniquely captures those elements by augmenting the standard lifeless baby manikin and bringing it to life with the widely used A-B-C resuscitation algorithm – airways, breathing and circulation.

The augmented features are controlled by a simple set of analogue controls. They provide life-like chest movement, breath sounds, pneumothorax (unilateral air entry), umbilical pulse, right brachial pulse, blood pressure measurement by palpation and pulse oximetry. These responsive human features make possible a wide range of training scenarios. The baby simulator is used extensively by the Sydney Medical Simulation Centre in pediatric training.

Training in basic life support is expanding. Not only is it required by paramedics, doctors, nurses and other health care professionals but also by fire



officers, police officers, emergency service personnel, defence forces and a wide range of community groups such as surf life savers. Once the more life-like augmented baby manikin is experienced, trainers and trainees alike demand the added realism of a simulated baby.

With this invention, the simple, portable augmentation system can also be modified for use on child and adult manikins.

A US patent has been granted and a patent is pending in Canada and Australia.

Two US companies are currently reviewing In-licensing Terms with a view to incorporating the technology into their range of simulation training products for the American market.

Local manufacture of the baby simulator is being negotiated for the Australian and New Zealand markets.

## **DO YOU THINK YOU HAVE AN INVENTION? OR DO YOU HAVE ANY QUESTIONS ABOUT RESEARCH COMMERCIALISATION - CONTACT THE OFFICE OF COMMERCIALISATION**

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The Office of Commercialisation is responsible for all IP owned by NSCCH – please refer to our website  
[www.officeofcommercialisation.com](http://www.officeofcommercialisation.com).

## RESEARCH SUCCESS AT NSCCH

### *Improving Treatment for Infertility*

Infertility is a problem for 80 million people worldwide or about one in ten couples. The problem is increasing as women in developed countries put off childbearing to a later age. The market for artificial fertilisation has grown but the low pregnancy rates (10-20%) combined with the high emotional and financial costs of multiple treatment cycles, discourage many infertile couples.

RNSH's Human Reproduction Unit has developed a platform technology that addresses the problems of poor pregnancy rates and/or multiple births when using Assisted Reproduction Technologies (ART) such as human IVF or embryo transfer in animal breeding. The technology has been developed by A/Professor Chris O'Neill, an internationally acknowledged expert in the field of embryo and fertility research from the University of Sydney and Royal North Shore Hospital. It has three applications to dramatically improve pregnancy rates when ART is used by humans and for animal breeding;

- A new screening method to assess embryo viability prior to implantation  
Its ability to (non invasively) assess embryo viability, prior to implantation, means only one embryo with good development potential need be implanted at a time. This will improve the chance of a successful pregnancy, reduce ethical and other problems associated with multiple births, and improve the cost-benefit of artificial reproduction technologies.
- A Quality Control (QC) and Quality Assessment (QA) system for IVF media producers.  
The embryo culture media is one of the most important components of performing IVF. The culture media supports all the processes that are carried out on the embryo, including fertilization and embryo development before implantation. The QC & QA system will allow media producers to gain a more accurate perception of their media culture products and to identify which media manufacturing techniques result in the best quality.
- A medical (media) device to improve the quality of embryos.

A small molecule has been found by A/Prof O'Neill to effectively treat a defect in embryos that is induced by the assisted reproduction process and results in the disappointingly low pregnancy rates. Therapeutic treatment of the embryo has never been done before. Safety of the proposed treatment is the primary concern and this will be determined in exhaustive animal studies.

NSCCH has patented these improvements in the field of Artificial Reproduction Technology and is actively seeking companies to support their development into commercial products.

## RESEARCHERS GUIDELINES FOR GOOD RECORD KEEPING

The importance of carefully keeping a laboratory notebook may be paramount to the chances of obtaining a valid patent. If properly kept it is invaluable in proving the right to own a related patent in Australia, or obtain one in the United States (where patent rights used to be assigned on a 'first to invent' basis, rather than the 'first to file' system that applies in Australia).

The NSCCH Office of Commercialisation has put together a short guide designed to help you ensure that all the requirements are met (in your particular circumstances). Specific advice should be sought on a case by case basis. This guide can be downloaded from <http://www.officeofcommercialisation.com/site/msn22.php>.

## BREAKING NEWS - 2008 IP CONFERENCE



The 2<sup>nd</sup> Annual IP Management and Commercialisation for Hospitals Conference will be held in Sydney on Friday 16 May 2008. The Conference Organising Committee are finalising the program for release in early December.

For further information and advice about the projects mentioned, please contact Ms Sandra See MBA Northern Sydney Central Coast Area Health Service – Office of Commercialisation Ph: 02 9926 7523 Email: [ssee@officeofcommercialisation.com](mailto:ssee@officeofcommercialisation.com) Level 4 Vindin House, Royal North Shore Hospital St Leonards NSW 2065

Details of all OOC Investment opportunities can be downloaded from [http://www.officeofcommercialisation.com/dnl/OOC\\_investment\\_opportunities.pdf](http://www.officeofcommercialisation.com/dnl/OOC_investment_opportunities.pdf)

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