

Detail of the Heart

a line drawing by Dr Rachel Burgess



Dr Rachel Burgess is an established artist based in the Hunter region of New South Wales in Australia. Her work has been exhibited within Australia and overseas.

She is currently undertaking a prestigious Synapse Residency awarded by the Australian Network for Art and Technology (ANAT). The Synapse Residencies place Australian artists into science and research settings, both within Australia and internationally, to pursue collaborative projects with benefits accruing to both the resident and the host organisation.

The Synapse residency is a continuation of the collaboration between Dr Burgess and Dr Vicki Clifton from the School of Paediatrics & Reproductive Health, University of Adelaide. It builds on their previous work at the University of Newcastle investigating

microchimerism, a process in which the cells from a mother and her child exist in each other's vascular systems and organs for the duration of their lives (Bianchi, Zickwolf, Weil, Sylvester, & DeMaria, 1996). In some situations there is an excessive transfer of cells between mother and child, causing disease and, in some cases, death. The project will examine the physical interaction between maternal and placental (fetal) cells in situ and, as well as the expected scientific outcomes, will lead to the production of an artistic work spring-boarding from the literal into a metaphorical investigation of the maternal bond.

Prior to taking up the Synapse residency, Dr Burgess was the 2007/2008 Research Fellow at the University of Newcastle's ArtsHealth Centre for Research and Practice, and artist in residence at the Mothers and Babies Research Centre (MBRC), a part of the University's Priority Research Centre for Reproductive Science.

In 2008, a major research output from her residency at MBRC was Echo Ex Umbria — an exhibition of exquisite line drawings responding to her investigation into microchimerism. This exhibition was opened at the John Paynter Gallery in June 2008, and later that year was also featured at the John Hunter Hospital as part of their Arts for Health program.

In 2009, Dr Burgess was part of a collaborative pilot research project between the MBRC, the ArtsHealth Centre for Research and Practice and the Population Health Department of Hunter New England Area Health Service. This project sought to use engagement in the arts — and in particular new art technologies such as video — as part of a multi-method program to address the high rates of teenage pregnancies in an Aboriginal population (Fuery, Smith, Rae, Burgess & Fuery, 2009).

In 2006, the Hunter Medical Research Institute commissioned Dr Burgess to create The Miracle of Conception as the inaugural work in the HMRI Art Series. Each year an established local artist is commissioned to create an artwork that celebrates the work of the HMRI Researcher of the Year. Dr Burgess was inspired by the research of Laureate Professor John Aitken, a world expert in fertility.

ArtsHealth would like to thank Dr Burgess for allowing us to feature her artwork on the first cover.

References

Bianchi, D. W., Zickwolf, G. K., Weil, G. J., Sylvester, S. & DeMaria, M. A. (1996). Male fetal progenitor cells persist in maternal blood for as long as 27 years postpartum. *Proceedings of the National Academy of Science USA*, 93. 705-708.

Fuery, P. J., Smith, R., Rae, K., Burgess, R. & Fuery, K. (2009). Morality, duty, and the arts in health: A project on Aboriginal underage pregnancy. *Arts & Health*, 1(1). 36-47.