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Artist Talk - Evolution, Mutation and Hybridity: The Influence of Biotechnology Practices on the Development of Chromosome Knitting

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Chromosome Knitting is an installation-based performance which incorporates live biotechnology with sonification of DNA and knitting patterns. The work has been developed by writer/performer Catherine Fargher and composer Terumi Narushima, both postgraduate students in the Faculty of Creative Arts, University of Wollongong. The collaboration has come about as a result of the artists' participation in a biotechnology workshop run by SymbioticA, The Art and Science Collaborative Research Laboratory based in the School of Anatomy and Human Biology, University of Western Australia.

In *Chromosome Knitting* the installation space is a blurring of lines between a domestic setting and a scientific laboratory: the audience's exploration of routine household items – a kitchen tabletop, bassinette, knitting basket and a bed – reveals a number of biotechnology products including live caterpillar cell cultures, salmon DNA fibres, pea seedling DNA and IVF hormone products. Knitting is a central metaphor in the performance, highlighting the similarities between the use of patterns and stitches in knitting to the basic techniques of biotechnology or genetic engineering, i.e. working with DNA as the 'building blocks of life'. It is also a metaphor for human reproduction.

For the interactive sound installation, a number of standard pattern stitches used in knitting are represented as patterns in sound. These sequences are realised using inharmonic timbres based on band patterns that result from a technique used by molecular biologists to analyse DNA known as gel electrophoresis. The audience is invited to create their own knitting (musical) patterns by choosing from a selection of pattern stitches (pitch sequences), yarn colours (timbres) and needle type (volume), as well as controlling the speed (tempo), tension (harmony) and density (texture) of their virtual knitting (musical) patterns. This forms the audio backdrop for the installation.

Various stages in the development of *Chromosome Knitting* have involved collaboration with plant and cell biologists. The installation includes sound and video recordings of laboratory procedures such as plant DNA extraction and culturing caterpillar pupae cells as well as interviews with scientists from SymbioticA conducted during the Biennale of Electronic Arts Perth in 2004.

The artist talk will include a demonstration of knitting fibre extracted from salmon DNA alongside musical sequences based on knitting pattern stitches. *Chromosome Knitting* is presented as an example in which con-

cepts of evolution, hybridity, cloning and mutation inform the process of creative collaboration. The installation is part of a larger project undertaken by Fargher in which she has created a number of new media performance works based on a series of bioethical fables. These fables respond to the 'miraculous futures' promised by contemporary biotechnologies. Works include *The Woman Who Knitted Herself a Child*, a radio play first presented on 'Airplay', ABC Radio National in 2004, and *Dr Egg and The Man with No Ear*, a puppetry and animation performance commissioned by the Opera House 'Kids in the House' program for young adult audiences, to be performed in May 2007.