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**For Immediate Release**

## Cord Blood Misconceptions Dispelled

13th September, 2005 – Internationally renowned scientist, Professor Robert Williamson, recently explained the critical importance of cord blood banking and dispelled some of the misconceptions that have arisen about stem cells.

Professor Williamson was speaking at the 5th Singapore Obstetrics & Gynecology Congress which ended on Sunday. The Congress was attended by over 200 obstetricians and gynecologists, of which about a third came from Southeast and North Asia. During his presentation, Professor Williamson covered the rapid development of cord blood-based stem cell therapy in its short history. He explained that recent results from the United States and Germany indicated that stem cells may be the ideal source of new cells for tissue replacement, as well as for many other treatments.

He also explained why cord blood stem cells are so unique and precious. “Cord blood stem cells are adult stem cells, and hence do not pose any of the ethical issues associated with embryonic stem cells,” said Professor Williamson. “Yet like embryonic stem cells, cord blood stem cells can grow into many different types of medically important tissues, including liver, muscle, blood and brain.”

“Cord blood stem cells are already used in place of bone marrow to treat leukaemia, a treatment that has already been carried out many thousands of times around the world,” he said. In addition, cord blood has many advantages over bone marrow, including immediate availability and less likelihood of causing immune rejection, a serious condition where the immune cells from the transplant can attack the patient’s cells.

“The future of therapies based on cord blood stem cells is very bright,” added Professor Williamson. Cord blood stem cells are already under test for heart attacks, Alzheimer and Parkinson diseases, cystic fibrosis and, most exciting, to reconstitute the immune system after cancer therapy.

“The one key limitation of cord blood stem cells is their availability,” said Professor Williamson. “Today, one cord blood collection can be used for one transplant and one transplant only. Even if the quantity of stem cells is more than enough, transplant doctors will still use all of the collection as this maximizes the patient’s chances of survival. Indeed, the current world standards call for storage as a single integrated unit only.”

There are a few companies around the world actively engaged in expanding the quantity of stem cells. When this becomes commercially and clinically viable, the uses of cord blood stem cells will increase dramatically. One of the companies

involved in such work is CyGenics, which operates Singapore-based cord blood bank, CordLife.

Professor Williamson is strongly of the opinion that given the potential of cord blood, collecting cord blood should be available as widely as possible, as affordably as possible, and collected in the safest way possible. He advised parents looking to store their baby's cord blood: "When looking at cord blood banking, the gold standard are cord blood banks accredited by the international agency AABB. An accredited bank must adhere to the very high standards set by the AABB, and be audited by it. At the moment, I understand that only one bank in Southeast Asia, CordLife, is AABB accredited."

*Note to editors: Pictures and DV video footage are available upon request.*

**About CordLife**

CordLife is a subsidiary of CyGenics, a leading stem cell biotechnology and immunotherapy company. The first private cord blood bank to be set up in Singapore, and among the first in Asia, CordLife's start-of-the-art facility is the first in Southeast Asia to be accredited by AABB, and is the only bank to be so accredited in this region. These banking facilities comprise full processing and cryogenic storage capabilities. For further information, please visit www.cordlife.com.

**About CyGenics**

CyGenics is a cell therapy company focused on the development and commercialisation of adult stem cell-related products, services, applications and technologies. From its headquarters in Australia, CyGenics operates four subsidiaries: Singapore-based CordLife (tissue banking services, in particular, cord blood banking) and Cell Sciences (consumable cell culture products), and Cytomatrix (cell therapeutics and technology development) based in Boston, USA, and CytoVations (new product development) based in New Jersey, USA. CyGenics is listed on the Australian Stock Exchange, under the symbol CYN. For more information, please visit www.cygenics.com.

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## Biodata: Professor Robert Williamson

Professor Robert Williamson qualified in Chemistry and Biochemistry at University College London, receiving his PhD in 1963. He spent some years in Glasgow as Lecturer and then Senior Lecturer in Cell Biology, and then Head of Molecular Biology at the Beatson Institute. In 1976, he became Professor of Molecular Genetics and Biochemistry at St Mary's Hospital Medical School, University of London, where he remained until 1995. He moved to Melbourne in 1995 as Director of the Murdoch Institute and Professor of Medical Genetics at the University of Melbourne. He retired as Director of the Murdoch in October 2004, and now is an Honorary Senior Principal Fellow and Professor of the Murdoch and the University of Melbourne, based in the Faculty of Medicine.

Professor Williamson has over 400 refereed career publications, including about 40 in *Nature*, *Nature Genetics*, *Cell* and *Lancet*. More recently, he has taken a major interest in national science policy and ethics, where he also publishes widely. He is Co-Chair of both the OECD Committee on Pharmacogenetics and the Committee on Regulation of Human Molecular Genetic Testing, and has worked extensively for the World Health Organisation. He is a Fellow of the Australian Academy of Science, a Fellow of the Royal Society, and an Officer of the Order of Australia.

Among his contributions was the demonstration that messenger RNA links ribosomes in polysomes in mammalian cells, and the first isolation of large amounts of mammalian messenger RNA. He demonstrated that alpha-thalassaemia is caused by a gene deletion, while in general beta-thalassaemia is not, and demonstrated the molecular organisation of the beta-globin gene locus in humans. He was the first to show that DNA-based prenatal diagnosis using chorionic villi is feasible and to use DNA methods to test for carriers for many genetic diseases. He demonstrated that the Duchenne muscular dystrophy locus is on the short arm of the X-chromosome, and the mutation causing cystic fibrosis on chromosome 7. He was very involved in the identification of the genes for cystic fibrosis, *Friedreich ataxia* and Alzheimer's Disease.

He has been a member of many editorial boards, including that of the *Journal for Medical Ethics* for the past twelve years, and has edited several books on Genetic Engineering and on Ethics and the New Genetics. He was the first to attempt gene therapy using non-viral techniques for cystic fibrosis, and believes that stem cells (including those from cord blood) will be exceptionally important for therapy in future. Because of his interest in using stem cells in therapy for cystic fibrosis, he has agreed to be an unpaid Scientific Adviser to CyGenics.