

20th April 2009



Pioneering Bristol academic raises £1.6 million investment for 'cell bandage'

A company co-founded by Professor Anthony Hollander, an academic from the University of Bristol, has raised over £1.6 million to fund trials, including a first study in man, of its pioneering 'cell bandage' technology, which aims to save thousands of patients from the type of knee surgery that currently leads to premature osteoarthritis.

Professor Hollander came to national prominence as part of the academic team that saved the life of Claudia Castillio, after developing the first tissue-engineered trachea (windpipe) using the patient's own stem cells. This fully functioning airway was transplanted into the patient and saved her life.

Azellon is now developing the first commercially practical applications of that same fundamental technology to create 'cell bandages' that can be transplanted into a damaged knee meniscus, helping to regenerate the joint, and saving the patient from future surgery and potentially debilitating osteoarthritis.

Azellon will develop a 'cell bandage' grown from the patient's own stem cells, and transplant it in the patient's knee joint within three weeks of extracting the stem cells from bone marrow.

The technology is believed to be the world's first adult and autologous (patient's own) stem cell treatment of meniscal tears*. More than 1.7 million people globally are estimated to have a part of or the full meniscus removed per annum making it a common orthopaedic procedure. Partial or full removal of the meniscus (meniscectomy) can provide significant pain relief within 3-5 months in most patients. It is, however, also well documented that 4-6 years after meniscectomy, osteoarthritic changes are noticeable in the knee of many patients, often leading to further joint surgery including total knee replacement.

Company co-founder and Managing Director Troels Jordansen said: "Azellon's technology is unique and has the potential to change the long term clinical outcome for thousands of patients who have parts of or the full meniscus removed with dire long term outcome. A unique element of the Azellon technology is that no tissue will be removed."

Olympic swimmer Sharron Davies, MBE, a past sufferer of a torn meniscus agrees: "If a stem cell treatment had been available for my injury, I might not have suffered the pain and discomfort that has become steadily worse over the past few years. As an athlete I am very excited about the possibility of this common sporting injury being healed with the patient's own stem cells."

Azellon has raised the money from a consortium of funders that includes the Wellcome Trust, the Technology Strategy Board, IP Group, the Wyvern Fund, Oxford Technology Management and the Universities of Bristol and Bath.

The £1.6 million raised will be invested in 3 pre-clinical trials covering safety, bio-distribution and cell fate. These trials will be carried out by University College London (UCL) under the direction of Professor Allen Goodship. In 2010 Azellon will initiate a human pilot study at Southmead Hospital in Bristol, under the direction of Professor Ashley Blom and co-workers.

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“The Cell Bandage is a rare example of fundamental university research being developed for the benefit of patients,” said Azellon Chief Scientific Officer Professor Anthony Hollander. “We are grateful not only to our investors, but to the funders of our research programme. The possibilities for tissue engineering from adult stem cells are enormous, and the University of Bristol is one of the world leaders in this field.”

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Notes for editors

* Meniscal tears are broken into two groups. One group is where the meniscal tear is in the outer margins, the so-called vascularised or red zone. The tears are likely to repair by simply reducing the tear with sutures or meniscal fixators which will promote good clinical outcome. This group is believed to be between 10% and 20% of all meniscal tears. The other group, representing 80% to 90%, consists of the tears to the avascularised or so-called white zone. Due to the absence of blood supply, these tears are unlikely to heal using sutures or meniscal fixators and are thus either partially or fully removed.

About Azellon Ltd

Azellon is focused on developing stem cell therapy for the repair of avascular meniscal tears. Today orthopaedic surgeons are partially or fully removing the meniscus which over 4-6 years will lead to osteoarthritic changes in the knee joint. The technology behind Azellon was developed by Professor Anthony Hollander over the last 5 years and has already been proven highly successful in an in-vitro model. www.azellon-ltd.com

About Azellon's technology

Azellon's technology is based on harvesting adult stem cells from the iliac crest, expanded under GMP conditions with a contract manufacturer and in-seed an increased population of the patient's own cells into a membrane. This membrane will be surgically inserted, using mini arthrotomy, into the tear in the meniscus where it will be fixed by suture. Once in place, the newly implanted cells will communicate with the original cells. This communication is inductive for cells migrating between the implant and the original tissue leading to bridging or welding the tear. This is expected to lead to strong and long term repair without removing any tissue and thus avoiding the osteoarthritic changes in knee joints and subsequent further surgery.

About the University of Bristol

The University of Bristol is committed to combining its excellence in research and innovation with a vibrant enterprise culture. The University is working with government, industry and other partner organisations to encourage the growth of knowledge based businesses in the South West. In particular, Bristol has joined forces with the Universities of Bath, Southampton and Surrey to establish the SETsquared Partnership to encourage enterprise, build new businesses and work more effectively with industry. As research-intensive universities, these enterprise activities derive from their research base, although support is also available to entrepreneurs from outside the universities. With a combined research staff of 6,400 and research budget of £266 million, the resulting contribution to the UK 'knowledge economy' is far greater than could be achieved individually. The partnership offers:

- Enterprise training and education
- Support for new businesses from within and external to the universities
- Access to innovative research that could lead to new products and processes

www.bristol.ac.uk/research

About the Wellcome Trust

The Wellcome Trust is the largest charity in the UK. It funds innovative biomedical research, in the UK and internationally, spending over £600 million each year to support the brightest scientists with the best ideas. The Wellcome Trust supports public debate about biomedical research and its impact on health and wellbeing.

www.wellcome.ac.uk

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About IP Group

IP Group plc is an intellectual property (IP) commercialisation company that specialises in commercialising university technology. Founded in 2001, IP Group listed on AIM in October 2003 and moved to the Official List in June 2006. It has made two acquisitions to date - Techtran, a company set up to commercialise university intellectual property under a long term contract with the University of Leeds, in 2005 and Top Technology Ventures, an investment adviser to early stage technology venture capital funds, in 2004.

IP Group has formed long-term partnerships with ten universities - the University of Oxford, King's College London, CNAP/University of York, the University of Leeds, the University of Bristol, the University of Surrey, the University of Southampton, Queen Mary (University of London), the University of Bath and the University of Glasgow.

The Company's portfolio is diverse with exposure to five main sectors - Energy & Renewables, Healthcare & Life Sciences: Non-therapeutics, Healthcare & Life Sciences: Therapeutics, IT & Communications and Chemicals & Materials. To date, eleven portfolio companies have listed on the AIM market of the London Stock Exchange, one on PLUS Markets and there have been two trade sales. www.ipgroupplc.com

About the Wyvern Fund

The Wyvern Seed Fund provides support for the early stage commercialisation of research generated by the Universities of Bristol and Southampton. The Fund offers resources for targeted development work to enhance the commercial potential of specific products or services as well as for licensing, sale of intellectual property and formation of spin-out companies.

www.wyvernfund.com/

About Oxford Technology Management

Oxford Technology Management is the manager of the £30 million Oxford Technology Enterprise Capital Fund (OTECF), a specialist investor in early stage technology companies in the United Kingdom. OTECF can invest between £100K and £2 million in suitable companies, plus appropriate follow-on investments. Oxford Technology Management is also the manager of four Oxford Technology Venture Capital Trusts, which are now closed to investments in new companies.

www.oxfordtechnology.com/

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