



PRESS RELEASE

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Azellon announces results of knee repair clinical trial

Azellon Ltd, (“Azellon”) today announced the results of the phase I/IIa trial of its prototype Cell Bandage for knee meniscus repair.

Meniscal tears are suffered by over one million people a year in the US and Europe alone and are particularly common in contact sports like football and rugby. 90% or more of tears occur in the white zone of meniscus which lacks a blood supply, making them difficult to repair. Many professional sports players opt to have the torn tissue removed altogether, risking osteoarthritis in later life.

The Cell Bandage has been developed by University of Bristol spin-out company Azellon, and is designed to enable the meniscal tear to repair itself by encouraging cell growth in the affected tissue.

A prototype version of the Cell Bandage was trialed in five patients, aged between 18 and 45, with white-zone meniscal tears. The trial received funding support from Innovate UK and the promising results have been published today in the journal *Stem Cells Translational Medicine*.



The procedure involved taking stem cells, harvested from the patient's own bone marrow, which were then grown for two weeks before being seeded onto a membrane scaffold that helps to deliver the cells into the injured site. The manufactured Cell Bandage was then surgically implanted into the middle of the tear and the cartilage was sewn up around the bandage to keep it in place.

All five patients had an intact meniscus 12 months post implantation. By 24 months, three of the five patients retained an intact meniscus and had returned to normal knee functionality whilst the other two patients required surgical removal of the damaged meniscus due to a new tear or return of symptoms.

Professor Anthony Hollander, Founder and Chief Scientific Officer of Azellon and Chair of Stem Cell Biology at the University of Liverpool said: "The Cell Bandage trial results are very encouraging and offer a potential alternative to surgical removal that will repair the damaged tissue and restore full knee function.

"We are currently developing an enhanced version of the Cell Bandage using donor stem cells, which will reduce the cost of the procedure and remove the need for two operations."

The Cell Bandage was produced at the NHS Blood & Transplant facility in Speke, Liverpool and implanted into patients at Southmead Hospital in Bristol, under the supervision of Professor Ashley Blom, Head of Orthopaedic Surgery at the University of Bristol.



Professor Blom, commented: “The Cell Bandage offers an exciting potential new treatment option for surgeons that could particularly benefit younger patients and athletes by reducing the likelihood of early onset osteoarthritis after meniscectomy.”

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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. These tears are likely to repair by simply closing the injuru with sutures or meniscal fixators. 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. Partial or full removal of the meniscus (menisectomy) can provide significant pain relief within 6-12 weeks in most patients. It is, however, also well documented that 4-6 years after menisectomy, osteoarthritic changes are noticeable in the knee of many patients, often leading to further joint surgery including total knee replacement.

About Azellon

Azellon is a spin-out company from the University of Bristol that was co-founded by Professor Anthony Hollander and is backed by a syndicate of investors including IP Group plc, Oxford Technology Management, Wyvern Seed Fund and Hugh Osmond. 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's focus is on developing stem cell therapy for the repair of avascular meniscal tears. Azellon has received grant funding from the Wellcome Trust and Innovate UK

For more information, please visit www.azellonctx.com

About Cell Bandage

Azellon's technology is based on harvesting adult stem cells from the iliac crest, expanded under GMP conditions and in-seeding an increased population of the patient's own cells into a membrane. This membrane is surgically inserted, using mini arthrotomy, into the tear in the meniscus where it is 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 of 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.

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