NEXT BIOSCIENCES

Netcells Stem Cell Banking

Q4 2025

20 Years

20 years, 23 000 stem cell units, **endless potential**

2025 has been an exciting year for both Next Biosciences and the global stem cell therapy landscape. For Next Biosciences, we celebrated our 20th birthday – a long way from when we started as a stem cell bank back in 2005. Since then, we have banked over 23 000 stem cell units for potential use.

Many of our early parents chose to bank with us at a time when the promise of stem cell therapies was still largely in the research phase, and tangible treatment options were few and far between. 2025 has delivered on some of the most exciting areas of research, particularly for mesenchymal stem cells (MSCs) from umbilical cord tissue. Globally, clinical trials are expanding with MSCs being investigated for their role in immune modulation, tissue repair, and regenerative therapies across fields such as orthopaedics, neurology, and autoimmune disease management.

This year also saw significant and exciting progress in the potential uses of cord blood stem cells, with new studies exploring their application beyond traditional haematological conditions. Together, these developments reinforce the growing importance of stored cord blood and tissue in future healthcare.

We look forward to continuing to share updates on these advances with you, as the field of regenerative medicine evolves.

From umbilical cord **to healing power**

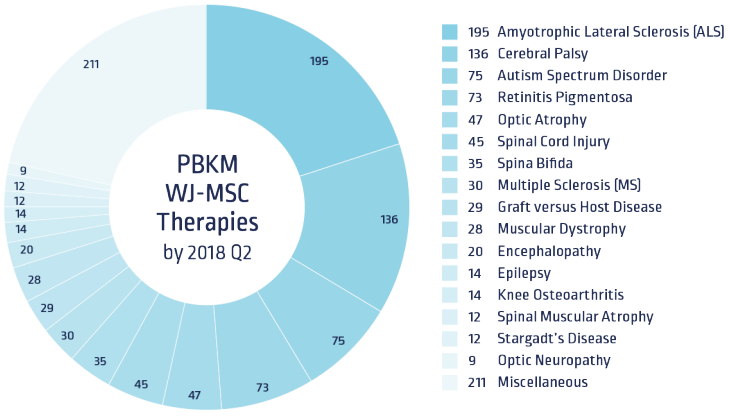
The tissue from the umbilical cord is an abundant source of mesenchymal stromal cells (MSCs). The stem cells within the Wharton's Jelly of the umbilical cord are different from stem cells derived from umbilical cord blood cells. Unlike blood-derived cells, these cord tissue cells are more easily differentiated into other types of cells, such as nerve cells, bone, and cartilage.

Currently, MSCs are the most widely used cell type in regenerative medicine and are frequently featured in research. These cells show significant potential in treating a wide range of autoimmune disorders and injuries in muscle, bone, and organs, including heart disease and sports-related injuries. MSCs derived from neonatal sources, like the umbilical cord tissue, have a faster growth rate compared to those obtained from adult donors, and are free from disease exposure.

Tissue stem cells collected from the umbilical cord can be used by the child, their siblings, parents, and even grandparents.

Polish stem cell bank Polski Bank Komorek Macierzystych (PBKM), part of the FamiCord group, is Europe's leading provider in therapies using mesenchymal stromal cells from Wharton's jelly of umbilical cord tissue (WJ-MSC).[1]

By July 2018 PBKM had supplied WJ-MSC therapy to almost 1 000 patients for a variety of treatments, including neurological conditions such as cerebral palsy (136 patients) and autism spectrum disorder (75 patients).



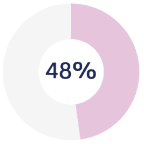
Feedback post-therapeutic administration showed that **2/3 of the cerebral palsy patients experienced improved function after WJ-MSC therapy.** Review and follow up of these patients is ongoing, with steady improvement reported.

Released for transplant

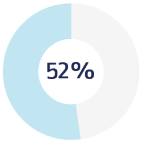
by FamiCord group (1997 – May 2025)

244
Umbilical cord blood units

1 939
Umbilical cord tissue units
(mesenchymal stromal cells – MSCs)
released for therapies in clinical trials and hospital exemption programmes



48% **Released for standard stem cell transplant therapies**
such as Thalassemia, Sickle Cell Disease, Leukaemia, immune disorders and brain tumours



52% **Released for regenerative medicine**
such as Cerebral Palsy, brain injuries, Autism and auto immune disorders

Scan QR code to read more about the global trends in stem cell withdrawals and therapeutic applications.

Another promising application is for the management of spina bifida, a birth defect in which the neural tube around the baby's spinal cord does not close properly during in utero development. The standard of care for this defect is to operate shortly after birth to close the neural tube, however, some nerve function is still lost. The current procedure of the WJ-MSC therapy is to give the cells intravenously after the spina bifida surgery to support recovery. Most of the spina bifida patients who received WJ-MSC had significant improvements in their digestion and bladder control.

Similarly, orthopaedic applications of WJ-MSC include knee cartilage repair. When the WJ-MSCs are injected at the site of cartilage damage, these stem cells stimulate the body to activate cartilage cells to regenerate new cartilage cells which can replace those which have been damaged. A video of a testimonial from a patient who has received therapy for this application is available on YouTube.

Scan QR code to watch a patient testimonial

1. https://parentsguidecordblood.org/en/news/famicord-europes-largest-cord-blood-bank-and-largest-manufacturer-cord-tissue-msc-therapy