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GermanStemCellNetwork

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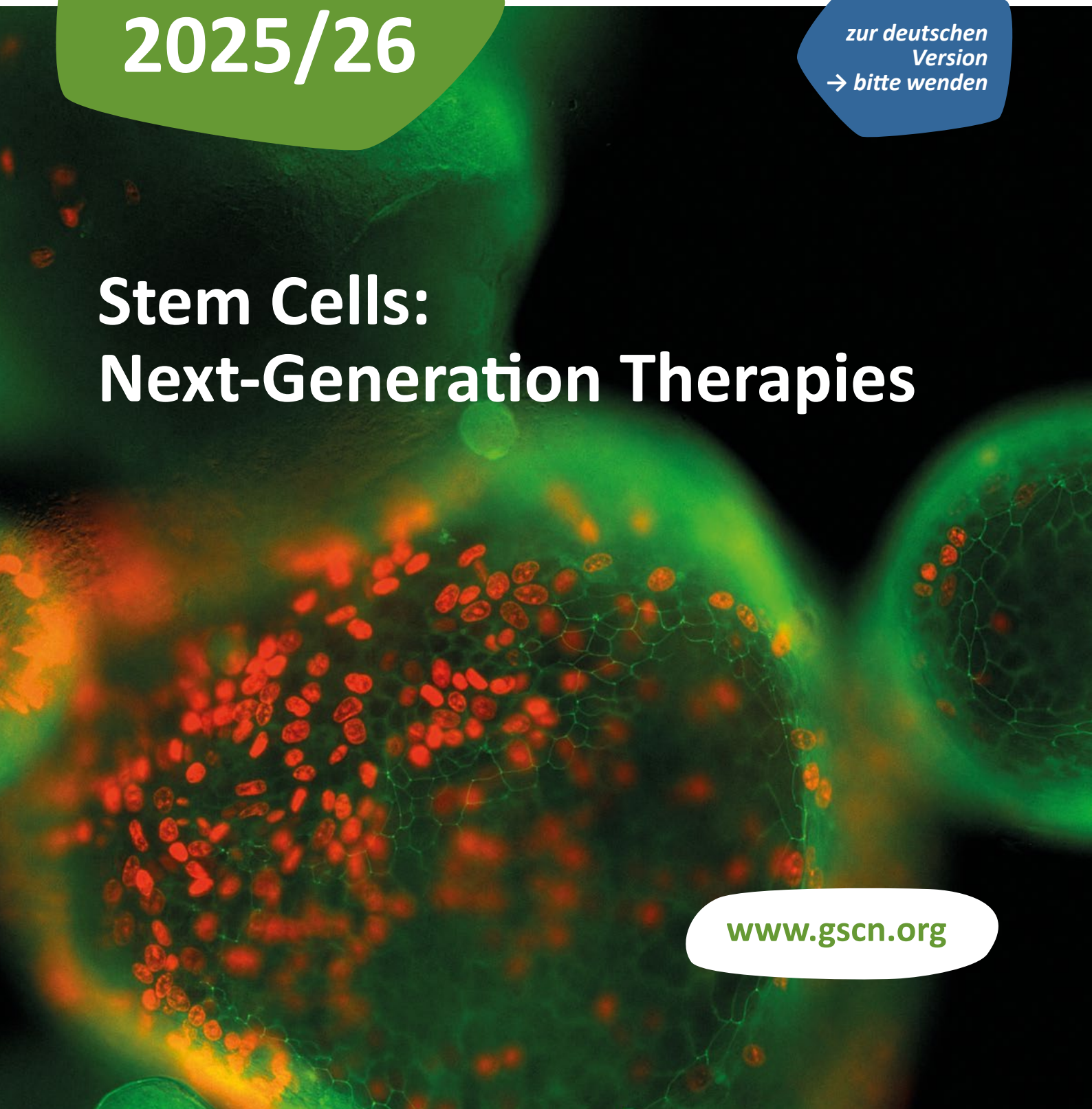
Stem Cells: Next-Generation Therapies



www.gscn.org

“It takes a whole village to bring a medical product to patients”

The GeneNovate® entrepreneurship program aims to inspire scientists and physicians to explore entrepreneurship, equip them with the necessary knowledge, and accelerate the transfer of innovative medical solutions to patients by building a strong network of experts.

After completing her biology degree, earning a PhD in immunology, and working as a postdoctoral researcher in London, Sandra Ammann was ready for a new challenge. “I didn’t want to remain in academia forever,” she recalls, thinking back to three years ago.

SANDRA AMMAN

At that moment she met Toni Cathomen, Professor of Gene and Cell Therapy at the University of Freiburg. Cathomen had a promising idea for testing the safety of gene therapies and was planning to launch a startup – but he needed someone to lead the project.

“I think this would be a great position for you,” he suggested to Ammann. “Yes, let’s do it!” she replied without hesitation. But soon doubts crept in. “I thought: okay, I know science – but what about everything else?” By coincidence, Cathomen and Ammann met Elke Luger, head of the National Network Office for Gene and Cell Therapies, at the ESGCT conference in Rome. During dinner, the conversation turned to the planned startup, and Luger mentioned the brand-new GeneNovate® program. “That was a perfect fit,” Ammann recalls. “I signed up, commuted from Freiburg to Heidelberg for the workshops, and learned an incredible amount.”

Building an entrepreneurship culture in gene and cell therapy and expert network

“With the GeneNovate® entrepreneurship program in the field of gene- and cell-based therapies, we want to support researchers and physicians in translating their ideas from the laboratory into real products,” says Elke Luger. “This kind of knowledge is still missing from most academic curricula.”

A second major goal is to create a nationwide network of experts that participants can rely on when new challenges arise. I see GeneNovate® as a structure that – like the proverb ‘It takes a whole village to raise a child’ – helps nurture product ideas that emerge in the laboratory,” Luger explains. “Without the expertise of the entire GCT ‘village’, many of these ideas would either never reach patients or would do so only very slowly.”

Together with the experienced consultant Ingo Schroeter, the GeneNovate® team developed a workshop series that provides comprehensive insight into entrepreneurship and start-up creation. “I wanted to be part of a team that truly changes something in healthcare,” says Schroeter, who previously helped transform Philips into a health technology company and contributed to building its corporate venturing activities.

“Germany and Europe produce outstanding basic research,” he says. “But when it comes to translating discoveries into real applications, we fall far behind. The value creation often ends up in the United States or China.” For Schroeter, the network aspect of GeneNovate® is key. “If we succeed in bringing together the expertise and resources that are scattered across Germany, we can build something powerful – and become far more competitive than what I’ve seen in the United States.”

Workshops that turn ideas into ventures

In six full-day in-person workshops held in English, participants learn the fundamentals of entrepreneurship. They form teams, receive guidance from experienced mentors, develop a short pitch presentation, and build valuable professional networks. Each workshop is preceded by a two-hour online session covering the theoretical background.

Workshop 1
Introduction to Entrepreneurship | Changing the Healthcare Industry | Creating & Presenting Pitch Desks

Workshop 2
Value Proposition & Buisness Modell Canvas | IP Protection & Management

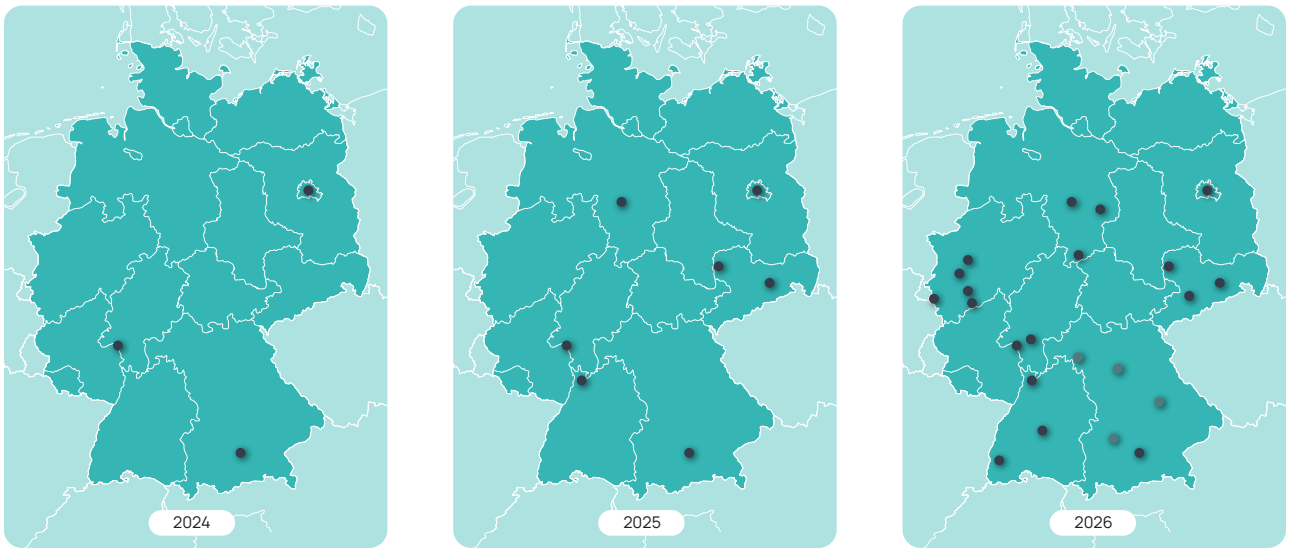
Workshop 3
Analyze your Market | Create your Business Model | Build your Business Case

Workshop 4
Regulation | Develop your Product/Solution | Go-to-Market: Understand and win customers

Workshop 5
Legal Foundations for Startups | Team management | Project Management | Establish and manage Partnerships

Workshop 6
Financing and Funding | Investor discussions & Negotiations | Exit options & Strategic value

Photos: Anna-Lena Ament / AG Vazquez,UniBonn; Jürgen Brandel / University hospital Freiburg



IN ITS THIRD YEAR, THE GENENOVATE® PROGRAM IS ALREADY OFFERED IN NINE REGIONS. IN 2027, FOUR MORE CITIES WILL BE ADDED: THE WERA REGION, INCLUDING THE LOCATIONS WÜRZBURG, ERFURT, REGENSBURG, AND AUGSBURG.

Young ideas – not young people

"Initially, we promoted the program by highlighting our search for early-career doctors and researchers," Luger recalls. "But that wasn't the right approach. What we are looking for are young ideas." As a result, the GeneNovate® workshops now bring together a diverse group of participants – from master's students and postdocs to professors, department heads, and even experienced founders.

"That diversity is incredibly enriching," Elke Luger says.

Each location hosts 15 to 30 participants, who form interdisciplinary teams. Initially, Ingo Schroeter led the workshops alone, but today more local experts from industry, technology transfer, finance, and successful startups contribute their expertise. Each team is also paired with an experienced mentor, who helps refine the project idea and prepare the final pitch. At the Final Event they present their ideas to a jury consisting of business angels, venture capital investors, experienced entrepreneurs, and representatives from politics. Winning teams receive individualized coaching and an invitation to the GeneNovate® Investors' Day.

1,000 trainees by 2030

"In the first year, 2024, we started with 54 participants at three locations – Berlin, Munich, and Mainz," Elke Luger explains. Interest grew quickly. In 2026, the program is already running in nine regions. With nearly 200 participants, more than 50 mentors, and over 100 experts, GeneNovate® is now close to nationwide coverage. At the beginning, mentors from many sectors had to be recruited actively. Today, many are so convinced of the program that they ask whether they can continue supporting it – pro bono.

"Our goal is to train 1,000 professionals in gene- and cell-therapy by 2030, and we are well on our way to achieving it," says Elke

National Network Office for Gene- and Cell-Based Therapies | GCT Germany

GCT
National Strategy
Gene and Cell-Based Therapies
Network Office

The National Network Office GCT Germany was established as part of the National Strategy GCT. We provide a nationwide point of contact and platform for national and international actors and stakeholders from the fields of science, business, patient and self-help organizations, politics, and society, as well as government agencies and foundations. Together with patient and self-help organizations, we develop measures to actively incorporate their perspectives into projects at an early stage.
Our Mission: The Network Office GCT is building a national GCT community information and networking. We consolidate the expertise and activities of our stakeholders and create sustainable synergies. www.GCT-Germany.de
GCT-Atlas: Consolidating and sharing knowledge: The GCT-Atlas is the central information platform and matchmaking hub for GCT in Germany. Become part of the map and visible to the GCT system. www.GCT-Atlas.de
GeneNovate®: With the first Germany-wide entrepreneurship program in the field of GCT, Medtech and Life Science we strengthen the entrepreneurial skills of high-potentials in medical and basic research. www.GeneNovate.de

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Graphic: NWB_Grafikladen; Photo: NWB_Arne Sattler


ELKE LUGER

Luger. Project ideas are diverse – ranging from RNA inhalation sprays for pulmonary fibrosis to macrophage-based cell therapies for solid tumors.

"These don't all have to be gene therapies," Schroeter explains. "For such complex treatments to reach the market, we also need complementary innovations – for example bioinformatic tools for data analyses, diagnostic solutions, small molecules for combination therapies, or safety technologies like the one developed by Sandra Ammann."

"As a scientist, you don't think about that"

Sandra Ammann participated in the second GeneNovate® cohort in 2025. "What I found particularly inspiring was hearing founders from different startups talk about their real experiences of launching companies," she says. She also described the session on how to file patents extremely valuable – how to approach them, how long the process takes, and why precise wording is crucial. "And as a founder you have to report an invention and start the patent process before publishing," she explains. "That's something you simply don't think about as a scientist."

Another key lesson was the importance of a strong team and network. "Through GeneNovate® we found an excellent mentor, Daniel Gau, who is now member of our supervisory board and helped us tremendously with our pitch," Ammann says. "Scientists tend to focus on details – but in a pitch things need to be quick and simple. When you think "Oh no, this doesn't sound scientific anymore,' then the pitch is actually perfect."

Success in the EXIST competition

Their pitch proved convincing: Ammann and her team from BiObservR successfully secured funding in the EXIST Research Transfer competition, a program of the German Federal Ministry for Economic Affairs that supports research-based startup projects.

The team will receive funding for 24 months to prepare for the company's launch. BiObservR has developed and patented the CAST-Seq method, which allows researchers to test the safety of gene therapies. In gene therapy, patient cells are repaired using the CRISPR-Cas gene editing system, multiplied, and then returned to the patients. However, the gene editing tool may not only modify the intended target gene but also other regions of the genome – known as off-target effects.

These potential changes must therefore be carefully analyzed before the cells are returned to the patient. "It is crucial to check whether any modifications could potentially trigger cancer," Ammann explains. "That would obviously be catastrophic." The method has already been accepted by regulatory authorities. Demand is high: 70 projects from Europe and even the United States have already been analyzed by Ammann's team.

GENENOVATE® FINAL EVENT 2025 IN BERLIN

INGO SCHRÖTER

A new professional life

Life as a startup founder is very different from life as a scientist – something Ammann actually enjoys. “You suddenly deal with many administrative tasks you never had to think about before. There are lots of meetings, and project management becomes crucial. The work is much more diverse.” BiObservR’s next goal is to offer its services commercially. To develop a solid business model, Ammann brought a business economist with startup experience onto the team. “He will make sure our pricing works and that the company is profitable.” Some former colleagues told her they would find such a step too risky. Ammann understands that perspective – but she also sees the opportunities.

“Of course you don’t know exactly what will happen. But you learn so much that even if the startup doesn’t succeed, you still gain valuable experience and excellent prospects for your next career step.”

Encouraging courage – and changing mindsets

Ingo Schroeter knows that founding a startup requires courage. “The theoretical knowledge is important – especially the parts specific to precision medicine,” he says. “But what matters even more is the personal experience shared in our workshops.” In every workshop, GeneNovate® invites a guest startup founder to talk openly about challenges, failures, and moments when perseverance was essential. These conversations help participants develop the soft skills needed to deal with setbacks.

“Everyone listens, everyone helps, and everyone shares their experience,” Schroeter says. “That’s what really distinguishes this program from other startup initiatives.”

Another goal is to change the mindset of researchers, says Elke Luger. “In the traditional academic career path, everything revolves around publications. Founding a company is still not widely recognized as a valuable achievement in German academia. That is something we want to change.”

Max Delbrück Center

In an ageing society, extending health-span will require not only treating illness, but stopping it before symptoms occur. “At the Max Delbrück Center, we are working on precision prevention – and stem cell-based technologies are an integral part of our efforts,” says Professor Maike Sander, Scientific Director of the Max Delbrück Center. To gain a detailed understanding of the cellular changes that unfold as a person’s health transitions into disease, scientists are engineering complex model systems, such as assembloids, organs-on-a-chip or vascularized organoids. They have also pioneered high-throughput screenings that use organoids grown from individual patients’ cells.

Other teams harness single-cell and spatial multi-omics approaches to map disease progression with unprecedented resolution. Advanced AI models are helping them to uncover patterns and possible mechanisms within these complex data sets – enabling discovery for tomorrows medicine.

Max Delbrück Center
Robert-Rössle-Str. 10 · 13125 Berlin
www.mdc-berlin.de

Looking beyond Germany

The success of GeneNovate® has attracted international attention. Universities such as Oxford and Cambridge have already contacted the organizers to explore potential collaborations. "We are also in discussions with partners in Switzerland and Finland," Luger says. Researchers from France are already participating in workshops in Cologne because it is geographically close.

The next step is clear: launching the first GeneNovate® satellite program outside Germany – in Paris next year. According to Schroeter, the program's strength lies in its network. "I still believe that in four or five years the biotech landscape in Germany and Europe will look different," he says. "And that will be because a network of people with the same drive has come together."

Looking ahead

And what does the future hold for Sandra Ammann? "I'm confident that in five years we will have a strong business model and a successful company offering valuable services for gene therapies," she says. "And hopefully I'll still be the CEO." If so, that would also be a success story for GeneNovate®.

Author: Stefanie Seltmann

Photos: privat / NWB _Arne Sattler

GENENOVATE® FINAL EVENT 2025 IN BERLIN