

# 1997-2022

## We celebrate 25 years of DKMS Life Science Lab

### Our highlights

up to **1,300,000**  
samples typed per year

**170**  
employees

up to **7,000**  
samples (buccal swabs) are processed per day

**35%**  
is the DKMS share of unrelated blood stem cell donations worldwide

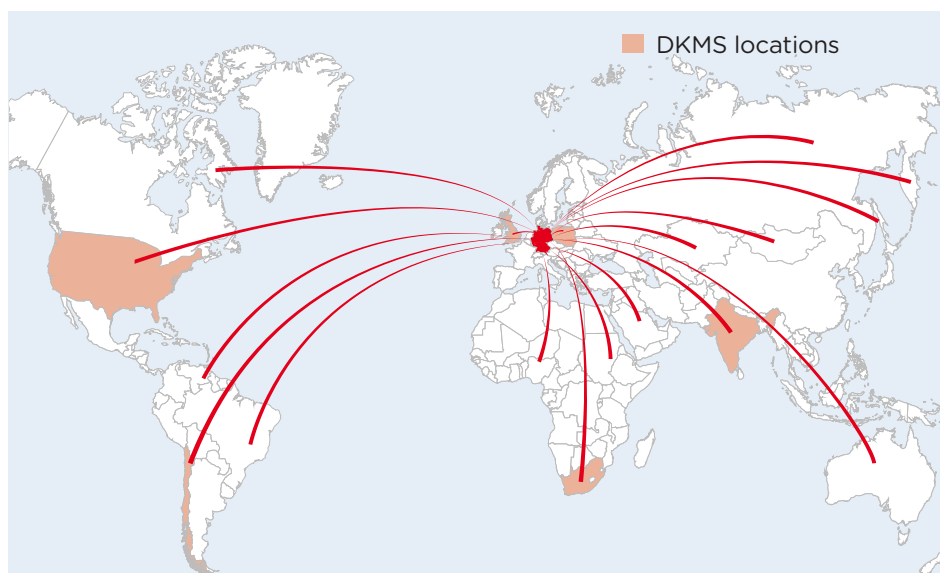
**>11,000,000**  
registered blood stem cell donors

**22**  
HLA markers and further parameters (e.g. CMV status) are analyzed

**4,500**  
square meters, highly automated laboratory; building: former federal bank branch

**100,000**  
number of second chances at life through DKMS to date

**29%**  
DKMS share of registered blood stem cell donors worldwide



The **DKMS Life Science Lab** is one of the world's leading laboratories for the typing of blood stem cell donors. Here, the samples of all new DKMS donors from all over the world are typed. One of the most important parts of typing is the analysis of the human leukocyte antigen (HLA) markers. Since 2013, the internationally active DKMS Life Science Lab has performed more than 8.5 million HLA typings through the constant advancement of the latest sequencing technology.

**HLA features** are structures on the surface of cells that signal to the body whether the cells are the body's own or foreign "material". To avoid a rejection reaction after transplantation, the HLA characteristics of the patient and donor must match as closely as possible.

## OUR MISSION

**The goal until 2030**  
20 million registered DKMS donors

*And for this we need committed employees, who share this goal with us. We are actively looking for new colleagues and look forward to receiving applications:*

[www.dkms-lab.de/about/careers](http://www.dkms-lab.de/about/careers)

Our mission is to give as many blood cancer patients as possible a second chance at life. The more potential donors who register and the more accurately the samples are analyzed, the greater the chance of finding a suitable match for patients in need. For this reason, the DKMS Life Science Lab will continue to rely on

- Innovation and further development of laboratory technology
- Optimization of the typing profile

# OUR EXPERTS



**Dr. Elke Neujahr**

Global Chief Executive Officer of DKMS

*"With our internationally active DKMS Life Science Lab, we have a high-tech laboratory that is a global leader in stem cell donor typing. The commitment and know-how of our experts enable groundbreaking innovations, such as the determination of CMV status by buccal swab. At the DKMS Life Science Lab, thousands of tissue samples from all over the world are analyzed every day - this is an indispensable contribution to our DKMS donor centers in seven countries on five continents. I am confident that with the Life Science Lab at our side, we will be able to reach our goal of 20 million potential DKMS donors by 2030 to give even more people with blood cancer a second chance at life."*



**Dr. Alexander Schmidt**

Chief Executive Officer of DKMS Life Science Labs

*"Although the treatment options and chances of curing blood cancer and other serious blood diseases have improved significantly in recent years, too many people still die of serious complications after a stem cell transplantation. The better donors match patients in terms of their HLA characteristics and various other factors, the greater the prospects for long-term success. We are therefore working, in particular, to improve the chances of such an optimal match."*



**Dr. Vinzenz Lange**

Chief Technology Officer of DKMS Life Science Labs

*"Currently, people usually match 12 HLA characteristics for a stem cell transplant - yet, unfortunately, post-transplant complications resulting from an imperfect donor-patient match are still common. Therefore, together with the Collaborative Biobank and the Clinical Trials Unit of DKMS, as well as other scientists, we are actively doing research to identify additional genetic markers with influence on transplant success."*



**Thomas Schaefer**

Chief Operating Officer of DKMS Life Science Labs

*"A lot has happened in our field over the last 25 years. I attribute our success to our ability to keep reinventing ourselves and to be truly innovative in our use of technology. We are excited about what the next 25 years will bring. I have no doubt that we will always continue to evolve."*

## Our innovations

### 2013

#### Next-Generation Sequencing (NGS) - Typing in the millions

The DKMS Life Science Lab was the first laboratory worldwide that used NGS for the high-throughput typing of stem cell donors. With this measure, the laboratory capacities could be increased more than eightfold.

### 2017

#### In-house development of an antibody-test via swab

Another highlight is the development of a cytomegalovirus (CMV) antibody test that does not require blood sampling, rather only a swab of the buccal mucosa. At DKMS, CMV status is part of the typing profile because it is important for donor selection. Since 2017, the laboratory tests the CMV status via an uncomplicated buccal swab directly during registration. This makes the donor search process faster and the associated time savings can be vital for patients urgently awaiting a transplant.

### 2022

#### Swabster - Robot and world novelty for the entering of samples

The "Swabster" automates the important first step of donor typing. The highly precise robot places the buccal swabs of the donors into the specified well on a test tray and reliably removes the stem from the head of the swab. This perfectly prepares the molecular biological analysis of the samples.

