

# QUALITY TIMES



**THE AI REVOLUTION:  
IT'S CLOSER THAN YOU THINK**  
THE CAR-T REVOLUTION  
IN CANCER THERAPY  
**MENTAL HEALTH IN THE  
WORKPLACE**  
SPOTLIGHT ON SAM DECKERS  
**THANK YOU**  
CHRISTMAS EVENT

# The AI Revolution: It's Closer Than You Think



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## AI Revolution is Coming Fast!

Brace yourself! AI is about to supercharge our daily lives in ways we could only dream of. Over the next few years, AI will dramatically reshape the way we live, work and interact. From smart homes that practically run themselves to health monitors that know us better than our doctors, AI is poised to make every part of our day faster, smarter and easier.

Firstly, the personal assistant as you know it is about to evolve. Today, we use our smart phones to find places, set alarms, manage calendars, etc., but soon, it'll manage your entire day, rescheduling appointments, ordering things before you need them, and even offering real solutions to life's daily problems. They will know you better than you know yourself. Imagine two friends with AI smartphones going out for dinner, where their devices join the conversation – a four-way chat, but only two dinners get paid!

Virtual relationships may also become the norm, allowing you to design a partner entirely online, from their physical appearance to their personality and overall character.

Then, there's transportation and self-driving cars? They're not sci-fi anymore, they're just about here. Autonomous vehicles, combined with AI-managed traffic systems, will soon make long commutes, accidents, and traffic jams things of the past. Imagine reclaiming hours of your day as your car handles the drive, dropping you off in record time and perfect safety. Driving manually may even be considered too dangerous and banned.

Healthcare is also in for a dramatic change. Forget occasional check-ups, AI-powered wearables will monitor our health 24/7, alerting us to any red flags instantly. Imagine knowing about a potential issue before it becomes serious, with AI offering insights into diet, exercise, and medication personalised just for you. This level of predictive care isn't just futuristic, it's happening now, and it's about to transform healthcare from reactive to proactive.

At home, AI will make everything from energy use to home security effortless. Picture a home that adjusts lighting, temperature, and even mood based on your habits, all while reducing your energy bills and carbon footprint. Robots that help with chores and cooking? That too is only round the corner.

This AI-powered future is closer than you think, promising a life that's more efficient, enjoyable, and perhaps exciting. Let's hope it's doesn't spoil our Christmas traditions too much!

**Wishing you a Merry Christmas and a happy, healthy and prosperous New Year.**

**Jay Lad**

**Managing Director**



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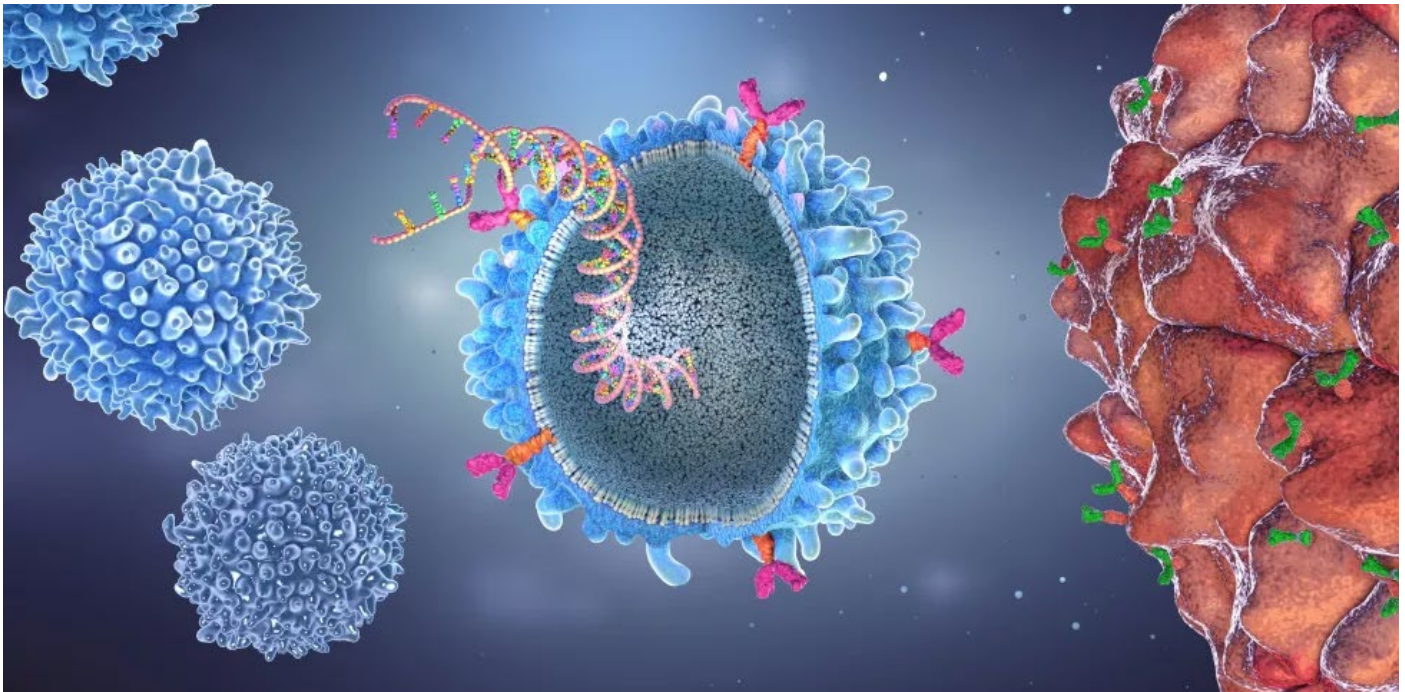
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# The CAR-T Revolution in Cancer Therapy

By **Kathrin Siguda**  
Senior Consultant



**Over the past two years, Kathrin Siguda has played a key role in Johnson & Johnson, overseeing the design, construction, commissioning, qualification & validation of their new Lentivirus manufacturing facility in Leiden, Netherlands. The Lentivirus produced in Leiden will serve as a viral vector in J&J's CAR-T facility in Gent, Belgium.**

In this edition, Kathrin provides insight into the CAR-T manufacturing process, highlighting the key steps required to ensure the safety, effectiveness and scalability of this groundbreaking cancer treatment.

## What is CAR-T?

Chimeric Antigen Receptor T-cell (CAR-T) therapy is a revolutionary approach in the field of cancer immunotherapy, offering hope to patients with certain types of cancers that are resistant to conventional treatments. CAR-T therapy involves engineering a patient's own T-cells to recognise and attack cancer cells, making it a form of personalised medicine with incredible potential.

However, the success of this therapy is closely tied to a highly complex and sophisticated manufacturing process.

## CAR-T Manufacturing Process

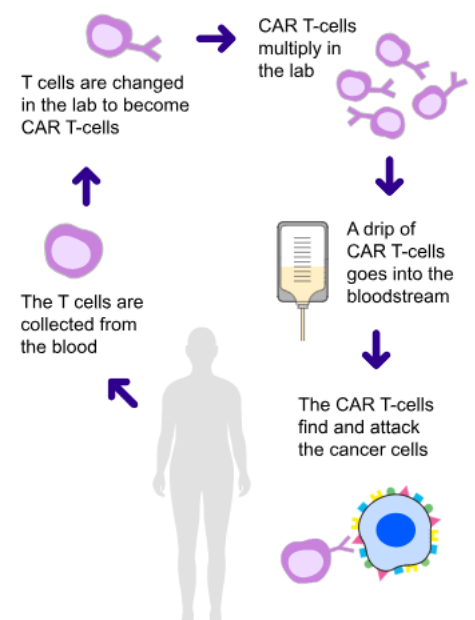
The CAR-T manufacturing process involves multiple stages, from collecting the patient's cells to reprogramming them and ensuring they are safe and effective for infusion. Each step must be meticulously carried out to ensure the final CAR-T product meets stringent quality and safety standards. Here's an overview of the main steps involved:

### 1. Patient Leukapheresis

The manufacturing process begins with "leukapheresis", where a patient's white blood cells, particularly T-cells, are collected. This is done through a process that separates white blood cells from other blood components, such as red blood cells and plasma. This is a critical first step since the quality and number of cells collected can influence the outcome of the therapy.

### 2. T-Cell Activation and Transduction

Once collected, the T-cells are activated and genetically modified. In this stage, the cells are stimulated to multiply and are transduced using a viral vector (typically a lentivirus or retrovirus) to introduce the gene encoding the chimeric antigen receptor (CAR). This receptor allows the engineered T-cells to recognise specific antigens on cancer cells.



### 3. Cell Expansion

After successful gene modification, the T-cells undergo “expansion”. This step involves growing the modified T-cells to a sufficient number in a controlled environment, typically small bioreactors such as wave bags or flasks. These bioreactors provide the necessary conditions for T-cell growth, ensuring that enough CAR-T cells are produced to fight the cancer effectively.

### 4. Quality Control and Release Testing

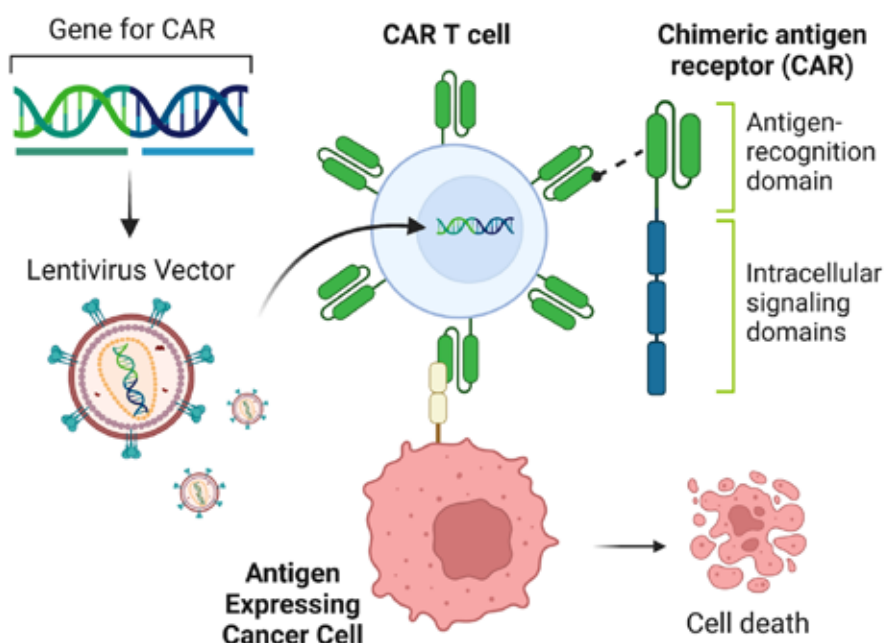
Throughout the process, stringent quality control measures are in place to ensure the safety, potency, and purity of the CAR-T cells. Tests are performed to confirm that the cells express the correct CAR, are free from contamination, and function as intended. Only when the CAR-T cells pass all quality control checks are they released for clinical use.

### 5. Cryopreservation and Transport

After manufacturing and quality testing, the CAR-T cells are cryopreserved (frozen) and transported to the healthcare facility where the patient is being treated. Cryopreservation ensures that the cells remain viable and functional until they are thawed and administered to the patient.

### 6. Infusion into the Patient

The final step is “infusion”, where the engineered CAR-T cells are delivered back into the patient’s bloodstream. Infusion typically occurs after a preparative chemotherapy regime designed



**CAR-T therapy has shown remarkable efficacy, especially in treating certain types of blood cancers, such as leukemia and lymphoma.**

to reduce the patient’s existing immune cells, creating a favourable environment for the CAR-T cells to expand and act against cancer cells. Once inside the body, these cells seek out and destroy cancer cells expressing the target antigen. CAR-T therapy has shown remarkable efficacy, especially in treating certain types of blood cancers, such as leukemia and lymphoma.

### Conclusion

The CAR-T manufacturing process is a highly intricate procedure that requires careful coordination of biological, chemical and technical expertise. Despite the challenges in production, CAR-T therapy represents a breakthrough in personalised medicine, offering new hope to cancer patients and transforming the future of oncology. With continuous advancements in manufacturing techniques, the scalability and accessibility of CAR-T therapies are expected to improve, bringing this life-saving treatment to more patients around the world.



# Mental Health in the Workplace: A Vital Consideration

By **Lindsay Marsh**  
Administration & HR Associate Director

**Mental health is a crucial element of employees' psychological, emotional and social well-being. Good mental health not only allows employees to become more resilient and cope effectively with challenges but also plays a vital role in their ability to build and maintain strong, healthy relationships at work.**

Employees with sound mental health are more likely to communicate well, collaborate effectively, and foster a respectful and inclusive workplace. Moreover, they are better equipped to manage stress, adapt to changes, and maintain a positive outlook, all of which contribute to higher job satisfaction and overall productivity.

Recognising that mental health is just as important as physical health, is critical. However, this awareness is often overshadowed by traditional workplace priorities, where physical health concerns tend to receive more attention, resources, and accommodations. While an employee with a physical injury may be given time off or adjustments to their workload, those suffering from mental health conditions might feel pressure to "push through" or be misunderstood. This imbalance can lead to issues such as presenteeism, where employees are physically at work but mentally disengaged, which in turn can affect their performance and well-being.



Promoting awareness that mental health is equally important as physical health is not just about providing resources or policies; it requires a cultural shift within organisations. Employers need to create an environment where conversations about mental health are normalised and where employees feel safe and supported in addressing their mental health challenges. This includes educating all levels of staff, from senior leaders to entry-level employees, about the importance of mental health and how it impacts both individual and organisational success.

## Recognising that mental health is just as important as physical health is critical.

Ultimately, prioritising mental health in the workplace is not only a moral imperative but also a strategic one. Employees who feel mentally supported are more engaged, more creative, and more likely to remain loyal to their organisation. Companies that invest in the mental well-being of their workforce often see reduced absenteeism, lower turnover rates, and improved overall performance. By promoting mental health awareness and treating it with the same level of importance as physical health, businesses can create a healthier, more productive work environment for all.

## Mental Health at SPGL

At SPGL, we recognise the importance of mental health and take proactive measures to support our employees. We conduct regular individual check-ins, typically around once a month, with responsibility shared among the management team. This system allows our team to follow up on employee concerns promptly and ensures that employees feel heard.

We take feedback seriously and endeavour to address any issues that arise, which we hope is helping to promote a positive culture of well-being. However, we acknowledge that addressing mental health is not a one-size-fits-all approach, nor is it something that can be solved overnight. As we grow and evolve, so too must our strategies for supporting our employees' mental well-being. We are always open to learning from feedback, industry best practices, and emerging research on mental health in the workplace.

Our goal is to refine our approach and introduce new measures that better meet the challenges employees face. For instance, we are exploring ways to integrate mental health initiatives into our day-to-day operations, ensuring that well-being is not just a "tick box" but a core value of our company culture.



# SPOTLIGHT



## **Sam Deckers** Senior Project Manager / Account Manager

Hi there! I am Sam, 43 years old and started with SPGL in 2011.

### **Tell us a bit about your background and what you did before you joined SPGL**

I graduated in 2005 as an Electromechanical Engineer, starting my career as a mechanical designer/draughtsman. In 2007 I joined an engineering company, delivering projects for pharmaceutical companies, as an I&E Engineer. Four years later In 2011, I joined SPGL as an Automation Engineer.

### **How do you find working for SPGL from a technical and personal perspective?**

Over the past 13 years at SPGL, I've had the privilege of working with a diverse group of people, each with their own unique expertise and experiences. I've enjoyed learning about the differences between pharmaceutical companies and departments, and most importantly, I've cherished the opportunity to collaborate with so many talented individuals. 📌

### **Getting to know Sam!**

#### **What is your favourite food?**

Spaghetti Bolognese.

#### **What do you enjoy doing in your spare time?**

I like a lot of things, as long as it is not overcrowded. I enjoy cycling with my daughters, working in the garden, woodworking and walking.

#### **If you were stuck on a desert island and you could have two people with you, who would they be?**

My two daughters, Sarah and Laura.

#### **If you could live anywhere in the world, where would you choose?**

For me, it's a toss-up between Norway's breathtaking landscapes and the familiar comforts of Belgium. Norway's stunning scenery and the country's harmonious relationship with nature are incredibly appealing. However, nothing beats the feeling of home, and Antwerp holds a special place in my heart.

# ANNOUNCEMENTS



**Kelly Rymenams** and her partner Nick welcomed a beautiful baby girl named Léa in October. Very many congratulations to Kelly and her family.



**Zain Sheikh** and his partner Salva welcomed a bouncing baby boy named Ibrahim in August. Heartfelt congratulations to Zain and his family.



**Brecht Vandeweyer** and his partner Stephanie welcomed a precious baby girl named Juliette in June. Warmest congratulations to Brecht and his family.



Congratulations to **Stef Picard** on his marriage to Gwen this October! Wishing the newlyweds a lifetime of happiness from all of us at SPGL!



We're excited to welcome **Hanne Lieten** who joined us as an Engineer Level I in May. We are so pleased to have you on board, Hanne!



A warm welcome to **Kyara Vanderhoven** who joined us as a Specialist Level I in April. We're excited to have you on the team, Kyara!



A big welcome to **Laurens Ignoul** who joined us as an Engineer Level III in October. We're thrilled to have you with us, Laurens!

# EVENTS

## New Years Celebration

We kicked off 2024 with a vibrant New Year's reception, celebrating with our team and their partners. With drinks, good food and great company, the energy was set for the year ahead!





# EVENTS

## Summer BBQ

Summer nights, great company, BBQ food & delicious brews. A fun & memorable evening with the team at the “Antwerp Brew Company”.



## Brainiac Day

A day of learning, inspiration, collaboration & socialising. SPGL’s Brainiac Day – an educational treat with presentations on visual inspection, a case study on our project with Sanofi & of course the hot topic on everybody’s lips, ‘Artificial Intelligence’!



# EVENTS

## UK Teambuilding

Our UK team had a great day out in London, enjoying lunch at the Anthologist followed by a visit to the Disney Exhibition. It was a day filled with fun, laughter and memories!



## Bring Your Kids to Work Day

We organised a school holiday club so our team could focus on work while their little ones were entertained by childcare students. All proceeds funded the students' end-of-year activities. It was a great success!



## London Meeting

Our team from Belgium visited the UK office for a productive meeting, covering key topics on Sales & Marketing, Operations, HR, Operations and Finance – we even found time for a bit of sightseeing!





JOIN US FOR A

# Christmas EVENT

**Friday 13th December**  
**RECEPTION FOLLOWED BY A  
CHRISTMAS MARKET  
8PM -11PM  
PARTNERS WELCOME!**  
**NIBBLES ★ DRINKS ★ FUN**



 **BARTBAAR MARKAT 48  
2440 GEEL**

**PLEASE CONFIRM BY 30TH NOVEMBER**

# THANKS

We want to extend our sincere thanks to our entire team for their unwavering dedication and hard work throughout the year. Your commitment to excellence has made a significant impact on our success. We're truly fortunate to have such a talented and hardworking team.

Special recognition includes:-

- **Jiwai Deng** for his dedication and hard work on numerous projects this year and excellent client feedback.
- **Veronique Schnabel** for her commitment to her project, always striving for excellence and exceeding expectations.
- **Gregory Crispeyn** for his tireless efforts and invaluable contributions to his project this year.
- **Lotte Michiels** for her exemplary work ethic, dedication, and consistent contributions to the success of SPGL.
- **Sam Vervliet** for his unwavering support & guidance with the ongoing training, and for his successful transition into his new role.
- **Dave Thomas** for his outstanding effort and unwavering commitment to our managed CQV project in the Netherlands.
- **Zain Sheikh** & **Kathrin Siguda** for their exceptional performance, positive client feedback, always going the extra mile!
- **Stef Picard, Ortwin Goubert, Wim Bressers** & **James Meade** achieved the CQV/CSV milestone of 1000 post approved documents, an impressive accomplishment!
- And finally, a big thank you to everyone involved in making SPGL Brainiac 2024 a success! We're especially grateful to **Michel Bullen, Jiwai Deng, Daan Glas,** and **Stefan Thys** for their engaging presentations. Your insights and expertise helped to make the event a highlight of our year.

