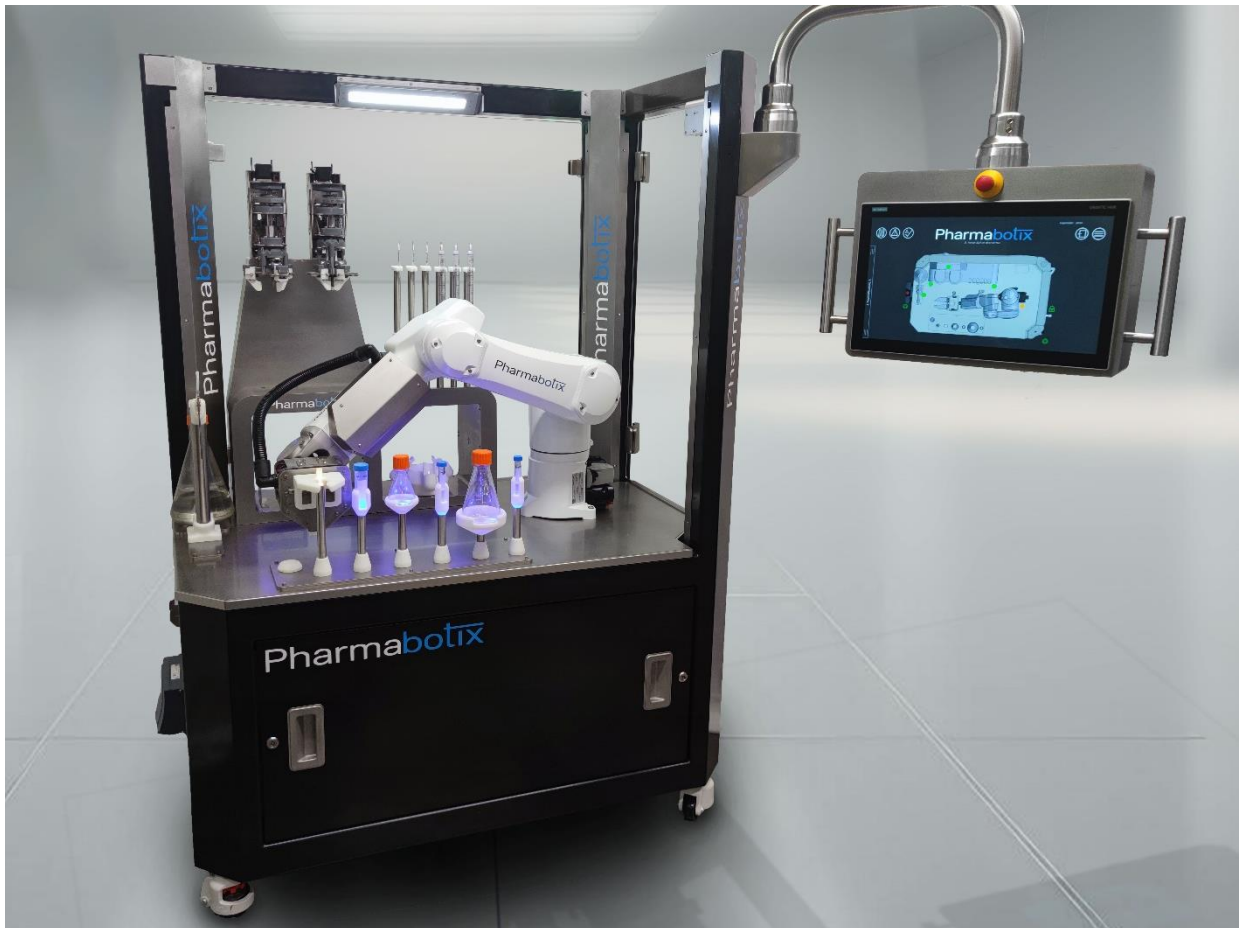


## Sally: Your robotic solution for cell and gene therapy manufacturing and laboratory applications

Author: Fabian Stutz / 13.03.2024

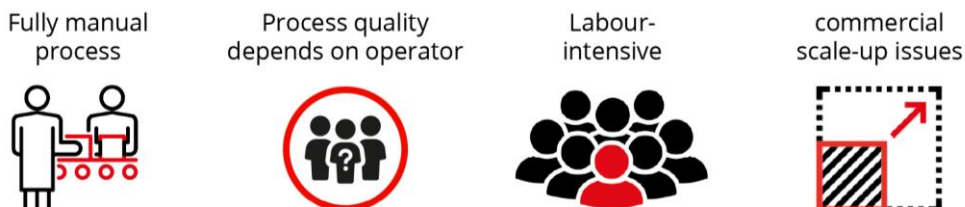


### Finding the optimal solution

Choosing the right solution for your processes in cell and gene therapy manufacturing as well as in laboratory environments is a complex task. Between standard and customized solutions, mobile and stationary systems, there are numerous variables to consider. Particularly, the diversity of processes in conjunction with a variety of containers, pipettes, and other instruments makes automation a challenge. An efficient solution therefore requires extremely flexible and adaptable technology.

## Manual processes and their issues

We often observe that many processes in the laboratory are completely manual, and the quality of the process largely depends on the operator's skill. An example is the famous slap on the CellStack to detach adherent cells: With what force does each operator perform this operation? What is the optimal force to avoid damaging the cells? Can this approach eventually achieve commercial scale-up? If you aim to solve this problem, there is no way around an automation solution.



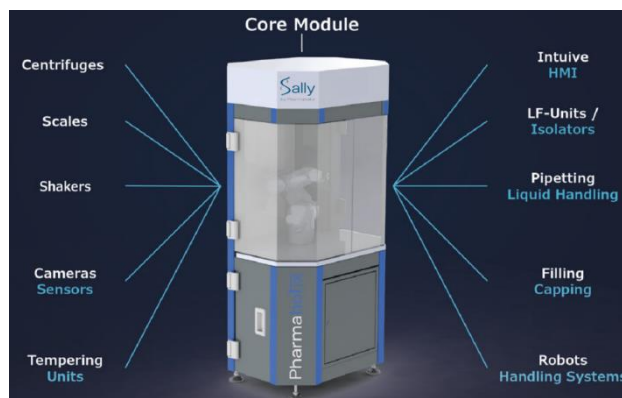
## Sally – modular and versatile



Sally is a modular and innovative concept for the production of cell and gene therapies as well as for general laboratory applications. At its core is a graphical, user-friendly Human Machine Interface (HMI) that, in conjunction with a 6-axis robot from Stäubli, offers the highest flexibility and performance. Sally allows the placement of various processes and laboratory equipment around the robot. The robot features a multifunctional gripper capable of effortlessly manipulating tubes, bottles, flasks, and vials of various sizes. Additionally, a pipetting system capable of handling pipettes with 1 ml and 50 ml is integrated into the gripper.

## Integration possibilities – maximum flexibility through modern robotics

Through Pharmabotix's intuitive user interface, the system can be easily expanded. In addition to the robot and its multifunctional gripper with pipetting function, various laboratory equipment such as incubators, shakers, cameras, inline measurement systems, centrifuges, carts, and much more can be integrated. The Stäubli robot also plays a central role here and can approach all stations within its work area according to customer processes.



Thanks to LED technology, the operator can monitor the status of all devices and containers in the system at any time.

## Automation – from user management to batch record

A modular and flexible system is only as good as its user interface. Pharmabotix relies on the new Siemens Unified platform for automation topics, enabling easy and intuitive operation. In addition to optimal operation, various functions such as:

- Job management
- Recipe management
- Batch reports & long-term archiving
- Analysis of alarm and process data
- User authentication via batch reader in conjunction with a customer-side Active Directory interface
- Audit trails and batch records

can be implemented. The robot is also fully integrated into the HMI, allowing for easy customization and teach-in of robot programs.



## Proof of Concept for Inoculum Production

A proof-of-concept video demonstrates the production of inoculum for suspension cells. The video showcases the flexible handling of various containers and consumables by the robot. It demonstrates the integration of Falcon tubes, flasks from 250 to 2000 ml, vials, robot-assisted pipetting from 1 ml to 50 ml, opening and closing of containers using two screwdrivers, as well as the integration of a centrifuge and an incubator (dummy devices). Status lights enable process monitoring.

Link to Video: [https://www.youtube.com/watch?v=Gfz\\_hrz5kd4](https://www.youtube.com/watch?v=Gfz_hrz5kd4)

## Conclusion

Sally is a flexible and versatile automation solution for laboratory processes and the field of cell and gene therapy. In summary, Sally offers the following advantages:

Would you like to learn more about the solution or have our experts examine your processes? Feel free to reach out!

Future Proof



Quick return on invest



Modular and flexible



Plug and produce



## Useful links:

- Webinar registration <https://pharmabotix.ch/workshop/knowledge-hour-sally-for-cell-and-gene-therapy-manufacturing-lab-applications/>
- Sally product page: <https://pharmabotix.ch/cell-gene/>
- Cryovial Filler / Robotizing of table-top fillers: <https://pharmabotix.ch/news/cryo-vial-filling-robotizing-of-table-top-fillers/>
- Contact Page: <https://pharmabotix.ch/contact/>