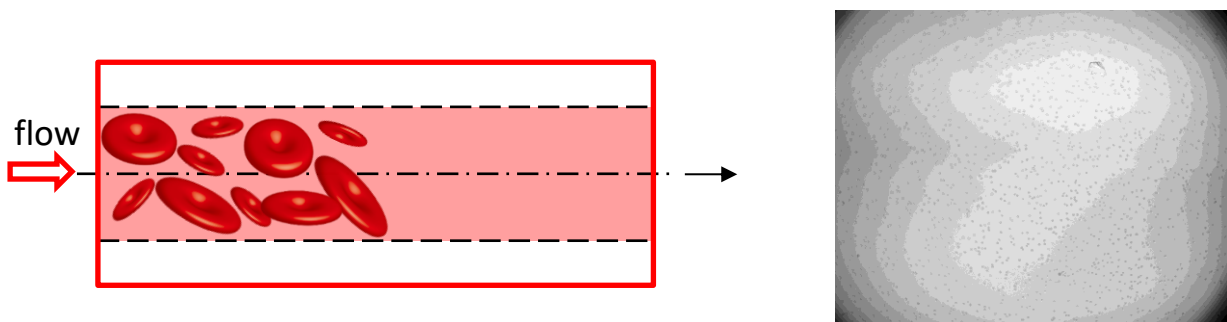


ARP/ADP!

Establishing quality criteria for transparent erythrocytes ("ghost cells")



For the optical measurements of particle dynamics in blood flow, a method for producing hemoglobin-reduced, nearly transparent erythrocytes ("ghost cells") was established at the SLA. In this process, the cell membrane is first deliberately damaged by a concentration difference so that the hemoglobin can be washed out in several centrifugation steps. The cell membrane is then closed again in a further step. Some of the cells are then labeled with a fluorescent dye.

The process described has already been successfully applied and is to be optimized in a parallel ADP. In order to guarantee and verify the quality of ghost cells, measurable quality criteria are to be developed in this work.

Possible tasks within the scope of the ADP are:

- Literature research on blood damage and measuring blood damage
- Literature research on the maximum storage time of whole blood and ghost cells
- Literature research on determining the rheological properties of blood
- Developing your own measurable quality criteria
- Applying the quality criteria, checking the researched storage times

The exact content of the ARP can be adapted depending on the scope and your personal interests.

Start: Immediately

If you are interested, simply contact Till Werner werner@sla.tu-darmstadt.de.