# SCIDENTIFY (Single cell identification)
## Identifying blood cancers, one cell at a time.

### In a nutshell
SCIDENTIFY has developed a platform technology, i.e. cloud-native enterprise software that improves the sensitivity and specificity of flow cytometry, a single-cell technique used in the diagnosis and study of (blood) cancers such as acute myeloid leukemia (AML).

### Why is our technology important?
300,000 people suffered from AML in 2023. Among those who are treated and considered cured, about half will see their cancer return within two years. Sadly, around 50% of all patients will eventually succumb to the disease. The return of cancer is closely linked to positive results in certain medical tests (MRD+ tests). There is a critical need for more accurate tests to detect even the smallest traces of cancer cells, which could help prevent relapse and improve survival rates.

Flow cytometry is used in the determination of MRD in 70% of AML patients. In flow cytometry, malignant cells are identified based on their immunophenotype, the respective biological markers that each cell express. Unfortunately, AML patient's immunophenotype can:

1) differ significantly from patient-to-patient -> require a broad panel to be conclusive, i.e. 3x 8-colour tube and is cost-inefficient
2) changes as a response to treatment (91% of cases)-> there is no guarantee that the test at diagnosis will work for MRD detection, i.e., requires test optimization per patient/time-point, i.e. is time and cost inefficient.

SCIDENTIFY's breakthrough technology enables identification through another descriptor of malignancy independent of immunophenotype: cell morphology.

### The benefits of our solution

- Morphology as a descriptor, i.e. the shape of the cell, and immunophenotyping in one test.

- Higher resolution than competitor software, i.e., 10-20% shorter measurement time.

- IP protected (WO2023095020 (A1) + further application(s) filed)

### Keywords
(Blood) cancer research and disease monitoring, single-cell technologies, enterprise software

### Founding Team
CEO/CSO - Dr. Cedric David KOOLEN, obtained his PhD in Chemical Engineering from EPFL with honors in July 2023 working on flow cytometry. He further holds degrees in Physics, Chemistry, and Medical Sciences from top universities across Europe. He is KOL for VSParticle B.V. He is the inventor of three patents. He is principal investigator at EPFL-ISIC-SB-LMER.

CTO/COO - Sven R.J. KOOLEN, obtained his MSc. in Mechanical Engineering from the TU Delft in 2018. He was senior consultant by the fortune 500 company Accenture, specializing in applied AI until 2022. He has worked with various fortune 500 companies including GE, Anglo American, and Shell. He is the inventor of 1 patent. He is self-employed as Senior Data Engineer in the petrochemical industry.

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Get in touch
We'd love to speak to you more about our project.
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