

Conclusion

iFLUOR™ brings wound healing assays into the next generation: continuous, high-resolution imaging, automated workflows, and accurate, reproducible data.

The integrated software enables automated quantitative analysis of wound characteristics, providing reliable metrics for cell migration and closure dynamics.

Ideal for academic, pharmaceutical, and biotechnology research, **iFLUOR™** delivers the precision, stability, and flexibility required to push the boundaries of cell migration studies.

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DT-FLUOR

Redefining cell migration analysis

Discover, measure, and understand cell dynamics like never before

Cell migration drives essential biological processes such as tissue regeneration, immune response, and cancer progression.

Accurately tracking these movements is key to advancing biomedical and pharmaceutical research.

With **iFLUOR™**, the study of cell migration can rely on a fully automated, real-time, and quantitative imaging system, resulting in precision and insight beyond traditional methods.

From classic assays to advanced monitoring

The wound healing (scratch) assay represents the gold standard for studying collective cell migration.

Yet, conventional manual setups come with serious drawbacks: limited time points, repositioning errors, and environmental fluctuations.

iFLUOR™ overcomes these limitations, offering continuous, automated, high-precision imaging that captures every stage of migration with unmatched clarity.

D-TAILS
Disruptive Technological Advances In Life Science

Why choose iFLUOR™

- **Full Field coverage:** $10 \times 10 \text{ mm}^2$ large field of view captures the entire wound area, allowing multiple conditions to be studied in parallel without repositioning.
- **Quantitative precision:** $2.5 \text{ }\mu\text{m}/\text{pixel}$ resolution enables detailed analysis of migration speed and morphology.
- **Unmatched stability:** motorized X-Z stage ensures long-term imaging without drift.
- **Perfect environment:** Compatible with Okolab H301 Mini incubator for stable temperature, humidity, and CO_2 .
- **Fully automated workflow:** time-lapse imaging with customizable intervals for long-term experiments.
- **Guaranteed Reproducibility:** consistent conditions eliminate alignment errors and variability.

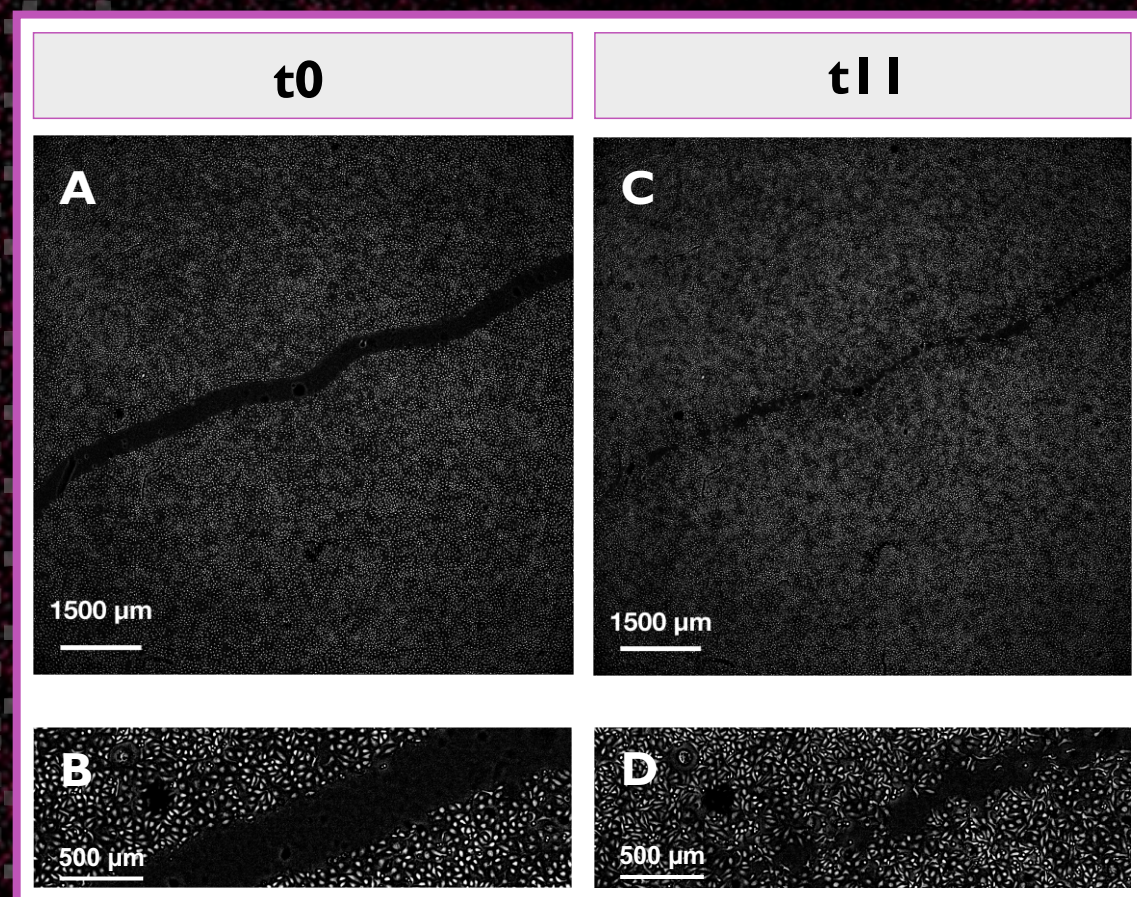


Figure 1: Time-lapse images of wound healing progression ($t_0=0$ hours, $t_{11}=11$ hours)

Performance that inspires confidence

In validation studies with SKOV3 cells, iFLUOR™ captured over 60 regions simultaneously for 48 hours, acquiring images every 15 minutes.

Automatic analysis of area, perimeter, compactness, and closure rate revealed sigmoidal kinetics typical of coordinated collective movement precisely quantified thanks to high temporal and spatial resolution.

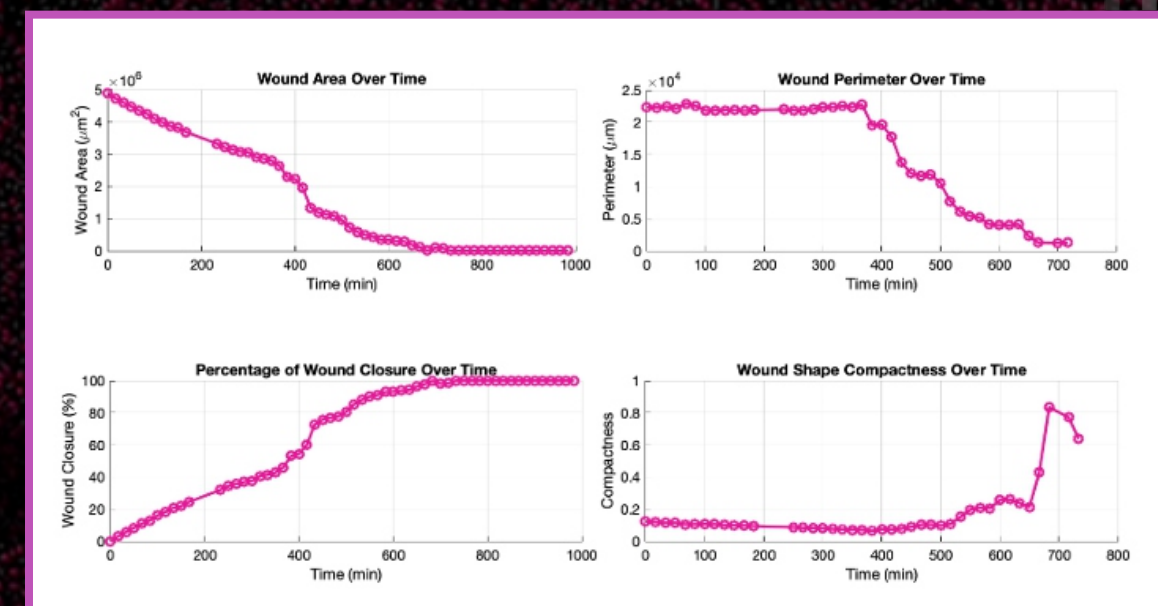


Figure 2: Quantitative analysis of area, compactness, perimeter, and closure rate

Versatility for every research need

iFLUOR™ adapts to a wide range of experimental applications:

- Cancer invasion and metastasis studies.
- Tissue regeneration and wound healing research.
- Drug screening for pro- or anti-migratory compounds.
- Comparative assays between wild-type and mutant cell lines.
- Integration with microfluidic systems to simulate gradients and complex microenvironments.