

CASY<sup>VIVO</sup> Cell Counter & Analyzer - Powering Breakthroughs in Cell Research

## NLGN4X Depletion Fuels Metastatic Melanoma Progression

Schörghofer et al. (2024). Late stage melanoma is hallmarked by low NLGN4X expression leading to HIF1A accumulation; British Journal of Cancer, 131:468–480. DOI: 10.1038/s41416-024-02687-y.

Melanoma; Cancer	
Index	CC17
Standardization	X
Counting	X
Viability	
Volume	

### The Challenge:

Identifying novel markers for metastatic melanoma progression, as current diagnostic markers often fail to reliably predict patient outcomes or the molecular drivers of metastasis.

### CASY's Contribution:

CASY provided high-precision automated counts to track cell growth over five days. Data showed that *NLGN4X* knockdown significantly reduces proliferation in MCM1G and WM793B lines, proving that *NLGN4X* loss triggers a metabolic switch that favors invasive migration over rapid division.

### Key Benefits to Researchers:

- **Precision Proliferation Metrics:** Automated counting enabled precise tracking of population changes across multiple days and cell lines.
- **Validating Malignant Shifts:** Confirmed that while metastatic potential increases, cell proliferation actually slows, a hallmark of aggressive phenotypic switching.
- **Standardized Accuracy:** Delivered objective data proving growth inhibition resulted directly from *NLGN4X* depletion.

