CASY^{VIVO} Cell Counter & Analyzer - Powering Breakthroughs in Cell Research

Normalization of Melanin Content in B16F10 and B78H1 Melanoma Models

Rothe et al. (2024). Programmable Release of Chemotherapeutics from Ferrocene-Based Injectable Hydrogels Slows Melanoma Growth; Adv. Healthcare Mater., 13, 2400265. DOI: 10.1002/adhm.202400265.

Melanoma; B16F10; B78H1	
Index	CC7
Standardization	X
Counting	X
Viability	
Volume	

The Challenge:

To assess the difference in melanin content between melanotic B16F10 and amelanotic B78H1 melanoma cells for drug release and tumor control studies

CASY's Contribution:

CASY Cell Counter was used to accurately **count B16F10 and B78H1 cells** to normalize the extracted melanin content , enabling the critical finding that **B78H1 cells lack melanin** compared to B16F10.

Key Benefits to Researchers:

- **Precision in Melanin Quantification**: Accurate cell counting ensures reliable normalization of melanin concentration (pg/cell).
- **Standardized Sample Preparation**: CASY contributed to the robust methodology for verifying a crucial difference between the cell lines.
- **Biocompatibility Assessment**: CASY was also used to count White Blood Cells (WBCs) in peripheral blood to exclude dysregulated immune reactions and adverse systemic side effects.

CASY-Based Normalization of Melanin and ROS Levels in Melanotic vs. Amelanotic Melanoma

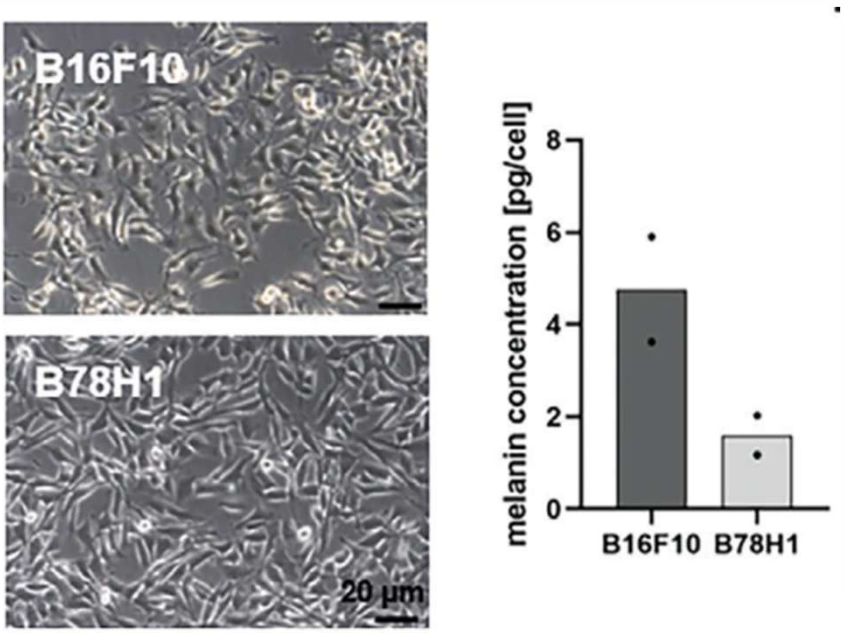

Fig. 4: Cell number normalized to assess the Melanin concentration and reactive oxygen species (ROS) levels in B16F10 and B78H1 melanoma. A) Cell morphology and melanin con-

centration of melanotic B16F10 and amelanotic B78H1 cells in monolayer cell cultures