

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

## HPS vs. PRP: Superior Adipogenic Support for Lipofilling

Jiang et al. (2025). Comparative evaluation of hypoxia preconditioned serum (HPS) and platelet-rich plasma (PRP)... **Frontiers in Bioengineering and Biotechnology**, 13:1683899. DOI: 10.3389/fbioe.2025.1683899.

Preadipocytes;	
Index	CC16
Standardization	X
Counting	X
Viability	
Volume	

### The Challenge:

Reducing fat graft resorption (20-90%) in lipofilling by optimizing the adipogenic environment for preadipocyte survival and differentiation using bioactive blood-derived secretomes.

### CASY's Contribution:

CASY provided high-precision automated counts of preadipocytes on days 2 and 4. The data demonstrated that Hypoxia Preconditioned Serum (HPS) supports robust proliferation and survival comparable to growth media, providing the essential quantitative baseline needed to validate HPS as a superior promoter of adipogenesis.

### Key Benefits to Researchers:

- **Precision Volumetrics:** Pulse area analysis delivered high-resolution growth kinetics across multiple donors and concentrations.
- **Normalization Accuracy:** Provided the critical "per cell" denominator for LDH cytotoxicity assays, ensuring health assessments were statistically sound.
- **Technical Quality:** Enabled label-free, rapid quantification that validated HPS as a safe and effective regenerative adjunct for research use.

