



## Kinetic Stem Cell (KSC) Counting From Asymmetrex®

*Technologies for Certifying the Quality of Tissue Stem Cells  
and Their Culture Media*

### KSC Counting Technologies

#### *Tissue stem cell-specific fraction and dosage (RABBIT Count™)*

Asymmetrex® has developed validated mathematical algorithms that can be used to determine the specific fraction or dosage of tissue stem cells (*e.g.*, hematopoietic stem cells or mesenchymal stem cells).<sup>1-5</sup> Private online calculators return to subscribers an instant tissue stem cell fraction after an input of only three bits of information:

1. Tissue source
2. Cell culture medium
3. 0-hour culture and 72-hour culture total cell number (*i.e.*, population doubling time)

#### *Tissue stem cell-specific response kinetics (TORTOISE Test™)*

Asymmetrex®'s KSC counting software provides unique, quantitative data for the specific viability, expansion, and tissue cell renewal of the tissue stem cells in complex tissue cell preparations. Similar kinetic factors are provided for committed progenitor cells and terminally-differentiating cells that are also present.

KSC counting software can be used to optimize the expansion of tissue stem cells.

### Applications

#### *Production*

- ❖ Quality control of the stem cell-specific fraction or dosage of tissue stem cell production lots
- ❖ Quality control of the stem cell-specific effects of production lots of tissue stem cell culture media
- ❖ Quality control of the stem cell-specific effects of production lots of tissue stem cell culture medium growth factor supplements
- ❖ Optimization of tissue stem cell expansion processes

#### *Marketing & Sales*

- ❖ Certification of the stem cell-specific fraction or dosage for tissue stem cell products
- ❖ Certification of the stem cell-specific effects of tissue stem cell culture media and growth factor supplements

### References

1. 2017 – US 9733236
2. 2019 – GB 2529921
3. Dutton *et al.* *OBM Transplantation* 2020;4:24; doi:10.21926/obm.transplant.2003117.
4. 2021 – No. PCT/US2021/63157208
5. Sherley *et al.* 2021, submitted.



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