

## SERUM-FREE MEDIUM FOR THE ISOLATION AND EXPANSION OF CANINE ADIPOSE-DERIVED MESENCHYMAL STEM/STROMAL CELLS

### Technology Summary

Mesenchymal Stem/Stromal Cells (MSCs) are a potentially effective therapy for treating a variety of conditions in veterinary medicine. MSCs are isolated and expanded *in vitro* in a medium that is supplemented with fetal bovine serum (FBS). However, the use of FBS as a medium component during manufacturing may pose several problems. FBS can be a source of unwanted pathogens, the serum can introduce carry-over components that may elicit an immune response, and lot-to-lot variations in FBS quality may introduce inconsistencies between batches of MSCs.

This invention is a novel FBS-free medium that supports both the isolation and expansion of MSCs from canine adipose tissue while removing the unwanted pathogens, immune response and lot-to-lot variations.

### Potential Commercial Applications

- An isolation and expansion technique for manufacturing large quantities of MSCs in an FBS-free medium

### Competitive Advantages

- The FBS-free medium removes the potential for adventitious pathogens, unwanted immune response and lot variations in MSCs during manufacture.
- The MSCs cultivated in this novel medium exhibit a more uniform size and a shorter population doubling time as compared to the FBS medium

**Development Stage:** Research Material

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### Publications:

- Devireddy, LR., et. al. A serum-free medium formulation efficiently supports isolation and propagation of canine adipose-derived mesenchymal stem/stromal cells. PLoS One. 2019 Feb 27;14(2)  
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**Product Area:** research material, supplement, media, serum

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