Office of Technology Management

ITACONATE IMMUNOMODULATORY PROPERTIES-ISCHEMIA REPERFUSION

Technology Summary:
Approximately 1.3 million individuals each year in USA alone are affected by ischemia-reperfusion injuries. A substantial portion of such injuries is the result of macrophage-mediated inflammation. There are some conventional methods for treating macrophage-mediated inflammation, but none has acquired a significant market share. A novel approach of administering itaconate or its derivatives could potentially surpass the existing treatments. Recent discovery of itaconate to suppress the LPS-induced immune macrophage response could open up new treatment opportunities for patients suffering from ischemic-reperfusion injuries.

Advantages:
- Potential therapeutic approach to ischemia-reperfusion injury
- Non-toxic and scalable.
- Additional marketability as supplement.

Stage of Development:
- Preclinical animal model.

Application:
- Treating acute macrophage-mediated inflammation associated with ischemia-reperfusion injuries.

Publication:
- Lampropoulou et al., Cell Metabolism (2016) doi:10.1016/j.cmet.2016.06.004

Patent:
- Pending

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