

*International Conference on***PHARMACEUTICAL AND BIOMEDICAL ENGINEERING***October 16-17, 2017 Osaka, Japan***Surgical evaluation of a full-body prosthetic****John LaRocco**

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Human head transplant surgery was predicated in terms of matching a compatible donor and recipient, selected based on strict immunological, genetic and physiological criteria. Due to the difficulty of finding appropriate donors, an artificial body was investigated as a suitable substitute. A cylindrical full-body prosthetic, fabricated using sterile stereolithography (SLA) with Accura® 60 was used as test case, in which the internal organs, spine and head of a donor rat were transplanted. Due to complications associated with unstable blood flow, the donor animal survived one hour after surgery. The findings suggest that an improved perfusion system, internal partitions and insulation would improve donor survivability in future attempts. We demonstrated the first step towards development of a technology with potential to assist the terminally ill and severely handicapped.

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