The functional return to tissue transplanted on extended neurovascular pedicles.

Progress report, Apr-Jun 79.

Office of Naval Research
Contract No. 00014-76-C-486

Department of the Navy

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The following is the progress made during April, May and June 1979 on Contract N. 00014–76-C-486, Office of Naval Research.

**Clinical Evaluation of Neurovascular Island Transplants.**

This study is being done by Dr. Norman Poppen and Dr. Tom Norris. All patients who have undergone toe to hand transfers or vascular island flaps from the toe to the hand have been recalled for clinical evaluation of restoration of function and sensation and motion. Detailed evaluation is made of the donor defect in the foot. The results of this study will form the basis of our paper to be presented to the American Society for Surgery of the Hand in February 1980 and to be included in a chapter of a book by Dr. J.E. Flynn of Boston on hand surgery.

**Xenon Washout Studies.**

This study is being conducted by Dr. Philip Hendel, a microvascular fellow. Various pharmacological agents have been tested using the Finseth rat-abdominal flap model. The same technique is being used clinically to monitor the circulation in microvascular flaps and transplants. This study to date has been the most dependable for monitoring microcirculation that we have found to date.

**Fiberoptic monitoring of Microvascular patency.**

Small, implantable fiberoptic cables have been successfully used to monitor at and distal to an anastomoses. The model has been revised on numerous occasions and a final prototype is still being assembled.

**Implantable microDoppler.**

Medsonics of Mountain View, California has still not delivered the tubolinar probe. Progress on this project is at a standstill.

**Study of Tissue Oxygen Tension, using polography.**

This study is being performed in conjunction with the Department of Anesthesia, University of California and we are at present awaiting reconstruction of the recording equipment.
Results of Isoxuprene on Tissue Survival in the Rat.

This study has been performed by Dr. Barry Zide and is complete. The report has been accepted for presentation at the meeting of the American Society of Plastic and Reconstructive Surgeons in October. The manuscript has been assembled and submitted to the editors of the Journal of Plastic and Reconstructive Surgery.