

# Plastic and Reconstructive Surgery

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We have been providing high-level surgical / reconstructive treatments for various patients, including microsurgical tissue transfer, nerve repair, hand anomaly reconstruction, cleft lip and palate repair, microtia, reconstruction, extensive burn/trauma, chronic/non-healing wound, and laser treatments. Our basic and clinical research interests are mainly focused on plasticity in peripheral nerve regeneration and wound healing mechanisms. Using animal models, we are promoting research projects which contributes to develop novel treatments for chronic ulcer or surgical procedure for better treatment options for patients such as facial paralysis and brachial plexus injury.



## Research and Clinical interests

1. Plasticity in peripheral nerve regeneration after nerve transfer or end-to-side neurorrhaphy / Head and neck reconstruction including facial nerve reconstruction
2. Wound healing mechanism / Various treatments for chronic wound or burn patients
3. Simulation surgery using 3D-printed model

## Materials and methods for collaborations

1. Making animal models for evaluation of peripheral nerve regeneration using microsurgical and ultramicrosurgical technique.
2. Evaluation of peripheral nerve regeneration (retrograde axonal tracing, various electrophysiological test, walking track analysis etc.)
3. Making 3D-printed model for novel simulation surgery

## Links to additional info

1. Wakatsuki H, Shibata M, Matsuda K, Sato N. Development of a mouse nerve-transfer model for brachial plexus injury. Biomed Res. 2019;40(3):115-123.  
[https://www.jstage.jst.go.jp/article/biomedres/40/3/40\\_115/article](https://www.jstage.jst.go.jp/article/biomedres/40/3/40_115/article)
2. Matsuda K, Kakibuchi M, Sotsuka Y, Kubo T, Shibata M, Hosokawa K. End-to-side "loop" graft for total facial nerve reconstruction: Over 10 years experience. J Plast Reconstr Aesthet Surg. 2015 Aug;68(8):1054-63. [https://www.jprasurg.com/article/S1748-6815\(15\)00183-7/fulltext](https://www.jprasurg.com/article/S1748-6815(15)00183-7/fulltext)
3. Lab HP (Japanese). <https://www.med.niigata-u.ac.jp/prs/site/>