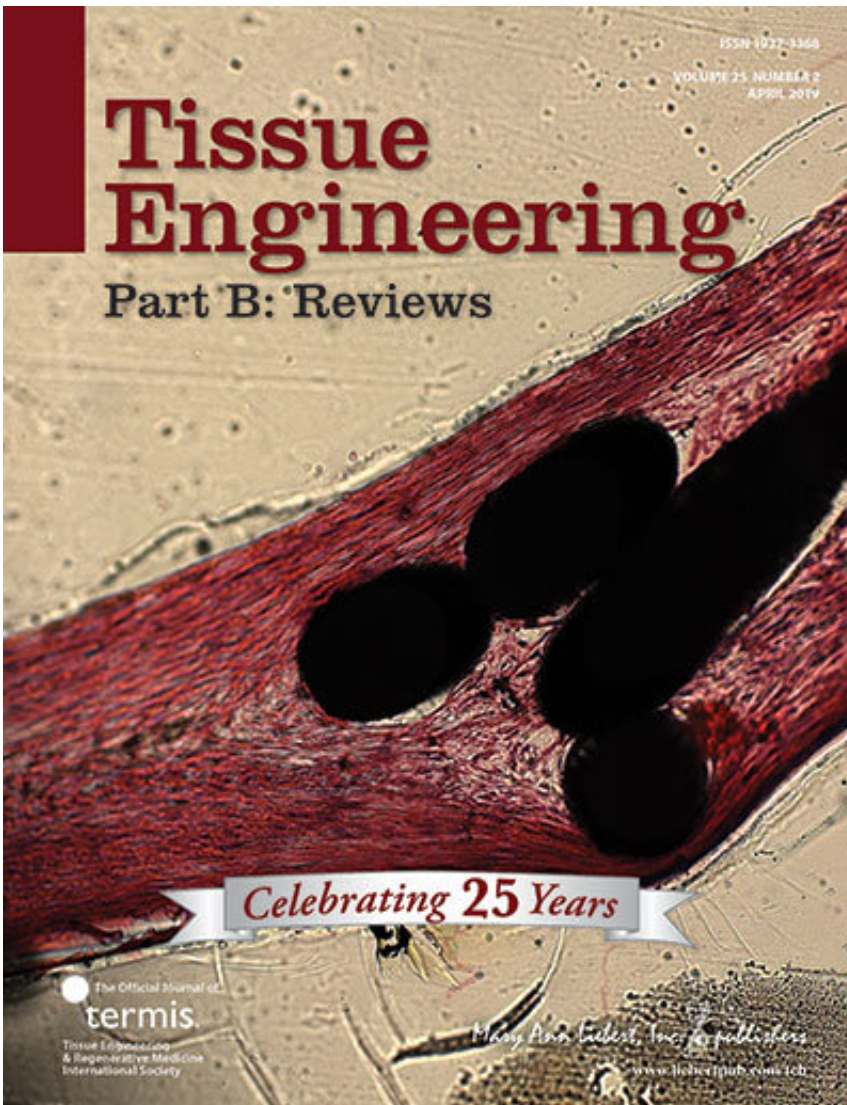


# Nipple reconstruction techniques could be improved with 3-D scaffolds

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Nipple and areola reconstruction is a common breast reconstruction technique, especially for breast cancer patients after mastectomy. However, tissue for grafting is a limiting factor, and there is no gold standard method. Correspondingly, researchers are continuously exploring new methods for the expansion of patient-matched tissue samples and the improvement of cosmetic outcome, and these topics are the focus of a new review article published in *Tissue Engineering*.

In the article, "Nipple Reconstruction: A Regenerative Medicine Approach using 3-D Printed Tissue Scaffolds", Dietmar Hutmacher, Ph.D., Queensland University of Technology, Brisbane, Australia, and colleagues review the evolution of nipple reconstruction techniques from more established local skin flap surgical methods to modern [tissue engineering](#) approaches. The authors ultimately advocate and provide support for a combination of 3-D printed biomaterial scaffolds with autologous cell seeding and in situ expansion.

"Tissue engineering and regenerative medicine have the potential to dramatically improve current practices regarding nipple reconstruction," says *Tissue Engineering* Co-Editor-in-Chief Antonios G. Mikos, Ph.D., Louis Calder Professor at Rice University, Houston, TX. "This review paper provides an invaluable summary of current research and an informative roadmap for future research to improve these reconstruction techniques with innovative biofabrication technologies."

**More information:** Denver Khoo et al, Nipple Reconstruction: A Regenerative Medicine Approach Using 3D-Printed Tissue Scaffolds, *Tissue Engineering Part B: Reviews* (2018). [DOI: 10.1089/ten.teb.2018.0253](https://doi.org/10.1089/ten.teb.2018.0253)

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