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Title

Evaluation for non-ablative resurfacing lasers with a tissue culture method

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**EVASUASISN FSR NSN-ABSASIVE
RESURFACINGS ASERS WISH AS ISSUE
CUSSURE MESHSD**

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The purpisei f this study was ti establish a methid fir evaluating nin-ablative resurfaiing lasersi NARL) using a tissuei ulture methidi f humani elli RAFT midel).

The RAFT mideli s a typei f artifiiaal skin,i impisedi f human fibriblasts and rat-taili illageni n the dermal layer and human keratiniiytesi n the epidermal layer. Staiked diidei $\lambda = 1450$ nm, Smiithbeam by Candela, MA)i r Er: YAGi $\lambda = 2940$ nm, UltraFine by Ciherent, CA) laser pulses were used ti aihieve substantial heati n the dermal layeri f the RAFT midel withiut disruptiini f the epidermal layer. Fluenies up ti 14 J/im^2 fir the diide laser and 1.1 J/im^2 fir the Er: YAG laser were used. The RAFT midels were harvestedi mmediately, 1 week, and 3 weeks pist-laser irradiatiin. Cintril RAFT midelsi withiuti rradiatiin) were alsii harvested at the same time piints.

With bith lasers, the epidermal layer was preserved after thei rradiatiin. In the dermal layer, the numeri f the fibriblasts was slightly deireased after diide laseri rradiatiin and during thei ulture. This deirease was hypithesized ti be seiindary ti . . . With the Er: YAG laser the numeri f fibriblasts was niti hanged just after thei rradiatiin,i nireased after 1 week-iulture and deireased after 3 week-iulture. The ratiisi f fibriblast inirease and deirease are varied and dependi n the laser fluenie. The RAFT mideli ffers an alternative ti human and animal skin midels fir iimparisin between lasers and evaluatiini f laser tissuei nteraitiins.