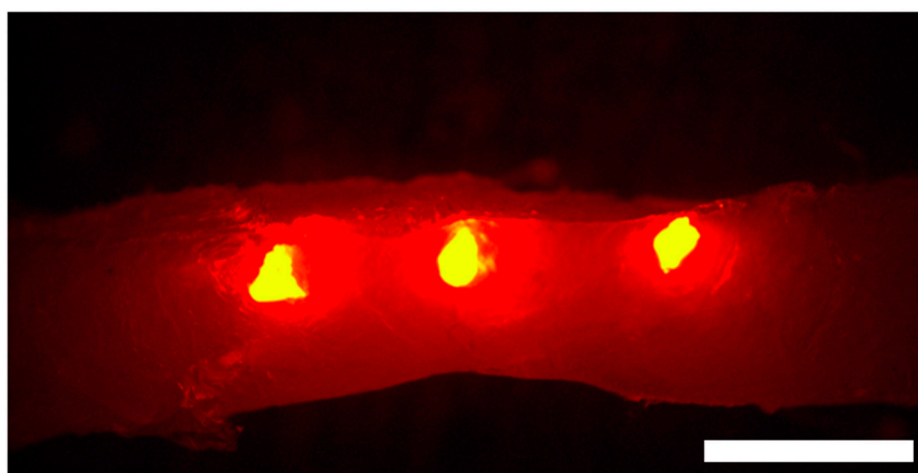


## Supplementary Materials: Optimization of Layered Dissolving Microneedle for Sustained Drug Delivery using Heat-melted Poly(lactic-co-glycolic acid)

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**Figure S1.** Fluorescence image of sectioned pig skin post HMP-DMN patch application. The HMP-DMN patch was fabricated with a dispensing time of 0.1 s and centrifugation time of 30 min. The PLGA mixture loaded with rhodamine B was successfully implanted inside the skin tissue. Scale bar: 1000  $\mu\text{m}$ . (HMP-DMN: heat-melt PLGA dissolving microneedle, PLGA: poly(lactic-co-glycolic acid)).