Supporting Information


High Aspect Ratio Elongated Microparticles for Enhanced Topical Drug Delivery in Human Volunteers

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**Figure S1**: Characterization of elongated microparticle (EMP) diameter (circles) and length (triangles). The EMPs had a diameter of $9.3 \pm 0.9 \mu m$ and a length of $303.4 \pm 208.7 \mu m$, with 50% of the EMPs having a length between 120.1 and 483.2 \mu m.
Figure S2: Characterization of elongated microparticle (EMP) penetration within volunteers. Reflectance confocal microscopy was used to analyse the number, distribution and penetration characteristics of the EMPs within the skin. The inset is a dermoscopy image showing the EMP treated region of the volunteer’s volar forearm. The small nature of the
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EMPs resulted in no obvious disruption to the skin. The red box corresponds to the reflectance confocal microscopy analysed area. Scale bars are 1 mm and 2 mm in the inset.

**Figure S3:** Characterization of elongated microparticle (EMP) penetration within volunteers. The EMP penetration angle decreased from 12.5 ± 6.3 degrees to 5.5 ± 2.5 degrees over a two week period as the EMPs migrated to the surface of the skin and were eliminated.