Supplementary Material (ESI) for Journal of Materials Chemistry B

Durable keratin based bilayered electrospun mats for wound closure †

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† Electronic Supplementary Information (ESI) available: Tabel and Figure.

# Both have made equal contributions to this study

Contents: **Page No.**

Supplementary Table 02

Supplementary Figures 03-6

Supplementary Table

Table S1.Tensile properties of electrospun nanofibrous scaffolds

Sample name	Mean Tensile Strength (MPa)	Mean Elongation At Break (%)
KC-PG	25.49±1.06	12.37±1.15
KCD-PG	24.82±0.57	11.64±1.11

Supplementary Figures

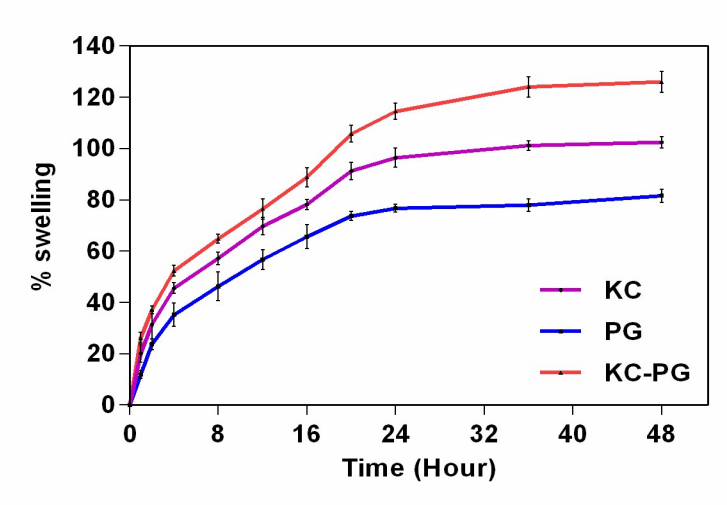

Figure S1 In vitro swelling behaviour of the nanofibrous scaffold

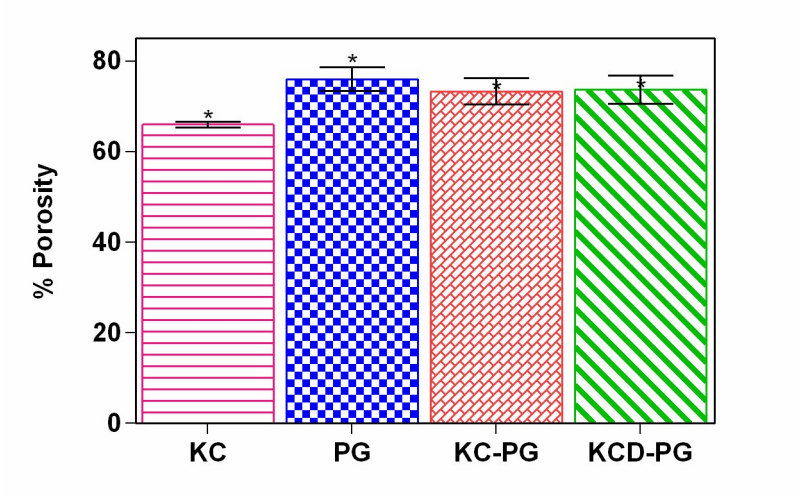

Figure S2 Porosity measurement of the nanofibrous scaffold (*$p < 0.05$; data presented are mean ±SD, n =3)

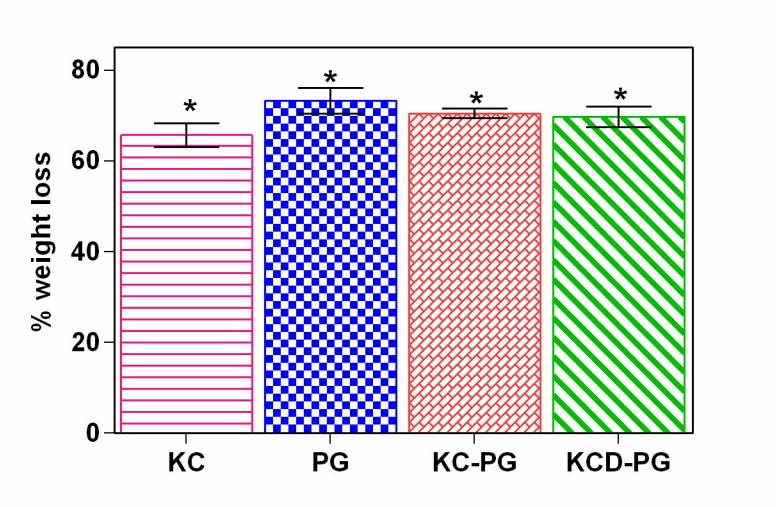

Figure S3 In vitro enzymatic stability of the nanofibrous scaffold scaffold (*$p < 0.05$; data presented are mean ±SD, n =3)

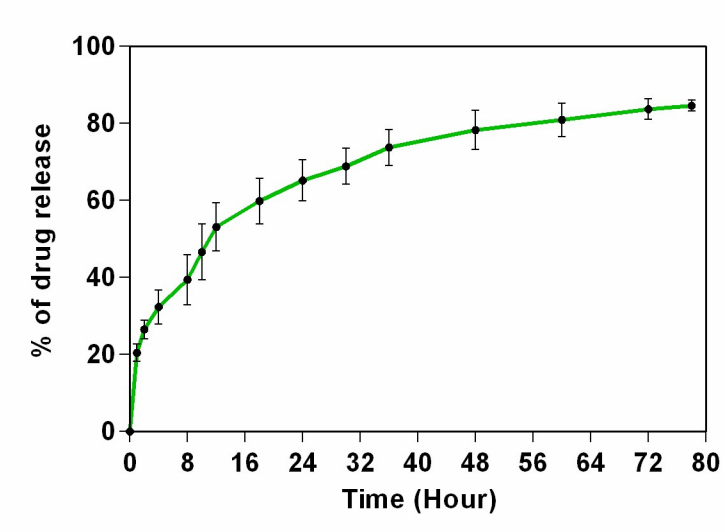

Figure S4 In vitro release study from the KCD-PG nanofibrous scaffold

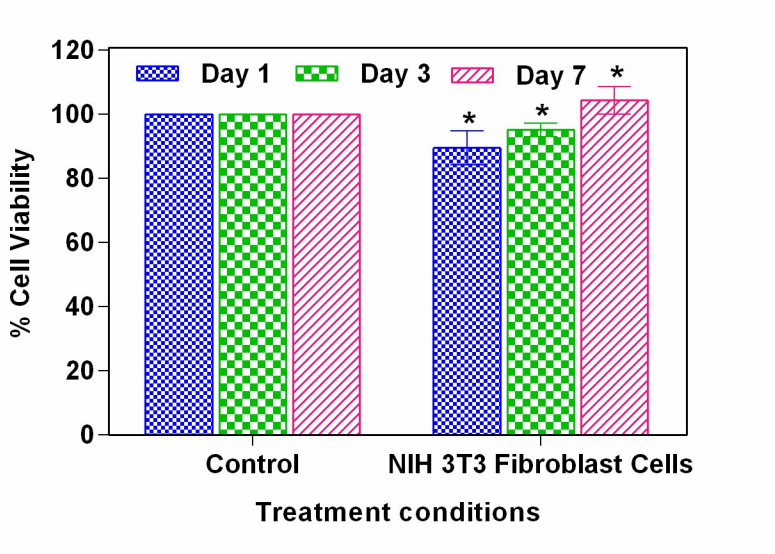

Figure S5 Figure 6 In vitro biocompatibility of NIH 3T3 fibroblast cell line over 1 day, 3 day and 7 day using MTT assay on the KCD-PG dual layered nanofibrous scaffold after 7 and 14 days. The data represented as the mean ±SD, n =3 (*P<0.05)

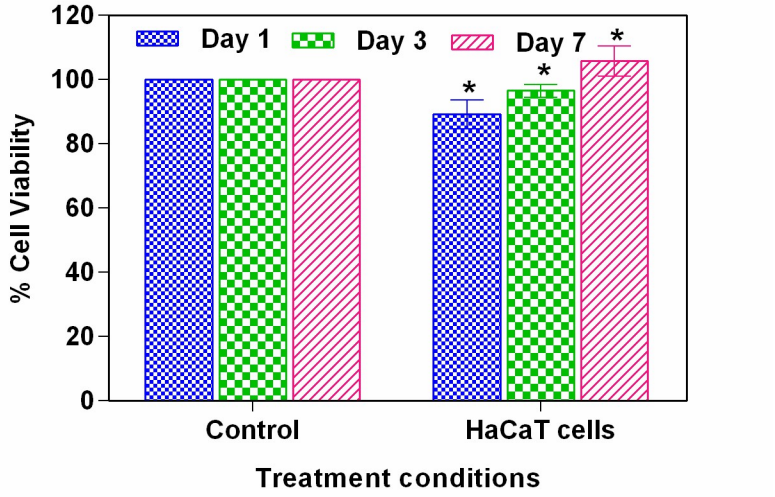

Figure S6 In vitro biocompatibility of Human (HaCaT) keratinocytes cell line over 1 day, 3 day and 7 day using MTT assay on the KCD-PG dual layered nanofibrous scaffold. The data are represented as the means± standard deviation; n = 3 (*P < 0.05).

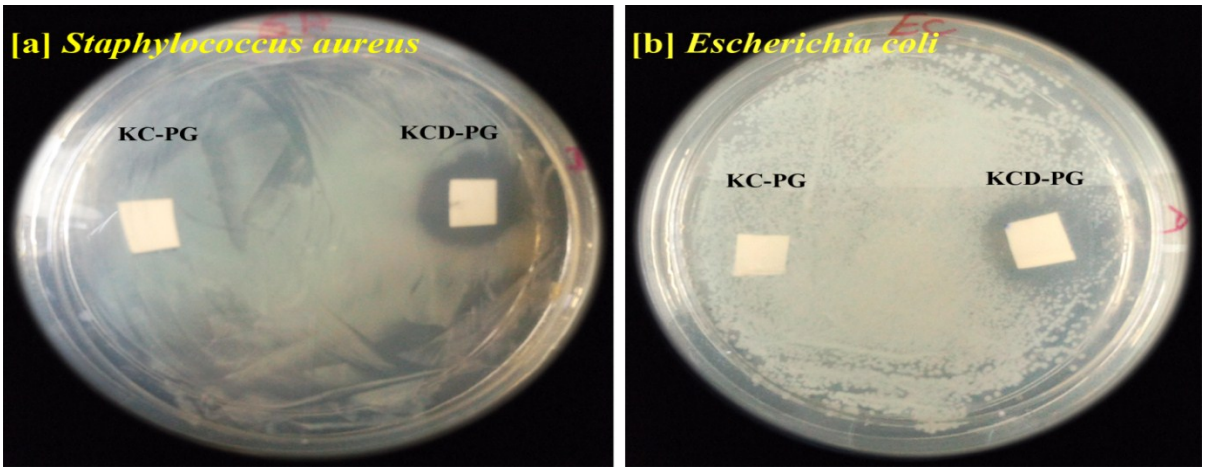

Figure S7 Antibacterial activities of the dual layered nanofibrous scaffold (a) Staphylococcus aureus and (b) Escherichia coli

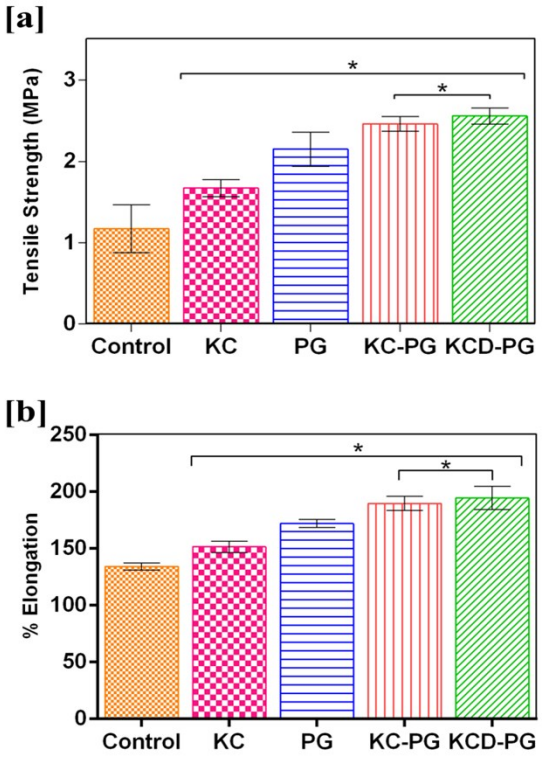

Figure S8 Tensile strength and elongation values of excised healed wound tissues of control and treated groups. Values are expressed as mean ± SD and the level of significance is expressed as * corresponding to $p < 0.05$, respectively compared with the control group.