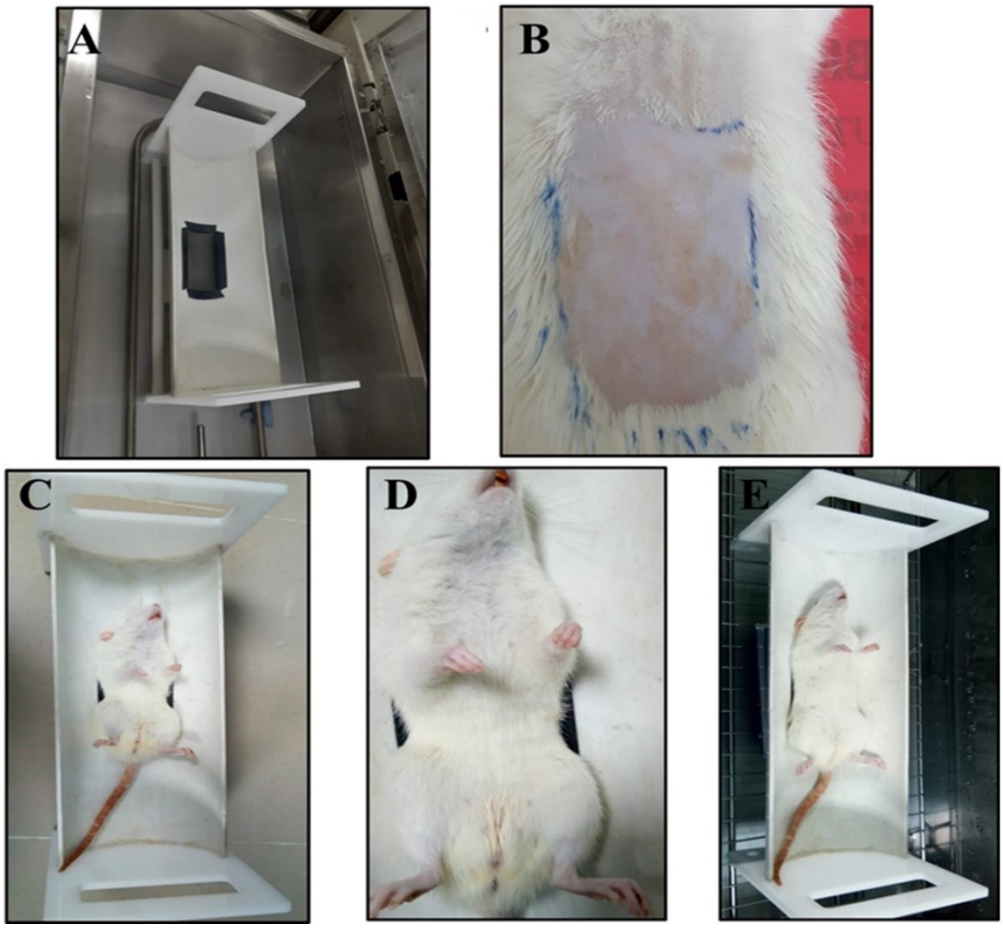
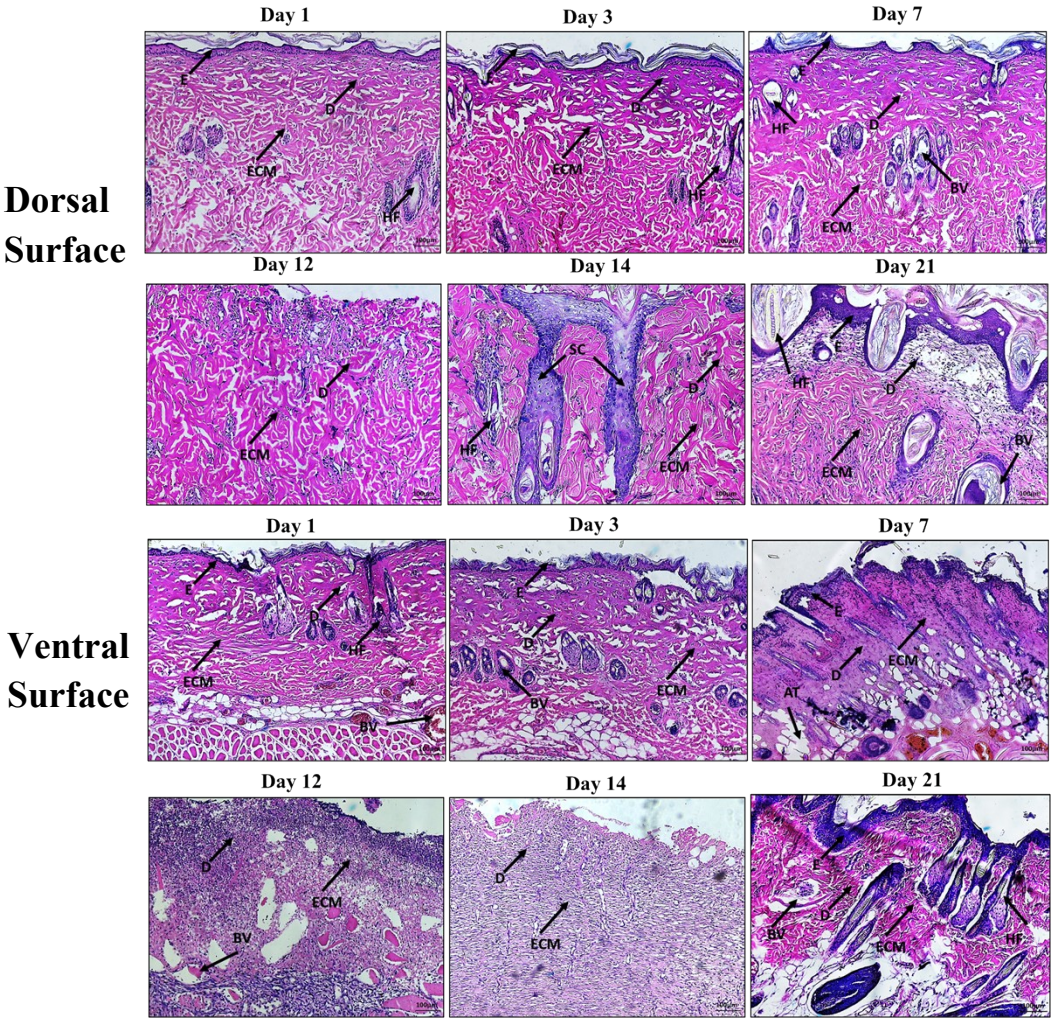
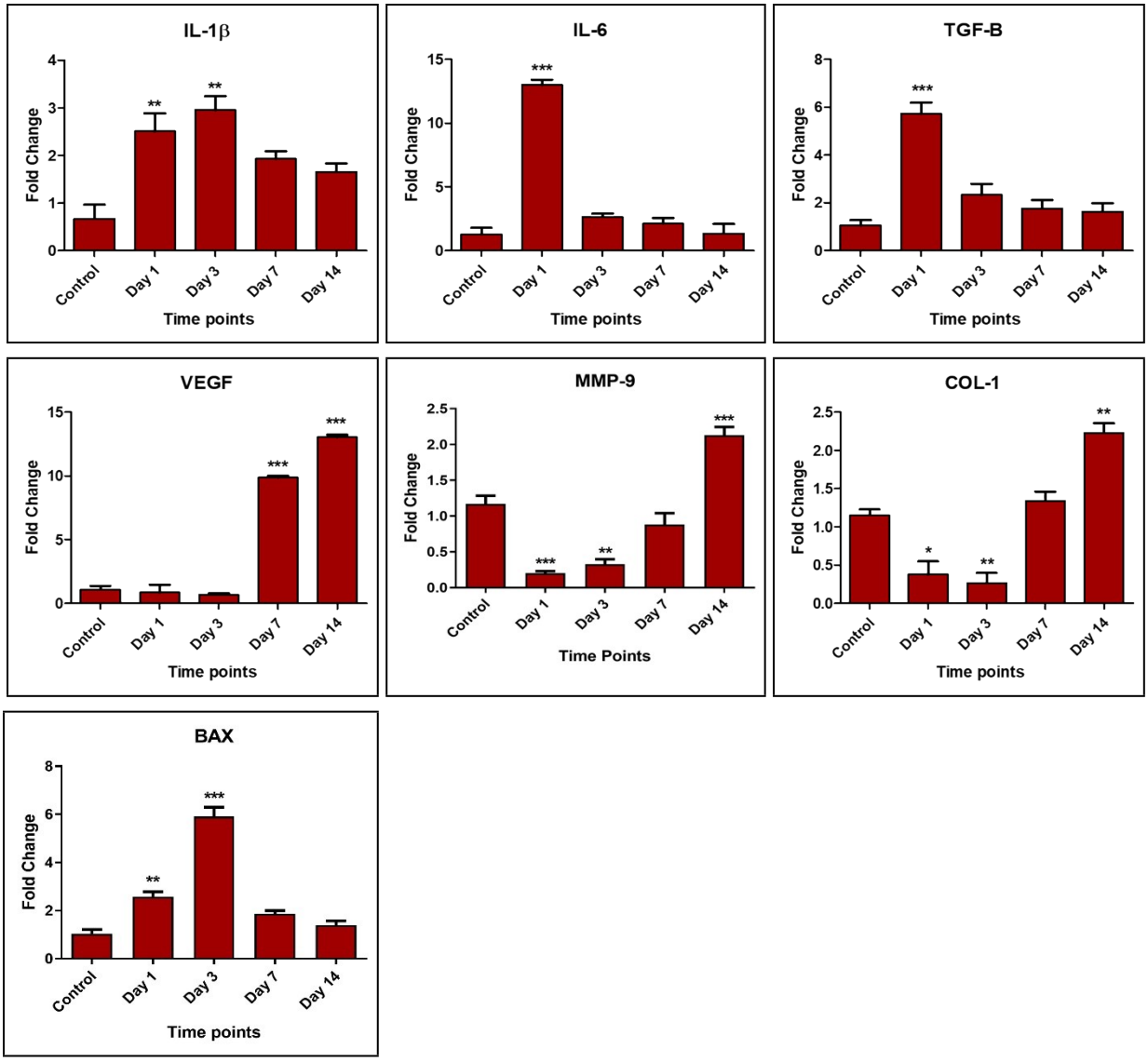



**Supp. Figure 1: Development of burn model.** Water level in the water bath was measured by placing the mold in it (A). Rat was shaved and anesthetized (B). Rat was then placed in the mold and its position is fixed to only expose the desired area for burn within the mold (C&D) and the mold was then placed in the water bath for 10 sec and then removed (E).




**Supp. Figure 2: Histological analysis of Control Burn**. The control burn showed inflamed and disoriented tissue framework which progressed with damaged ECM and inflamed hair follicles till day 3 to 7, whereas, severe tissue scarring leading to incomplete regeneration till day 21 was observed (A). Severe inflammation with damaged tissue framework involving the epidermis and dermis from day 1 till day 7 and incomplete re-epithelialization and tissue scarring till day 21 was observed (B). The images were taken at 10X magnification.




**Supp. Figure 3: Gene expression analysis in control burn.** The genes IL-1β and IL-6 and TGF-β showed time dependent downregulation as the wound progresses. VEGF showed increased expression at day 7 and 14. BAX showed upregulation particularly at day 3 only. COL-1 and MMP-9 showed time dependent up regulation with the highest expression at day 14. One way ANOVA was used for statistical analysis, followed by descriptive statistics of Bonferroni's post hoc test and P value of $< 0.05$ was considered statistically significant (where *** = $p < 0.001$, ** = $p < 0.01$ and * = $p < 0.05$).