

Supplementary Materials for

OPTIMIZATION OF OLIGOMER CHITOSAN/ POLYVINYLPIRROLIDONE COATING FOR ENHANCING ANTIBACTERIAL, HEMOSTATIC EFFECTS AND BIOCOMPATIBILITY OF NANOFIBROUS WOUND DRESSING

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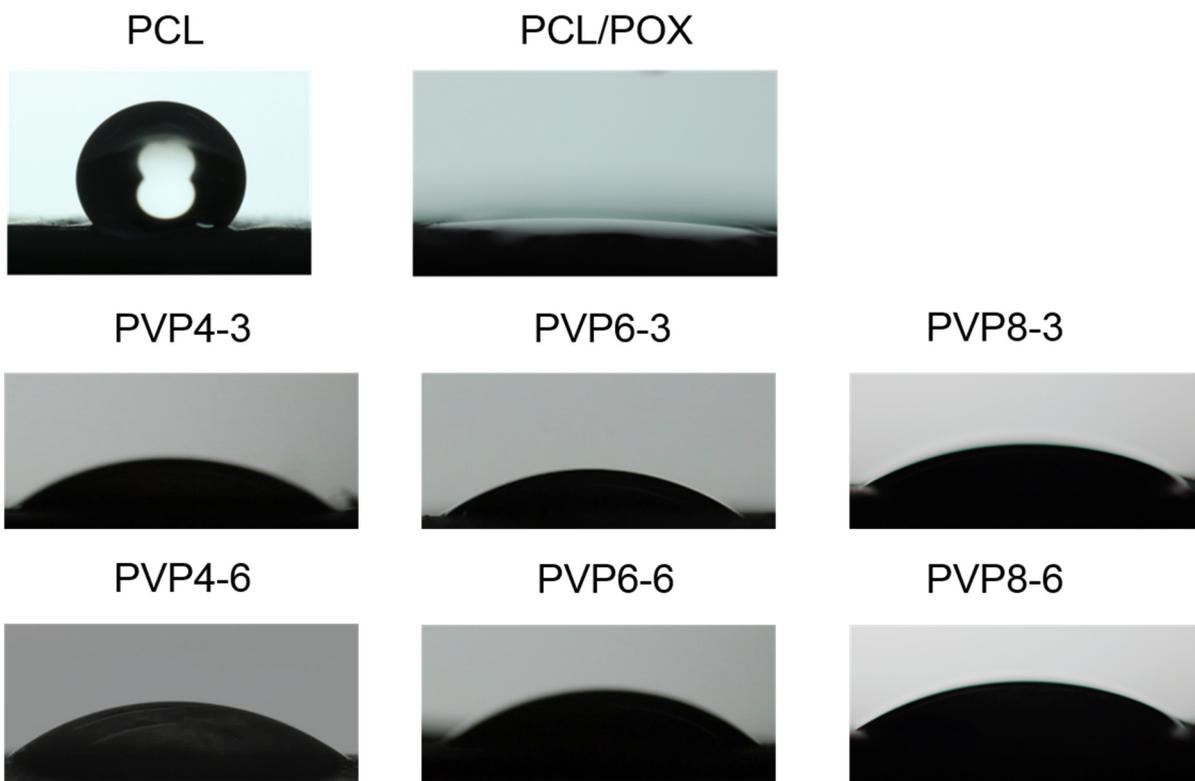


Figure S1. Images of water droplets on PCL, PCL/POX, and PVP/COS surfaces after 0'12''s

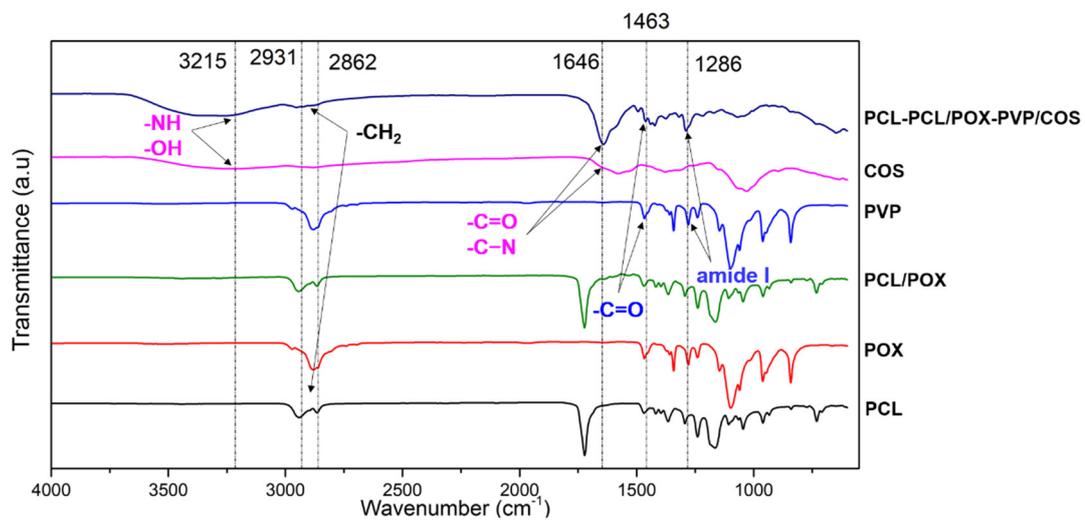


Figure S2. FT-IR spectra of PCL, POX, COS, PVP, and PCL-PCL/POX-PVP/COS membranes

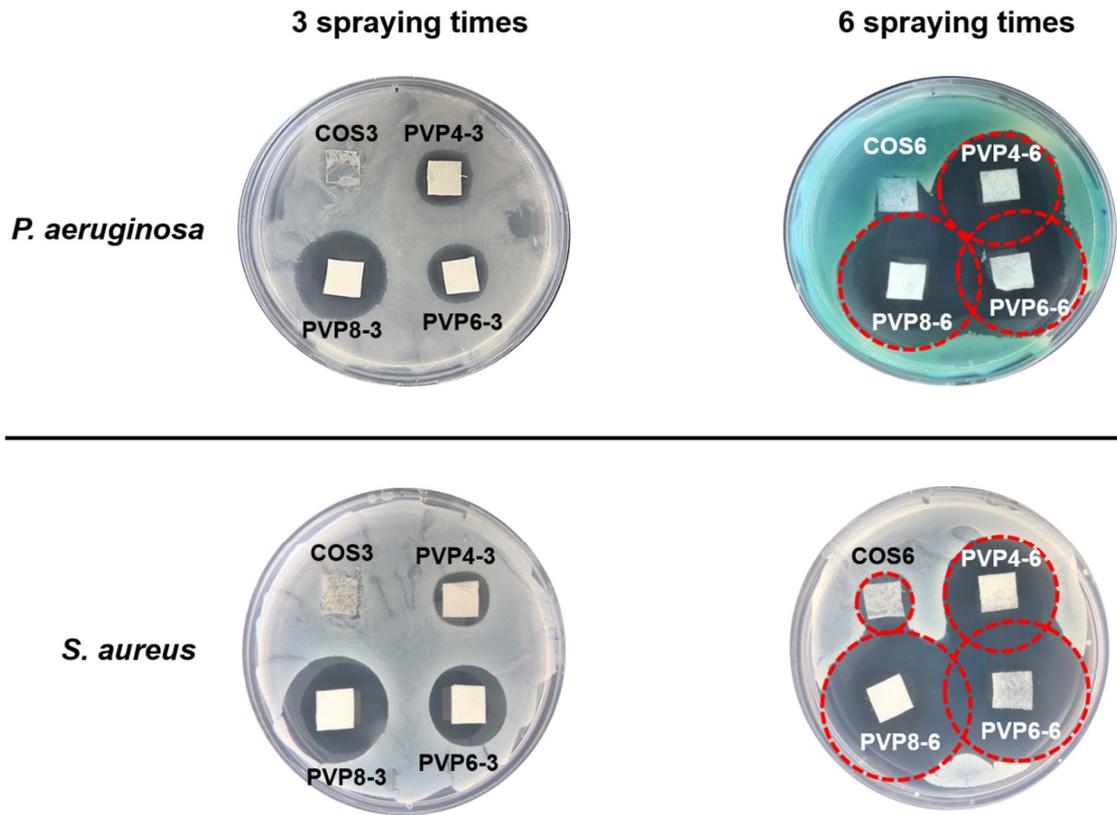
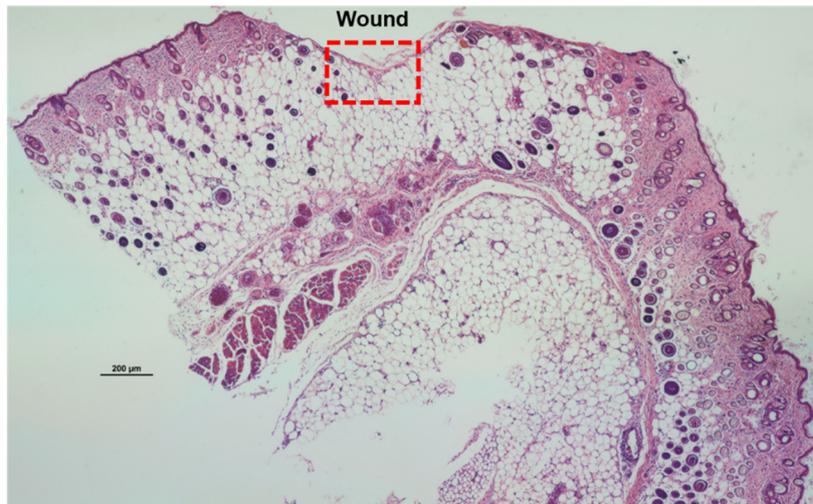


Figure S3: Antibacterial properties of PCL-PCL/POX-PVP/COS membranes with varying PVP concentration and spraying times against *S. aureus* and *P. aeruginosa* by agar disk diffusion test.

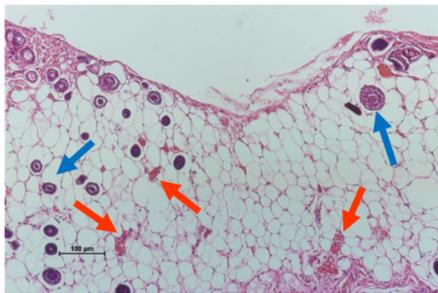


Figure S4. Photographs of surgery sites treated with COS3, COS6, PVP6-3, and PVP6-6 from day 0 to 10.

Control
40x



100x



200x

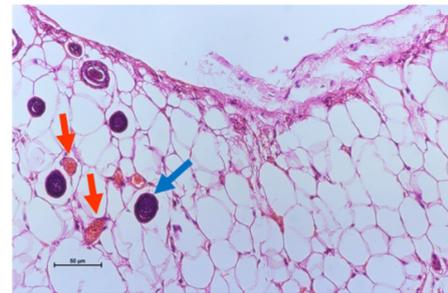


Figure S5. Histological examination of tissues from mice of the control group.
Scale bar: 40x – 200 μm, 100x – 100 μm, and 200x – 200 μm. Ep: Epidermis, GT: Granulation tissue. Red arrows indicate blood vessels and erythrocytes. Blue arrows indicate hair follicles. Recovered area is not showed since the wound had not healed.

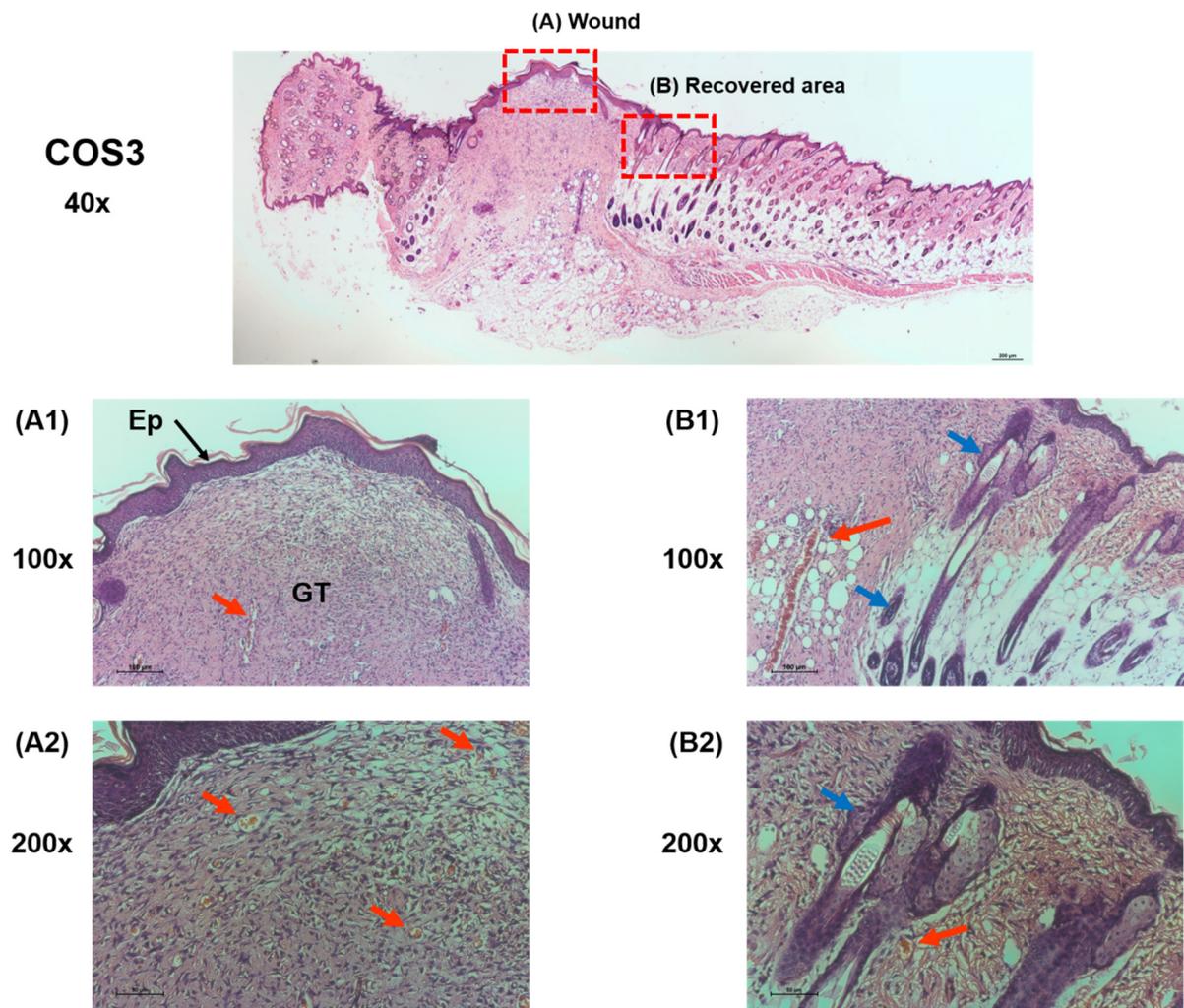


Figure S6. Histological examination of tissues from mice treated with COS3 sample.

(A) Wound area (B) Recovered area. Scale bar: 40 \times – 200 μm , 100 \times – 100 μm , and 200 \times – 200 μm . Ep: Epidermis, GT: Granulation tissue. Red arrows indicate blood vessels and erythrocytes. Blue arrows indicate hair follicles.

COS6
40x

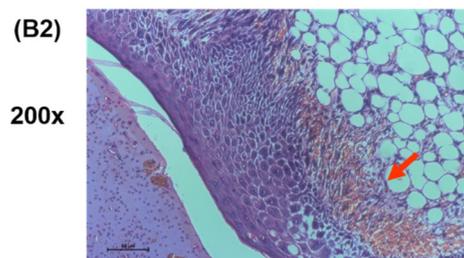
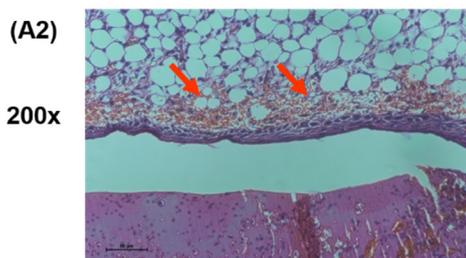
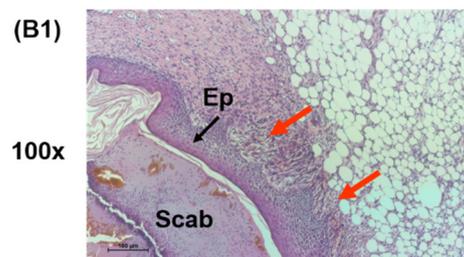
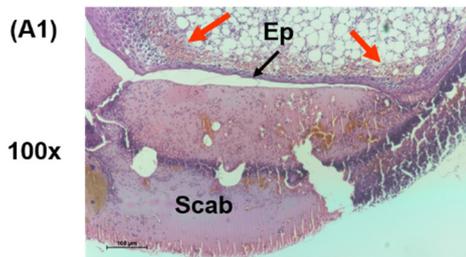
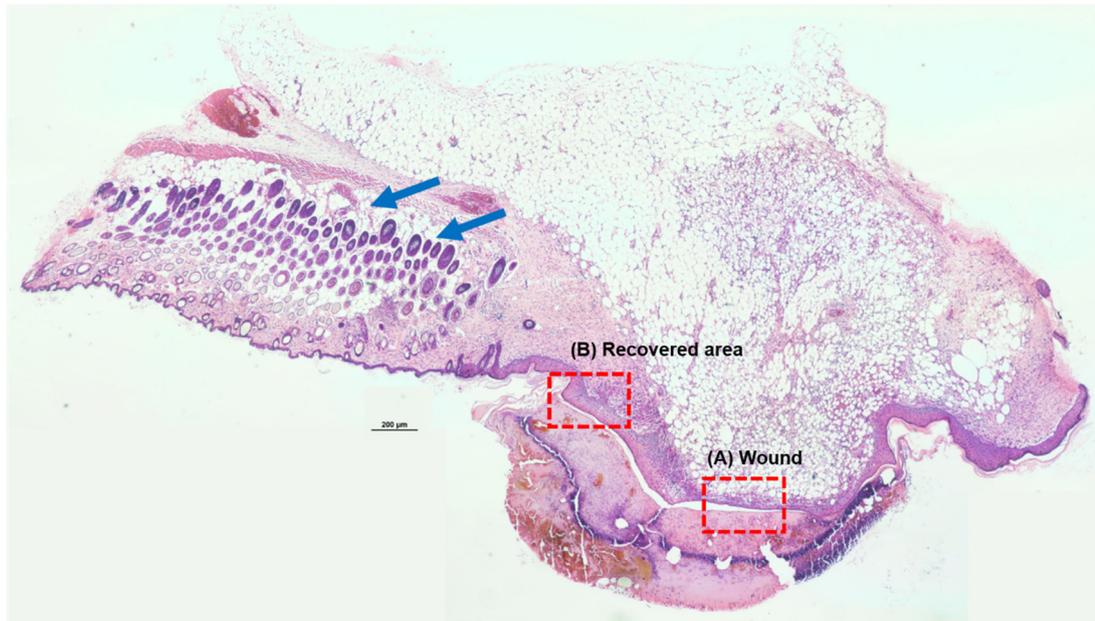


Figure S7. Histological examination of tissues from mice treated with COS6 sample.

(A) Wound area (B) Recovered area. Scale bar: 40× – 200 μm, 100× – 100 μm, and 200× – 200 μm. Ep: Epidermis, GT: Granulation tissue. Red arrows indicate blood vessels and erythrocytes. Blue arrows indicate hair follicles.

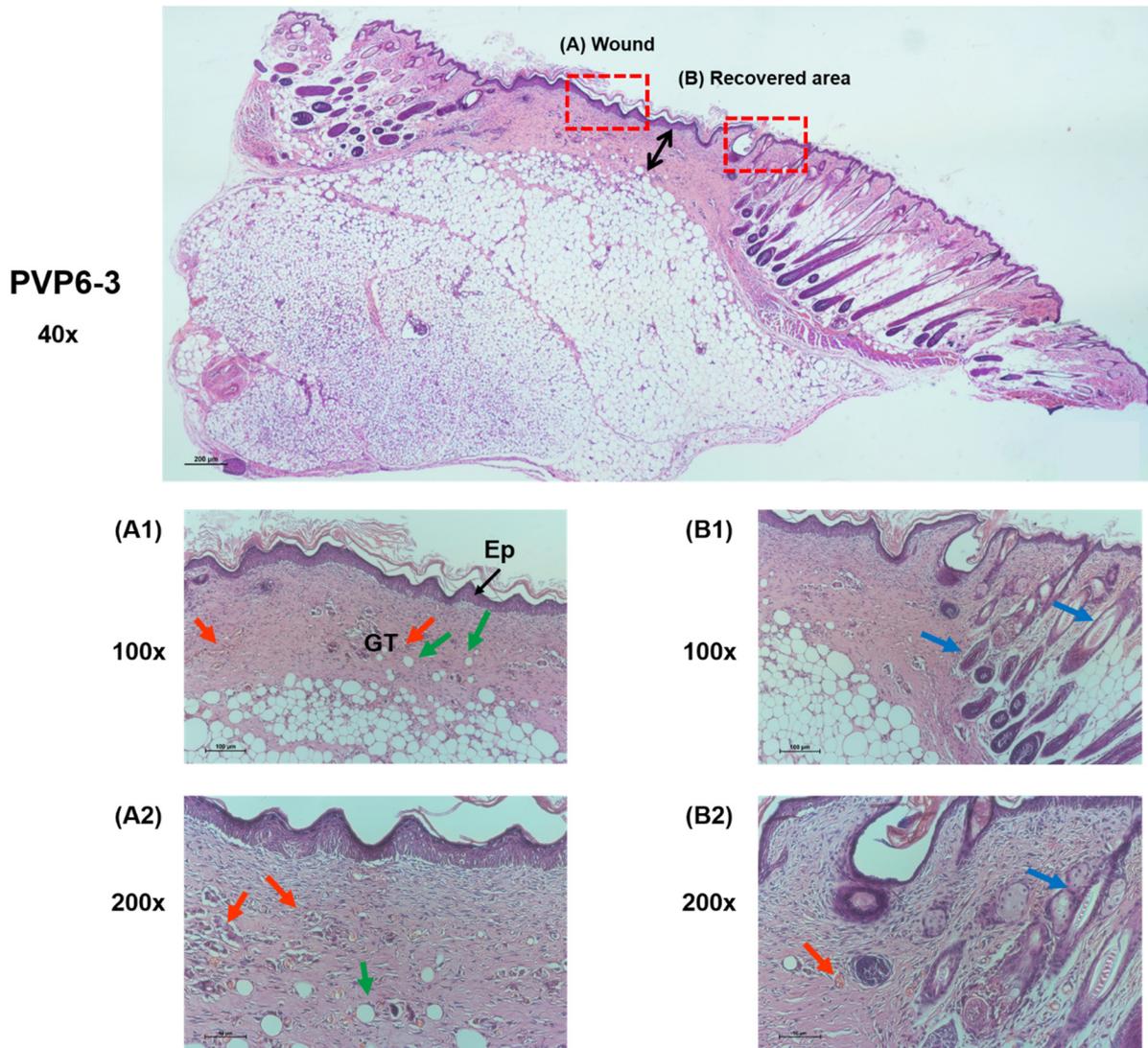


Figure S8. Histological examination of tissues from mice treated with PVP6-3 sample.

(A) Wound area (B) Recovered area. Scale bar: 40 \times – 200 μ m, 100 \times – 100 μ m, and 200 – 200 μ m. Ep: Epidermis, GT: Granulation tissue. Double-headed arrow indicates a thick dermis layer. Red arrows indicate blood vessels and erythrocytes. Blue arrows indicate hair follicles. Green arrows indicate adipocytes.

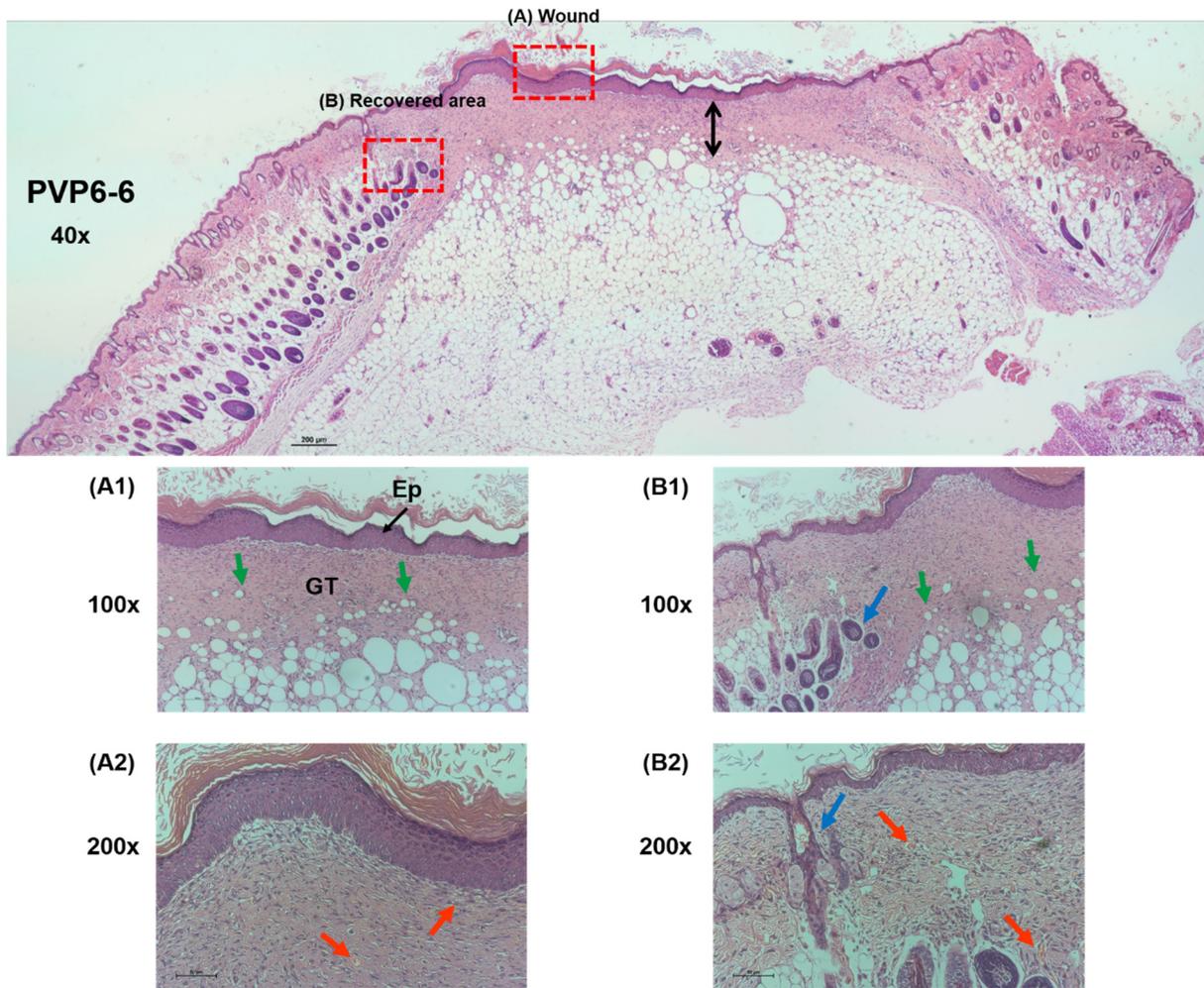


Figure S9: Histological examination of tissues from mice treated with PVP6-6 sample.

(A) Wound area (B) Recovered area. Scale bar: 40 \times – 200 μm , 100 \times – 100 μm , and 200 \times – 200 μm . Ep: Epidermis, GT: Granulation tissue. Double-headed arrow indicates a thick dermis layer. Red arrows indicate blood vessels and erythrocytes. Blue arrows indicate hair follicles. Green arrows indicate adipocytes.