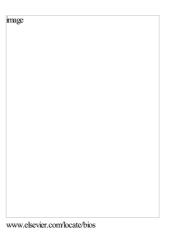
## Author's Accepted Manuscript

Bioelectric dressing supports complex wound healing in small animal patients

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CCEPTED MANUSCR

Bioelectric dressing supports complex wound healing in small animal patients

Title: Bioelectric dressing supports complex wound healing in small animal patients Corresponding

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**ABSTRACT** 

It is well documented that physiological electric fields provide the earliest signals necessary to

initiate cell proliferation, migration, and ultimately re-epithelialization of wounds. Additionally,

electricity is known to exert an antimicrobial effect. An electric field-generating wound dressing

designed to mimic physiological electric fields has not been described in the small animal clinic.

This manuscript retrospectively reviews the use of a microcell battery-impregnated bioelectric

dressing (BED) in five small animal patients with complex wounds. For each patient, product

application and wound healing progress was monitored and documented over several weeks.

Despite the severity of the wounds and being at high risk for infection, all presenting wounds

treated with BED achieved complete closure within 4 weeks without becoming infected or

requiring grafting. These cases provide early evidence that use of the BED is feasible in a small

animal clinic and may support healing while providing topical, non-antibiotic activity against

wound pathogens.

Abbreviations:

BED: Bioelectric dressing

NPWT: Negative pressure wound therapy

EF: Electric field

TEP: Transepithelial potential

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