CONCLUSION

• Bioactive peptides show promise as a natural treatment for chronic skin wounds
• Treatment A proved to be most effective
• Rat models shown effective as a means to test wound healing parameters

INTRODUCTION

• Treatment of chronic, open wounds is often complicated by comorbidities presenting therapeutic challenges
• Burden in US around $20 billion (1, 3)
• Currently only 4 FDA approved therapies for chronic cutaneous wounds (2)
• Bioactive peptides preferentially incorporated during each phase of skin wound repair

MATERIALS AND METHODS

• 30, 200 g Sprague-Dawley outbred albino rats randomized to 5 test groups (A-E)
• Treatment applied to left dorsal intrascapular region following 4 mm full-thickness skin incision
• Right sided incision on same animal served as control
• All wounds allowed to heal via secondary intention
• Animals euthanized day 7 post surgery
• Histological analysis of healing in both wounds conducted by randomized point count
• One-way ANOVA with Tukey-Kramer post-hoc test to confirm differences between group means (p<0.05)

RESULTS

• Treatments listed from most effective to least effective: A,C,D,E,B.
• Treatment C showed significantly greater dense connective tissue than treatments B and E (p<0.01). Treatment A showed significantly greater dense CT than treatments B and E (p<0.01 in both).
• Treatment E showed a significantly greater number of fat cells than treatment A (p<0.01) and treatment C (p<0.006).

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REFERENCES