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[54] **BIOLOGICAL ADHESIVE COMPOSITION AND METHOD OF PROMOTING ADHESION BETWEEN TISSUE SURFACES**

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[58] **Field of Search** 424/423; 514/2, 514/12, 21, 955; 530/835, 840, 841, 842, 846, 850

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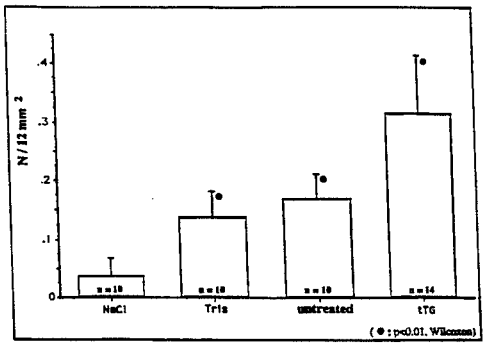
[57] **ABSTRACT**

A formulated biological adhesive composition utilizes tissue transglutaminase in a pharmaceutically acceptable aqueous carrier. The tissue transglutaminase is used in an effective catalytic amount to promote adhesion between tissue surfaces upon treatment thereof by catalyzing the reaction between glutaminyl residues and amine donors of the tissue and/or the enzyme. The carrier contains a divalent metal ion such as calcium to promote said reaction.

36 Claims, 5 Drawing Sheets



- NaCl: 0.9% NaCl
- buffer: 0.1 M CaCl2, 0.3 M NaCl, 0.01 M Tris-buffer, pH 7.4
- untreated: cut surfaces, but without treatment
- tTG: tissue transglutaminase, 1 mg/ml