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Stone

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(54) **SUBSTANTIALLY NON-IMMUNOGENIC
INJECTABLE COLLAGEN**

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(75) Inventor: **Kevin R. Stone**, Mill Valley, CA (US)

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(73) Assignee: **Crosscart, Inc.**, San Francisco, CA (US)

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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This patent is subject to a terminal disclaimer.

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(21) Appl. No.: **11/413,360**

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(65) **Prior Publication Data**

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Primary Examiner—Suzanne M. Noakes

Related U.S. Application Data

(74) *Attorney, Agent, or Firm*—John M. Garvey; Matthew L. Fenselau; Foley & Lardner LLP

(63) Continuation of application No. 10/722,869, filed on Nov. 26, 2003, now Pat. No. 7,064,187.

(57) **ABSTRACT**

(60) Provisional application No. 60/429,078, filed on Nov. 26, 2002.

The invention provides an article of manufacture comprising a substantially non-immunogenic injectable collagen for implantation into humans. The invention further provides methods for preparing injectable collagen material by removing collagen-containing material from a non-human animal; washing in saline and alcohol; subjecting material to cellular disruption treatment; and digesting the material with a proteoglycan-depleting factor and/or glycosidase and optionally following with a capping treatment. The invention also provides an article of manufacture produced by the method. The injectable collagen material of the invention are substantially non-immunogenic and have substantially the same mechanical properties as a corresponding native soft tissue.

(51) **Int. Cl.**
C07K 1/14 (2006.01)
A61K 38/17 (2006.01)

(52) **U.S. Cl.** **530/355**; 530/356

(58) **Field of Classification Search** 530/356,
530/350

See application file for complete search history.

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6 Claims, No Drawings