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Henderson

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(54) **MICRONEEDLE COMPOSITIONS AND METHODS OF USING SAME**

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(58) **Field of Classification Search**

None

See application file for complete search history.

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(57) **ABSTRACT**

Described herein, are microneedle devices comprising a recombinant alphavirus replicon encoding an exogenous polypeptide, wherein the recombinant alphavirus replicon is coated onto or embedded into a plurality of microneedles. Also described herein are methods of preparing a microneedle device comprising a recombinant alphavirus replicon encoding an exogenous polypeptide. Also disclosed herein are methods of inducing an immune response in an individual comprising contacting the individual with a microneedle device comprising a recombinant alphavirus replicon encoding an exogenous polypeptide.

20 Claims, 19 Drawing Sheets

Specification includes a Sequence Listing.