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(54) **FUSION PROTEIN OF STREPTOCOCCAL PYROGENIC EXOTOXINS**

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See application file for complete search history.

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(57) **ABSTRACT**

The present invention relates to genetically attenuated superantigen toxin vaccines altered such that superantigen attributes are absent, however the superantigen is effectively recognized and an appropriate immune response is produced. The attenuated superantigen toxins are shown to protect animals against challenge with wild type toxin. Methods of producing and using the altered superantigen toxins are described.

2 Claims, 12 Drawing Sheets