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(12) **United States Patent  
Pettine**

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(54) **REGENERATIVE AUTOLOGOUS BONE  
MARROW CELL THERAPIES AND  
METHODS FOR THEIR USE IN THE  
TREATMENT OF JOINT PAIN**

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**A61K 35/28** (2015.01)

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CPC ..... **A61K 35/28** (2013.01)

(58) **Field of Classification Search**  
USPC ..... 435/325; 424/93.7; 623/17.11  
See application file for complete search history.

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(57) **ABSTRACT**

The present novel technology relates to an autologous cell  
therapy that comprises a pre-determined amount of a pro-  
cessed bone marrow cellular matrix with a pre-determined  
amount of pre-mixture, where the pre-mixture includes quan-  
tities of anticoagulant solution, dextrose and phosphate buff-  
ered saline, and methods for production. The present novel  
technology further relates to a method of using the composi-  
tion to reduce discogenic pain in humans.

**13 Claims, 5 Drawing Sheets**