US009410118B2

(12) **United States Patent**
Fike et al.

(10) **Patent No.: US 9,410,118 B2**
(45) **Date of Patent: Aug. 9, 2016**

(54) **CELL CULTURE MEDIA AND METHODS**

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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 75 days.

(21) Appl. No.: **14/367,413**

(22) PCT Filed: **Dec. 21, 2012**

(86) PCT No.: **PCT/US2012/071411**

§ 371 (c)(1),
(2) Date: **Jun. 20, 2014**

(87) PCT Pub. No.: **WO2013/096858**

PCT Pub. Date: **Jun. 27, 2013**

(65) **Prior Publication Data**

US 2015/0064785 A1 Mar. 5, 2015

Related U.S. Application Data

(60) Provisional application No. 61/579,432, filed on Dec. 22, 2011.

(51) **Int. Cl.**

B29C 67/24	(2006.01)
B29L 9/00	(2006.01)
C12N 5/00	(2006.01)

(52) **U.S. Cl.**

CPC ***C12N 5/0018*** (2013.01); ***B29C 67/24*** (2013.01); ***C12N 5/005*** (2013.01); *B29L 2009/00* (2013.01); *C12N 2500/30* (2013.01); *C12N 2511/00* (2013.01); *C12N 2533/40* (2013.01); *C12N 2533/74* (2013.01)

(58) **Field of Classification Search**

CPC ... A61K 2300/00; A61K 31/58; A61K 35/28; A61K 35/545; A61K 31/565; A61K 35/12; A61K 45/06; A61K 2800/782; A61K 31/00; A61K 8/63; A61K 38/39; A61K 8/14; A61K 8/65; A61K 9/0014; A61K 9/127; A61K 31/352; A61K 31/728; A61K 36/47; A61K 47/36; C08L 2666/22; C08L 69/00; C08L 85/02; C08L 101/00; C08L 57/08; C08L 67/02; C08L 2666/04; C08L 51/04; C08L 55/02; C08L 2666/02; C08L 2666/14; C08L 51/00; C08L 53/02; C08L 25/04; C08L 25/12; C08L 27/06; C08L 25/02; C08L 77/00; C08L 77/02; C08L 77/06; C08L 2666/08; B05D 2202/25; B05D 7/14; B05D 3/0254; B05D 1/00; B05D 1/22; B05D 2258/00; B05D 7/54; C22F 1/04; C22F 1/053; Y10T 428/2495; Y10T 428/31522; Y10T 428/31551; Y10T 428/31678; Y10T 428/265; B29C 67/24

See application file for complete search history.

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(57) **ABSTRACT**

Compositions and methods are described for preparing media, feeds, and supplements. Such methods and medias may display increased stability of labile components and may use, for example, microsuspension and/or encapsulation technologies, chelation, and optionally, coating and/or mixing the labile compounds with anti-oxidants. The compositions may withstand thermal and/or irradiation treatment and have reduced virus number. These techniques may result in product with extended shelf-life, extended release of their internal components into culture, or in product that can be added aseptically into a bioreactor using minimal volumes. The compositions and methods may optimize the bioproduction workflow and increase efficiency.

20 Claims, 12 Drawing Sheets