

## Title (en)

A SERUM-FREE VIRUS PROPAGATION PLATFORM FOR A VIRUS VACCINE CANDIDATE

## Title (de)

SERUMFREIE VIRENVERMEHRUNGSPLATTFORM FÜR EINEN VIRENIMPFSTOFFKANDIDATEN

## Title (fr)

PLATEFORME DE PROPAGATION VIRALE SANS SÉRUM UTILISÉE COMME CANDIDATE DE VACCIN ANTI-VIRAL

## Publication

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## Application

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## Abstract (en)

[origin: WO2008051698A2] The invention relates to methods for propagating viruses. In particular, the invention provides optimized conditions for propagating viruses. Optimization of the following parameters are provided: lipid concentrates as supplements to the medium, temperature shift from pre-infection to post-infection, multiplicity of infection, direct bead-to-bead transfer and serum supplementation of pre-infection medium. In particular, the invention provides for the first time a method for propagating a virus by culturing cells that are infected with the virus in a medium comprising chemically defined lipid concentrate (CDLC). In another claim, the CDLC is added to medium that is substantially free of serum for culture of virus-infected cells.

## IPC 8 full level

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## CPC (source: EP KR)

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## Citation (search report)

- [L] WO 2007118134 A2 20071018 - MEDIMMUNE INC [US], et al
- [X] WU S-C ET AL: "Optimization of microcarrier cell culture process for the inactivated enterovirus type 71 vaccine development", VACCINE, ELSEVIER LTD, GB, vol. 22, no. 29-30, 28 September 2004 (2004-09-28), pages 3858 - 3864, XP004567461, ISSN: 0264-410X, DOI: 10.1016/J.VACCINE.2004.05.037
- [X] TRABELSI K ET AL: "Comparison of various culture modes for the production of rabies virus by Vero cells grown on microcarriers in a 2-l bioreactor", ENZYME AND MICROBIAL TECHNOLOGY, STONEHAM, MA, US, vol. 36, no. 4, 2 March 2005 (2005-03-02), pages 514 - 519, XP025278458, ISSN: 0141-0229, [retrieved on 20050302], DOI: 10.1016/J.ENZMICTEC.2004.11.008
- [X] FRAZZATTI-GALLINA N M ET AL: "Vero-cell rabies vaccine produced using serum-free medium", VACCINE, ELSEVIER LTD, GB, vol. 23, no. 4, 9 December 2004 (2004-12-09), pages 511 - 517, XP004629187, ISSN: 0264-410X, DOI: 10.1016/J.VACCINE.2004.06.014
- [X] FRAZZATTI-GALLINA N M ET AL: "Higher production of rabies virus in serum-free medium cell cultures on microcarriers", JOURNAL OF BIOTECHNOLOGY, ELSEVIER SCIENCE PUBLISHERS, AMSTERDAM, NL, vol. 92, no. 1, 15 November 2001 (2001-11-15), pages 67 - 72, XP027295856, ISSN: 0168-1656, [retrieved on 20011115]
- [A] SÉBASTIEN QUESNEY ET AL: "Kinetics and metabolic specificities of Vero cells in bioreactor cultures with serum-free medium", CYTOTECHNOLOGY, KLUWER ACADEMIC PUBLISHERS, DO, vol. 42, no. 1, 1 May 2003 (2003-05-01), pages 1 - 11, XP019236782, ISSN: 1573-0778, DOI: 10.1023/A:1026185615650
- [XP] INN H YUK ET AL: "A serum-free Vero production platform for a chimeric virus vaccine candidate", CYTOTECHNOLOGY, KLUWER ACADEMIC PUBLISHERS, DO, vol. 51, no. 3, 16 November 2006 (2006-11-16), pages 183 - 192, XP019448504, ISSN: 1573-0778, DOI: 10.1007/S10616-006-9030-7
- [T] BARRETT P NOEL ET AL: "Vero cell platform in vaccine production: moving towards cell culture-based viral vaccines", EXPERT REVIEW OF VACCINES, UK, vol. 8, no. 5, 1 May 2009 (2009-05-01), pages 607 - 618, XP009128183, ISSN: 1744-8395, DOI: 10.1586/ERV.09.19
- See references of WO 2008051698A2

## Citation (examination)

B. NAGEL ET AL: "GLOSSARY FOR CHEMISTS OF TERMS USED IN BIOTECHNOLOGY (IUPAC Recommendations 1992)", PURE & APPL. CHEM., vol. 64, no. 1, 1 January 1992 (1992-01-01), Great Britain, pages 143 - 148, XP055073736

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