

Title:

NHRI technology, “Influenza vaccine production using suspension MDCK (NHRI sMDCK) cells” (abbreviated as “The Technology”) available for technology licensing.

Description:

The licensing technology is about a proprietary Madin-Darby canine kidney cell line (NHRI sMDCK) capable of growing in suspension culture without serum. Further disclosed are culturing methods for growing the NHRI sMDCK cell line and methods for producing a vaccine from the MDCK cell line grown in the chemically defined medium. Traditionally, cell lines, including adherent MDCK cells, are grown in serum-containing media to assist cell growth and proliferation. However, serum is not advantageous, particularly in large-scale commercial production, due to its high cost, risk of contamination, undefined nature, and variability. Such disadvantages spurred the use of serum-free medium for culturing some cell lines. However, serum-free medium still contains animal components, e.g. transferrin and other undefined products, e.g. hydrolysate, which provide a level of risk and uncertainty when using such medium. The technology further relates to methods of culturing the cells and methods for producing vaccines. The adapted NHRI sMDCK cells have been adapted to chemically-defined serum-free suspension culture without the use of microcarriers. The cost for using this technology is significantly reduced to the level that similar to traditional egg-based method. This licensing technology is applicable to pandemic influenza vaccine production as well as seasonal influenza vaccine production.

The licensing package contains the following technologies:

1. MDCK SUSPENSION CELL LINES IN SERUM-FREE, CHEMICALLY-DEFINED MEDIA FOR VACCINE PRODUCTION (patent pending)
 - a. US patent (publication no. 2018/0311337 A1, publication date: November 1, 2018)
 - b. PCT (PCT National phase: US, China, Europe, Japan, International publication no. WO 2017/072744 A1, publication date: May 4, 2017)
 - c. R.O.C. patent (publication no. TW 201726911 A , publication date: August 1, 2017)
2. NHRI sMDCK cell stock (30 vials)
3. A platform technology for generating high-growth candidate vaccine viruses (including high-growth donor virus)
4. Analytical method for in-process control
5. Immunogenicity study data with two different adjuvants
6. Technical data for 50L single-use bioreactor process
7. Technical data for 50L downstream purification process (for pandemic use)

Potential licensee qualifications:

1. be incorporated and approved by law and does not have any record of misconduct or conviction for any offense
2. better to have related experience and skills for developing The Technology
3. better to have experience of international collaboration and clinical trial
4. be willing to provide long-term investment

Qualification review I (For company profile) :

Potential licensee meeting the above qualifications, please fill out the “Part A. Basic Information”, of the “Licensing Proposal (attachment II)” and send the application through both mail(hard copy) and email to Ms. Ruby Weng before **Dec.19, 2019**.(Address: Technology Transfer and Incubation Center, National Health Research Institutes, 35 Keyan Road, Zhunan Town, Miaoli County 35053, Taiwan, R.O.C.; E-mail : rubyweng@nhri.edu.tw) The qualification of potential licensee will be reviewed by NHRI. Pre-qualified potential licensee will be informed by email within 5 business days after the application deadline.

Qualification review II (For the Licensing plan) :

1. After pre-qualification, NHRI will either held a technology presentation or provide pre-qualified potential licensee with related information about The Technology. The pre-qualified potential licensee then fill out the “Part B. Licensing Plans”, of the “Licensing Proposal (attachment II)” and send the application through both mail(hard copy) and email to Ms. Ruby Weng within a month after the date of The Technology presentation or receiving related information about The Technology. (Address: Technology Transfer and Incubation Center, National Health Research Institutes, 35 Keyan Road, Zhunan Town, Miaoli County 35053, Taiwan, R.O.C.; E-mail : rubyweng@nhri.edu.tw). Additional information may be required by NHRI upon request.
2. The qualification of potential licensee will be reviewed by NHRI.

Other information:

We, NHRI reserve the right to modify and terminate this announcement.

Attachments:

I:Announcement

II: Licensing Proposal