

Novel Cell Engineering Technologies for the Next Generation...

CESCO Bioengineering Process-to-Product Guide

www.cescobio.com.tw

Press **ESC** to close the program

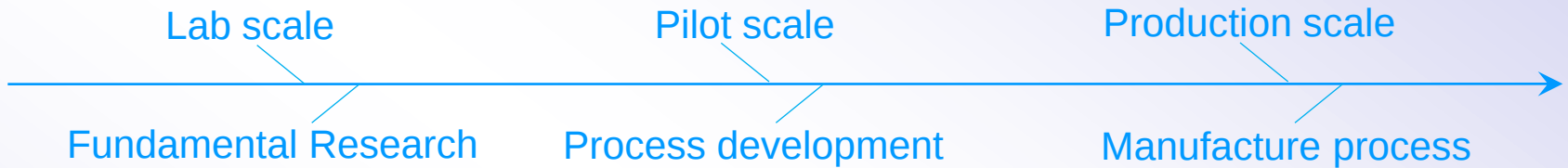
Press  to return to the first page

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START

Welcome to CESCO Bioengineering's Process-Product Guide

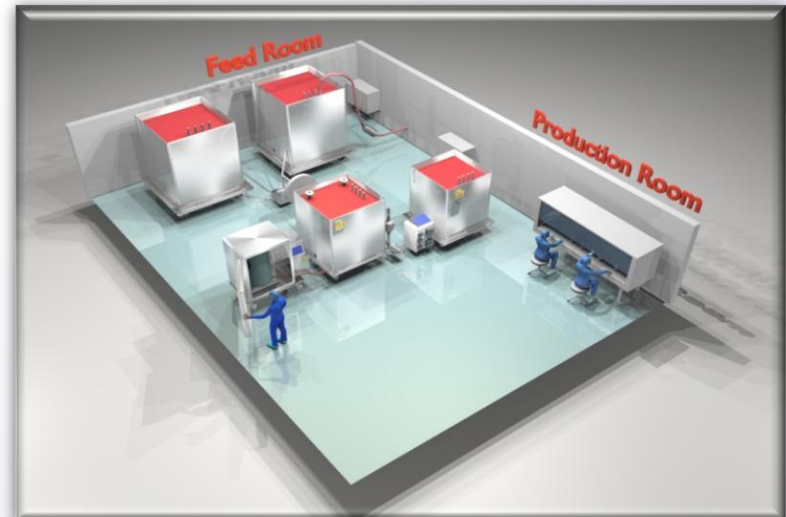
Optimize your cell culture process from laboratory to manufacture



For Bioprocess Development



For cGMP Manufacture



Process Development Room

GlucCell Meter



Matrix Vessel



Mixing Bag



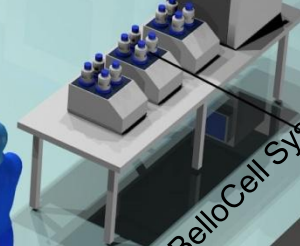
TideCell 020 System



Cell Harvest System



BelloCell System



BelloCell Bottles

TideCell 002 System



Seed Preparation Room

Medium Preparation Room

Production Room

Feed Room

A 3D rendering of a Seed Preparation Room. The room is enclosed with white walls and a light blue floor. The title "Seed Preparation Room" is written in large, red, 3D letters on the top right wall. Inside the room, there are several pieces of equipment: a large white machine with a red top, a smaller white machine with a blue top, a large white machine with a red top, a large white machine with a blue top, and a large white machine with a red top. There are also several smaller machines and tables. Four blue humanoid figures are shown working in the room: one is operating a machine on the left, one is operating a machine in the center, one is operating a machine on the right, and one is sitting at a desk in the foreground. There are also three circular callouts: one showing a white container, one showing a white container, and one showing a blue container. A small blue and white device is also shown in the bottom right corner.



Feed Room

Production Room

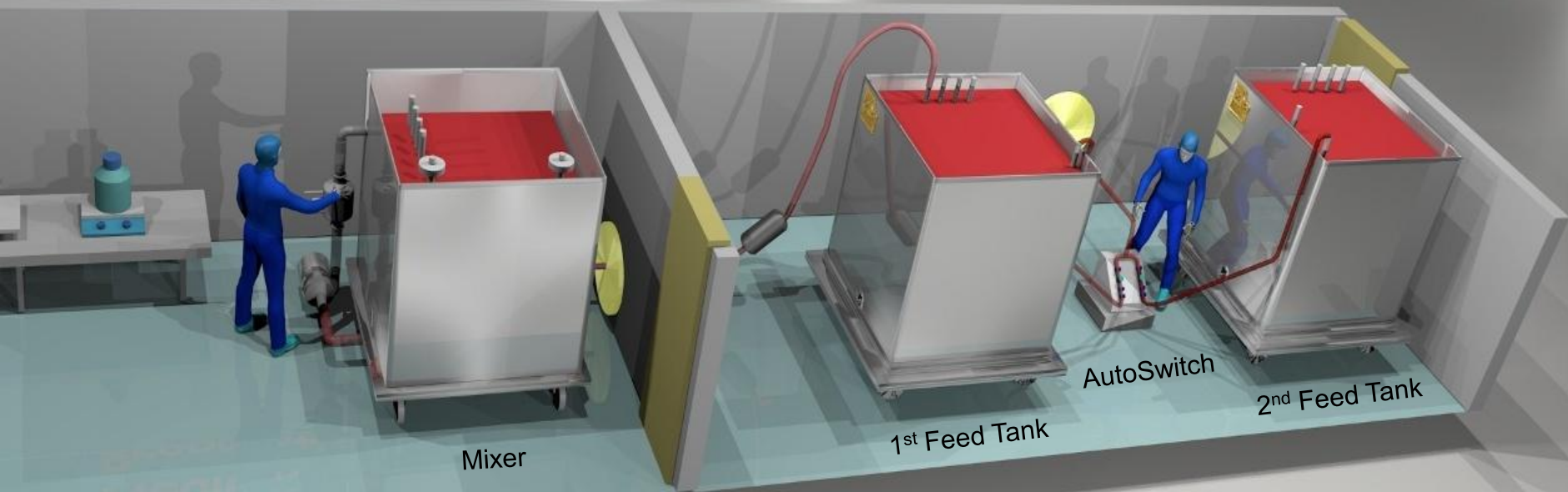
AutoSwitch

TideCell 100 HD Cell Culture System



Medium Preparation Room

Feed Room



BelloStage™-3000



BelloStage-3000 controls and drives the medium flow in BelloCell bottles. The main console is placed inside the incubator while the control panel can be magnetically attached outside of it. The BelloStage-3000 provides a capacity of four BelloCells, which produces up to 1.2×10^{10} cells (equivalent to 80 roller bottles, or about 500 T-150 flasks).



An additional option of BelloStage-3000 allows the culture system to run in the “continuous” mode. Each feeding/harvesting program can be individually set up.



Disposable BelloCell[®] Bottles

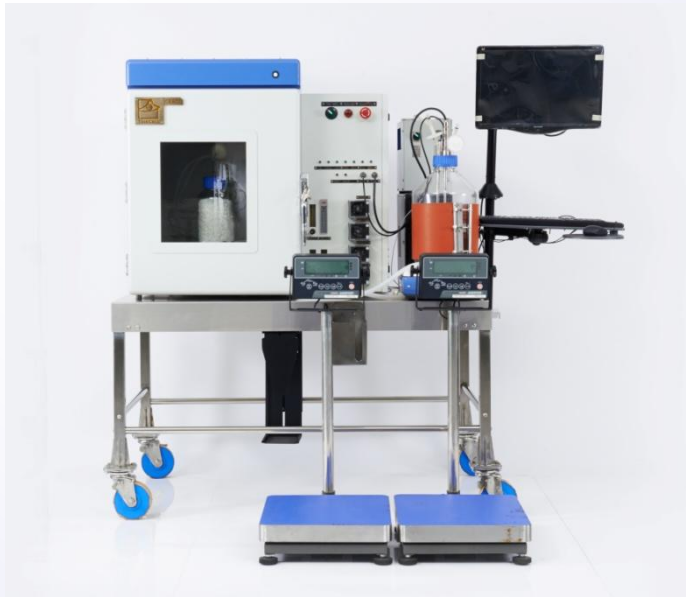
(1×10^9 – 5×10^9 cells per bottle)

BelloCell[®] →

- BelloCell-500
- BelloCell-500P
- BelloCell-500A
- BelloCell-500AP



TideCell[®]-002 HD Bioreactor



TideCell -002 System including a culture chamber and controlling system (left) and a thermostatic mixing vessel on a magnetic stirrer (right)

TideCell-002 is a bench-top, fixed-bed bioreactor with 1~5 L matrix capacity. Cell density can reach $5\sim 25 \times 10^9$, which is equivalent to 10~50 L conventional stir tank bioreactor. TideCell-002 is designed as an autoclavable bioreactor for smaller scale and then be scaled up in the process development to larger TideCell HD cell culture system because of its easy-to-use and capability of linear scale-up.



A glance at the internal of culture chamber.



TideCell[®] 10/20 HD Bioreactor



TideCell-010 HD Cell Culture System



TideCell-020 HD Cell Culture System

TideCell-010/020 is an easy-to-use, fixed-bed bioreactor between bench-top and pilot scales with 5~20 L matrix capacity. The cell density in TideCell-010 and -020 provides up to 1×10^{12} cells in total (or 5×10^7 cells/ml), equivalent to a 100 to 200 L conventional bioreactor. With the function of cell culture, medium mixing, pH / DO / CO₂ / temperature control, and Feed / Harvest management. TideCell-010 and -020 systems have been widely used to product high titers of virus in vaccine industry.



TideCell[®] 100 HD Bioreactor



TideCell 100 System including TCICS for 100 L Matrix Vessel (left), a 500 L-1000 L Mixer Mixing System with single use mixing bag (middle), and a AutoFeeder system for perfusion control.



TideCell 100 System during operation. Two 500 L Medium tanks (right) are for perfusion culture.

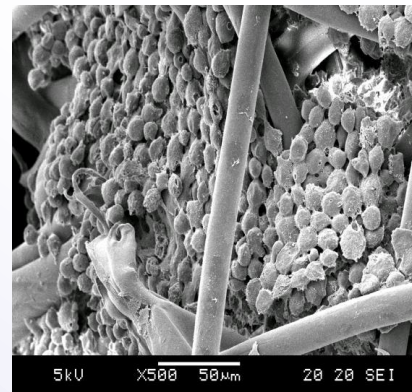
TideCell-100 is a industry scale, fixed-bed bioreactor with 50~100 L matrixes. It contains three major module systems, namely, TideCell Incubation and Control System (TCICS), Mixing System, and AutoFeeder system. The cell density in TideCell -100 can be up to 5×10^{12} cells in total (or 5×10^7 cells/ml), which is equivalent to a 1,000 to 2,000 L conventional bioreactor. With the function of cell culture, medium mixing, pH / DO / CO₂ / temperature control, and Feed / Harvest management. TideCell-100 systems have been widely used to product high titers of virus in vaccine industry.



BioNOC™ II Carriers

Pure, Lighter, Higher S/V, and Save You More...

BioNOC II™ cell culture matrix are carriers for the growth of anchorage-dependent animal, mammalian, and insect cells. BioNOC II™ is manufactured according to cGMP guidelines, and the fabrics are specially treated to maximize the hydrophilicity and biocompatibility. Besides TideCell® and BelloCell® bioreactors, BioNOC II™ also works well in other commercial pack-bed bioreactors. One gram of BioNOC II™ provides space for about 1.0×10^9 cells to grow (2,400 cm²/g). Cell types such as CHO, CHO-K1, rCHO-hIgG, rC-127-TPA, HEK293, Hybridoma, Vero, Sf-9, Hi-5, BHK-21, rBHK-Factor VIII, HepG2, Hela, Huh 7, RK-13, human foreskin fibroblasts, human muscle skeleton cells, human mesenchymal cells, human embryonic stem cells have been successfully cultured with BioNOC II™ in BelloCell® bioreactors.



TideCell[®] Matrix Vessel



The major consumables in TideCell HD Cell Culture System includes the Matrix Vessel and the Medium Bag. The scale of Matrix Vessel is from 2 L, 10 L, 20 L, up to 100 L. Options of disposable and autoclavable uses are both available.

The scale of Medium Bag is from 20 L, 50 L, 200 L, 500 L, up to 1000 L. The medium bag is multi-layer LDPE film that is inert and durable in operation. All materials meet the regulation standards from FDA.



TideCell[®] Mixing Bags



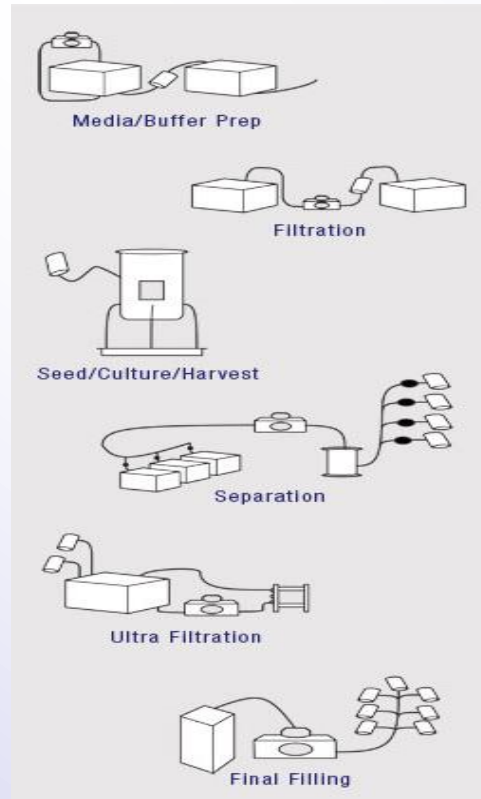
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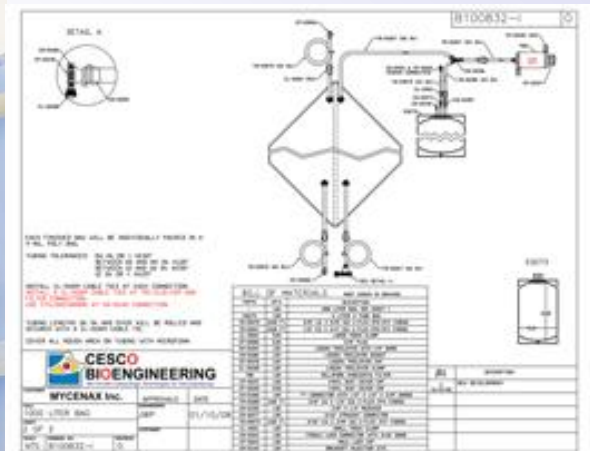


Bioprocess Container

We customize your bags!



- From 0.5 L to 2,500 L
- Meet FDA cGMP guideline
- Full Document Support



Single-use bioprocess containers are suitable for entire bioprocess from the upstream to the downstream. We provide single-use bioprocess bags and containers from 0.5 L to 2,500 L. We customize your bag and accessories (connections and tubing) to meet your demand!

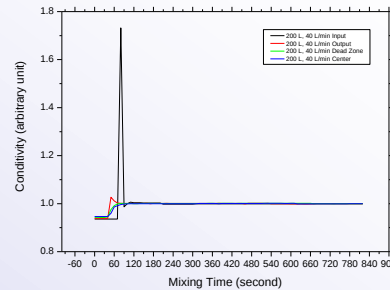
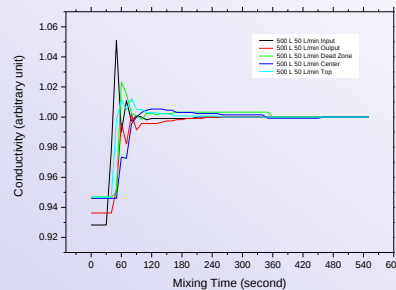
For more information, please contact: info@cescobio.com.tw



TideCell[®] Mixer Mixing System



TideCell Mixing System can be a module for TideCell system, or an individual mixing system for other purposes. The TideCell Mixing System utilize a bearingless magnetic pump that allows the propeller float in the middle of pump head without any wearing during pumping. The TideCell Mixing System speeds up the heating and mixing than any other systems. Heating from room temperature to 37 degree in a 500 L system takes only 3 to 4 hours. Mixing in 500 L takes only 2 minutes to reach homogeneous. By adapting single-use technology, TideCell Mixing System provide users a alternative for mixing purpose in cGMP operation environment.



For more information, please contact: info@cescobio.com.tw



TideCell[®] Cell Harvest System

Harvest cells automatically in a close system. Reducing the risks of contamination during cell harvest and transfer.



TideCell Cell Harvest System provides an efficient tool to harvest viable cells from TideCell Matrix Vessel.

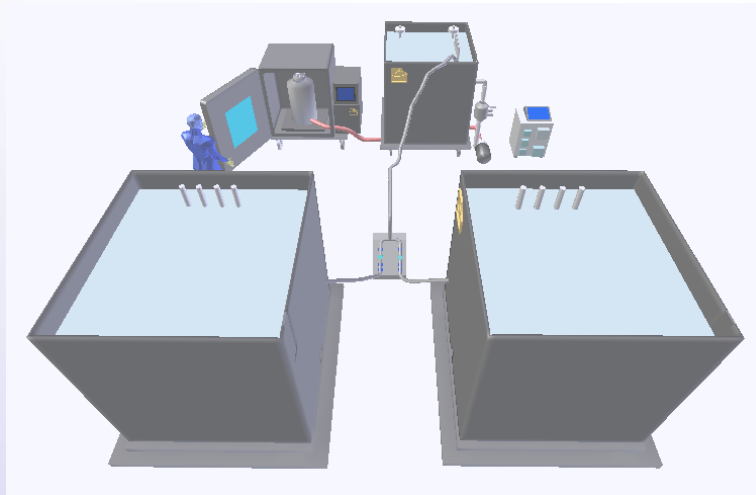
It is a powerful tool to harvest and transfer viable cells from large scale TideCell systems in a close and automatic system. It can also be applied to harvest cell mass for biological production and any related applications. Up to 10^{11} cells can be harvested within one to three hours operation. Entire cell harvest process is done in a close system and could eliminate the risks of contamination.



AutoSwitch System



AutoSwitch System controls two Feed tanks by switching the feed line from one to the other once the one is empty during feeding. Alarm light will on once one of them is empty with liquid. Alarm buzz will on once two are all empty. Individual warning lights for indicating depletion of Feed tanks.



It allows a continuous nutrient supply without interruption and make the entire cell culture batch smoothly without facing the risks of nutrient depletion.



GlucCell™ Glucose Meter

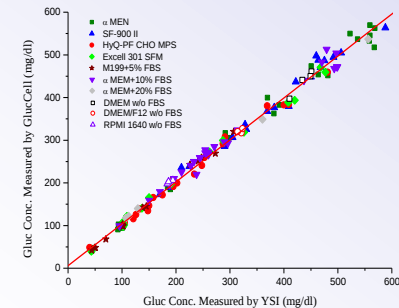
The most economical, palm size glucose meter in the industry for animal cell culture monitoring purpose



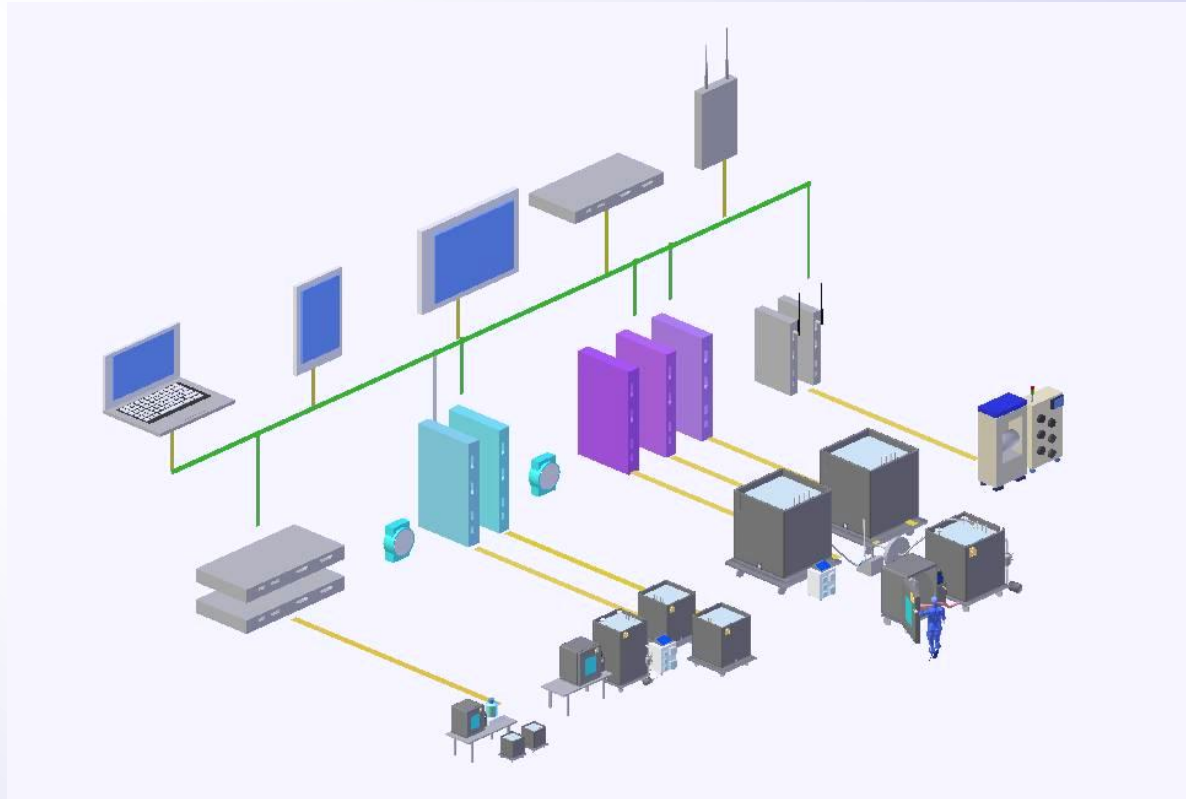
- Calibration-free
- Ready-to-use
- Plug&play
- Disposable
- 99.5 % Correlated with YSI biochemical analyzer
- Precision: >95 %, Accuracy > 90 %,
- Linearity = 0.9997

GlucCell™ glucose monitoring system simplifies and accelerates glucose measurement during cell culture. The disposable glucose test strips enable the

measurement of glucose concentration during mammalian cell and insect cell culture in a few seconds. Just insert the strip, add the sample, and read the result. The accuracy is independent of ingredients and serum-related components in the culture medium .



TideCell SCADA System



TideCell SCADA System monitors multi-systems and collect data during operation at the same time. Up to 16 units could be monitored. It can be used off-line, or on-line and is compatible with portable tablet systems such as iPad. Users could monitor the status of operation anywhere, anytime. Alarm notice will sent to the users through Skype, e-mail, or other assigned communication systems.

For more information, please contact: info@cescobio.com.tw



Cell Culture Medium

Our Culture Media are all Animal Component-Free!

Plus⁺ VERO

Plus⁺ VERO

Plus⁺ MDCK

Plus⁺ MDCK

Super Plus⁺

Super Plus⁺



HiSMOP Custom-Formulation

HiSMOP Custom-Formulation

For more information, please contact: info@cescobio.com.tw

