

Method

Silanization of glass vessel.

Simethicone and dichlorodimethylsilane were employed to silanize glass vessel with different solvents or solvent-free. Silanization was a well-known method to prevent the adsorptive losses of microcarriers and cells. The process was achieved by manually adding the siliconizing agent to each vessel ensuring coverage of the entire vessel surface area. Then the excess fluid was drained from the vessels and all the vessels were left in a fume hood overnight for drying. Lastly, the vessels were rinsed with distilled water and wrapped for sterilization.

Preparation of CMC column

The harvested α_{1A} cells (7×10^6) were washed three times with physiological saline (pH=7.4) by centrifugation at 3000 g for 10 min at 4°C. Tris-HCl (pH=7.4; 50 mM) was added to produce α_{1A} cell suspension; the cells were then ruptured by ultrasonic procedure for 30 min. The resulting suspension was clarified by centrifugation at 1000 g for 10 min at 4°C. The pellet was discarded and the supernatant was centrifuged at 12000 g for 20 min at 4°C. The precipitation was suspended in 10 mL physiological saline, and then the suspension was centrifuged at 12000 g. Then α_{1A} cell membrane suspension in 5 mL physiological saline was obtained. 0.05 g silica was activated at 105°C for 30 min, the cell membrane suspension was slowly added to silica under a vacuum and with agitation at 4°C. Then the mixture was agitated 30min by a magnetic stirrer and stand overnight. Finally, the α_{1A} cell membrane stationary phase was packed into the CMC column (10 mm \times 2.0 mm I.D.) using the column loading machine following a wet packing procedure.

Figures

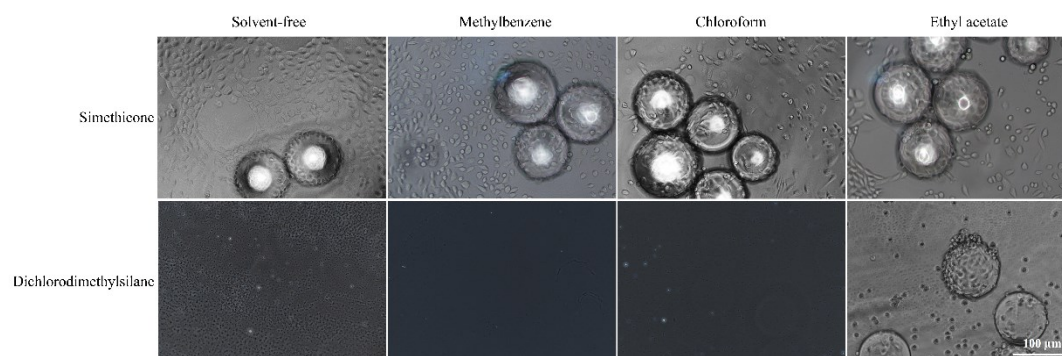


Figure S1. Silanization of glass culture vessel. The concentration of silyl reagents was 5% in methylbenzene, chloroform or ethyl acetate (vol:vol).

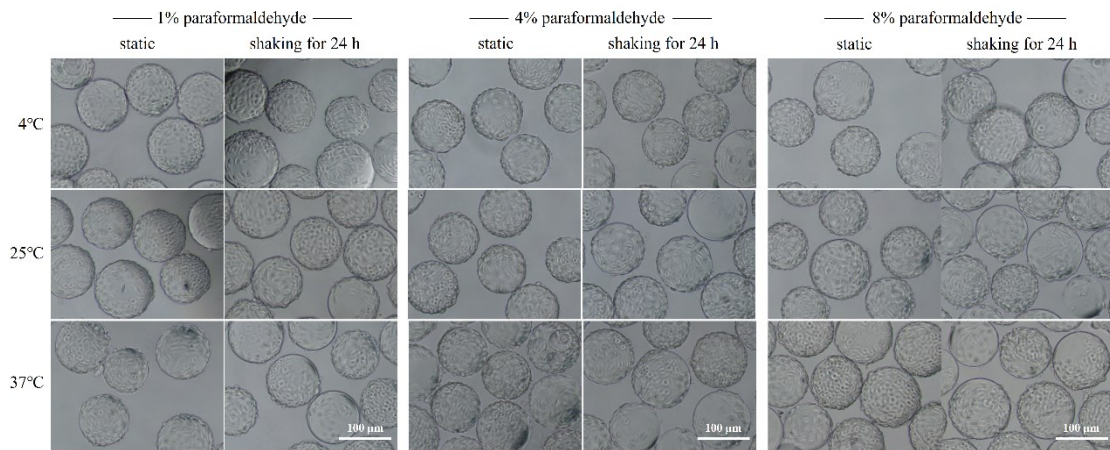


Figure S2. Fixation for 30 min in different concentrations of paraformaldehyde in PBS (vol:vol) at 4°C, 25°C or 37°C.

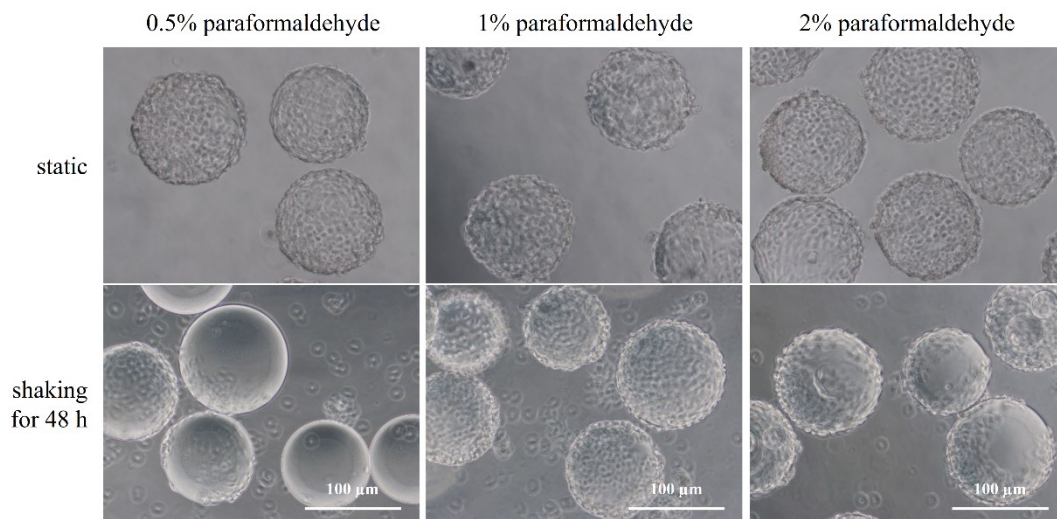


Figure S3. Fixation for 30 min in different concentrations of paraformaldehyde in PBS (vol:vol) at room temperature.

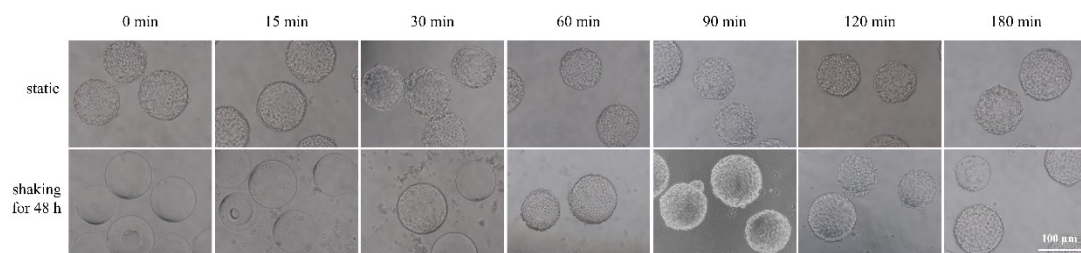


Figure S4. Fixation in 1% paraformaldehyde in PBS (vol:vol) at room temperature for different time.

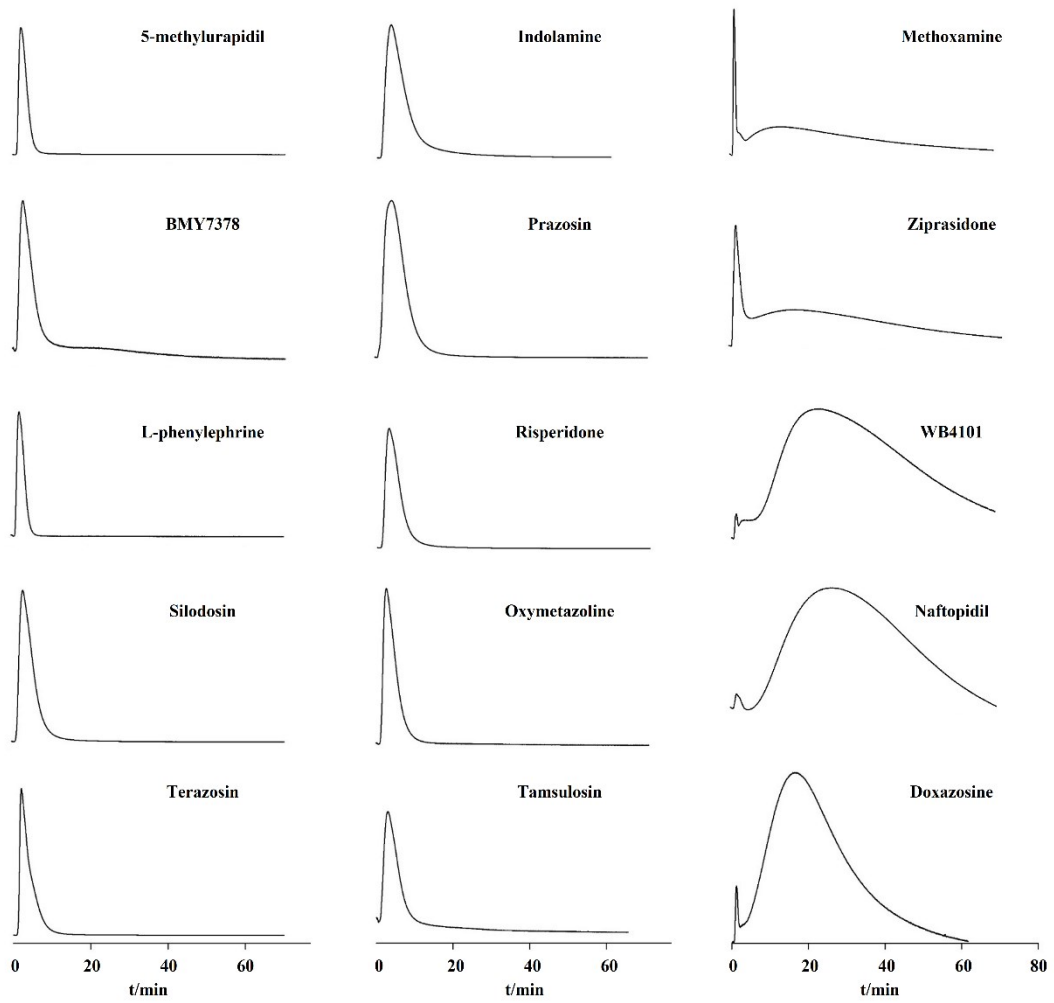


Figure S5. Selection of positive drugs by overexpressed α_{1A} AR CHO cell-based 3D bionic screening system.