

RESEARCH ON THE EFFECTIVENESS OF THE DESIGNED HYPOXIA-REOXYGENATION MODEL OF STROKE AND HEART ATTACK TO DEVELOP NEW DRUG FOR HEART ATTACK

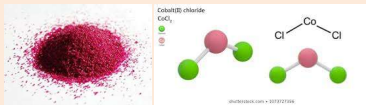
TRAN TRUNG KIEN, TRAN THI THUY DUONG, DANG VIET HUY, NGUYEN THUY DUONG

INTRODUCTION

- Stroke and heart attack are serious diseases that occurs when blood flow to the tissue is partially or completely reduced
- Reperfusion of blood to the tissue can reduce damage to the brain and heart muscle. However, replenishment can cause further muscle depends on oxygen transport by blood and blood flow.
- Therefore, in study, we designed the approach which is effectiveness and suitable to screen natural bioactive compounds with potential effects and applied to evaluate potential pharmaceuticals in treatment.

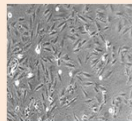
METHODS

Cobalt(II) chloride

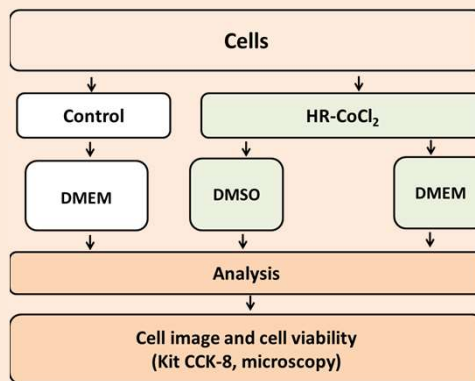


Cell culture and treatment

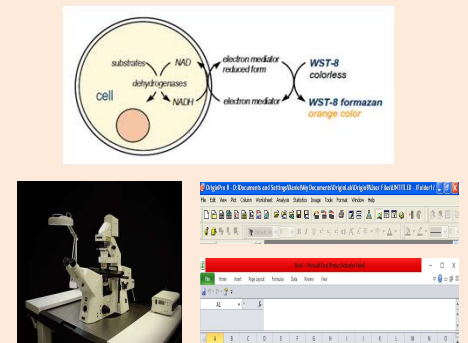
- Cells: 10^4 cell per well
- CCK-8 assay kit
- Plate reader: 450 nm abs
- DMSO
- 96 well plates
- CoCl_2 : 300 (μM)



Experimental design



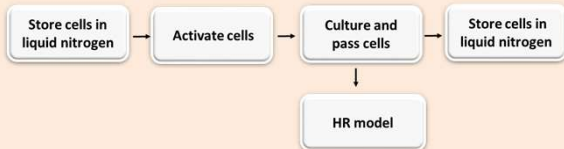
Procedures



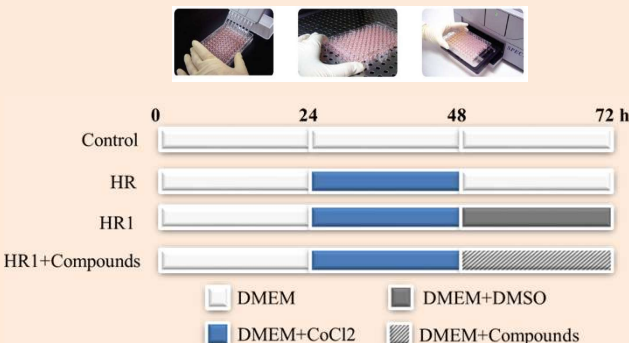
RESULTS

① Disease model approaches

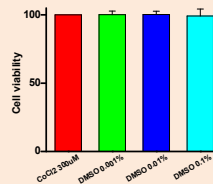
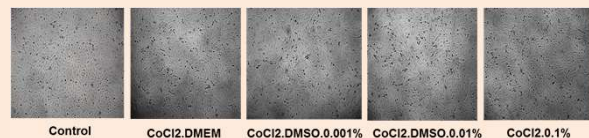
Maintaining cell



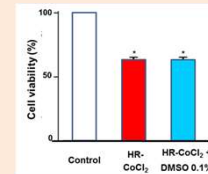
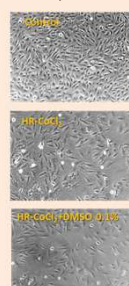
Models for stroke and heart attack studies



② Assessment of disease model



- DMSO (0.01±0.1%) does not affect on cell viability.
- DMSO 0.1% is selected for next testes.



- Cell alive in CoCl₂ treated groups was significantly decreased
- The model is ready for studying stroke and heart attack diseases.

CONCLUSIONS

- The established model is successfully built suitable for studying stroke and heart attack diseases
- To evaluate potential pharmaceuticals in treatment, potential compounds and drugs could be prepared in DMSO (0.01±0.1%)

FUTURE

We have learned invaluable lessons about stroke and heart attack diseases and known how to conduct a scientific research to create the highest efficiency, so it may have a great influence on our future career.