



Evaluating the Cell viability and Cytotoxicity of 50 Plant Extracts on MARC-145 cells

Kraijak Kaewprom¹, Chao-Nan Lin^{1,2}, Ming-Tang Chiou^{1,2}

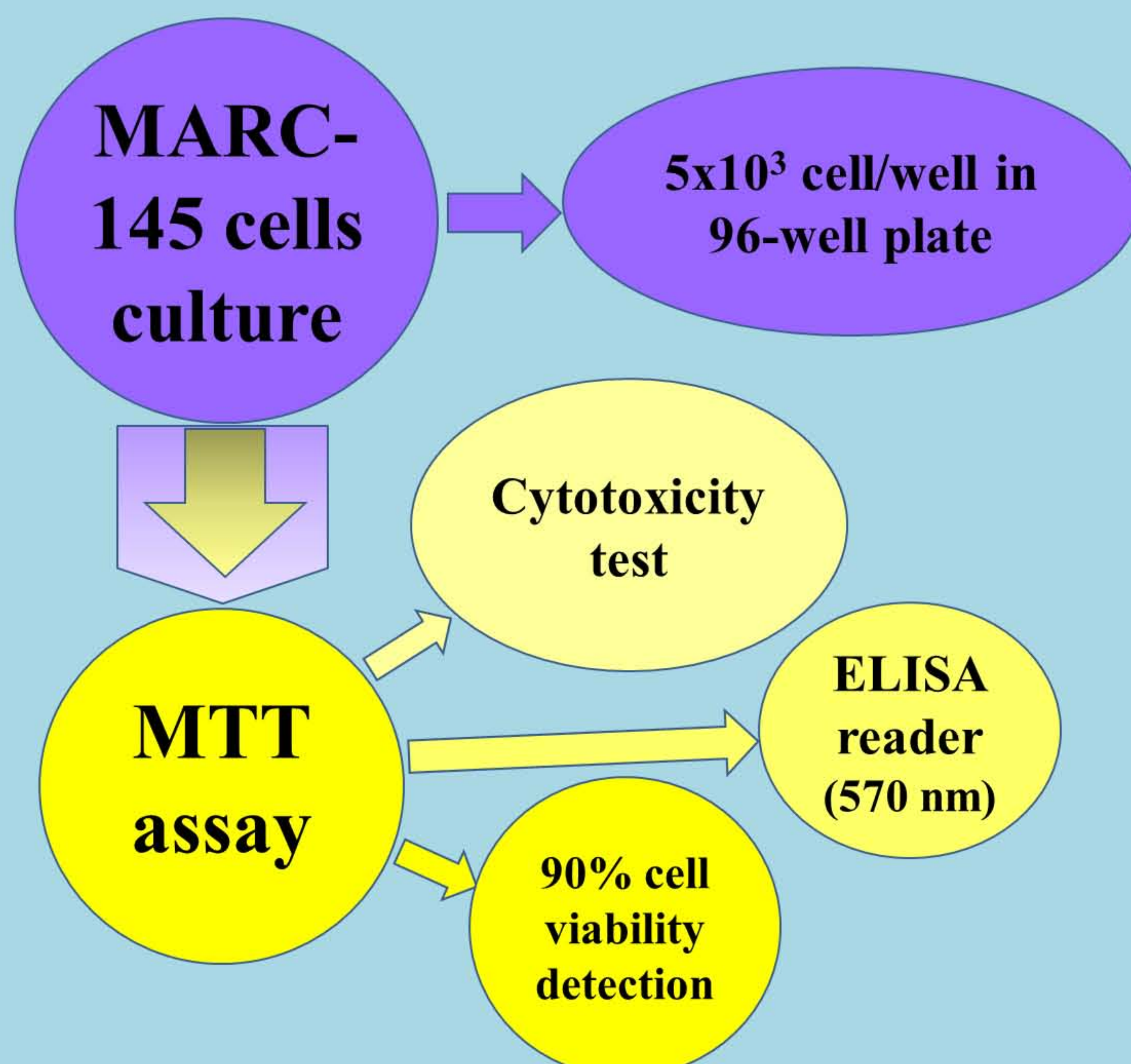
¹ Department of Veterinary Medicine, ² Animal Disease Diagnostic Center
College of Veterinary Medicine, National Pingtung University of Science and
Technology (NPUST), Pingtung, Taiwan

kkraijak@yahoo.com

Introduction

- ❑ PRRS is characterized by reproductive failure of sows and respiratory problems of nursery and growing pigs.
- ❑ PRRSV infection can cause immunosuppression in pigs.
- ❑ Present management strategies mainly focus on the prevention of infection using vaccination but are not sufficient to eradicate the virus and provide complete immunity.
- ❑ Previous studies have discovered a few natural compounds have antiviral activities on PRRSV.

Materials and methods



Results

- ❑ Cytotoxicity test were observed MNCT initial from 2⁻² dilution while clearly indicated that the cytotoxicity of different compounds on the same cell varied remarkably.
- ❑ A low-moderate toxicity was 42 compounds with MNTC ranging from 2⁻²-2⁻⁶ dilution.
- ❑ A strong toxicity was 8 compounds with MNTC ranging more than $\geq 2^{-11}$ dilution.
- ❑ The cytotoxicity of compounds on Marc-145 cells was in a dose-dependent manner.
- ❑ Cells morphological changes; granulation, lyses, vacuolization in cytoplasm, darkening of cell boundaries, cell detachment (Fig.1).

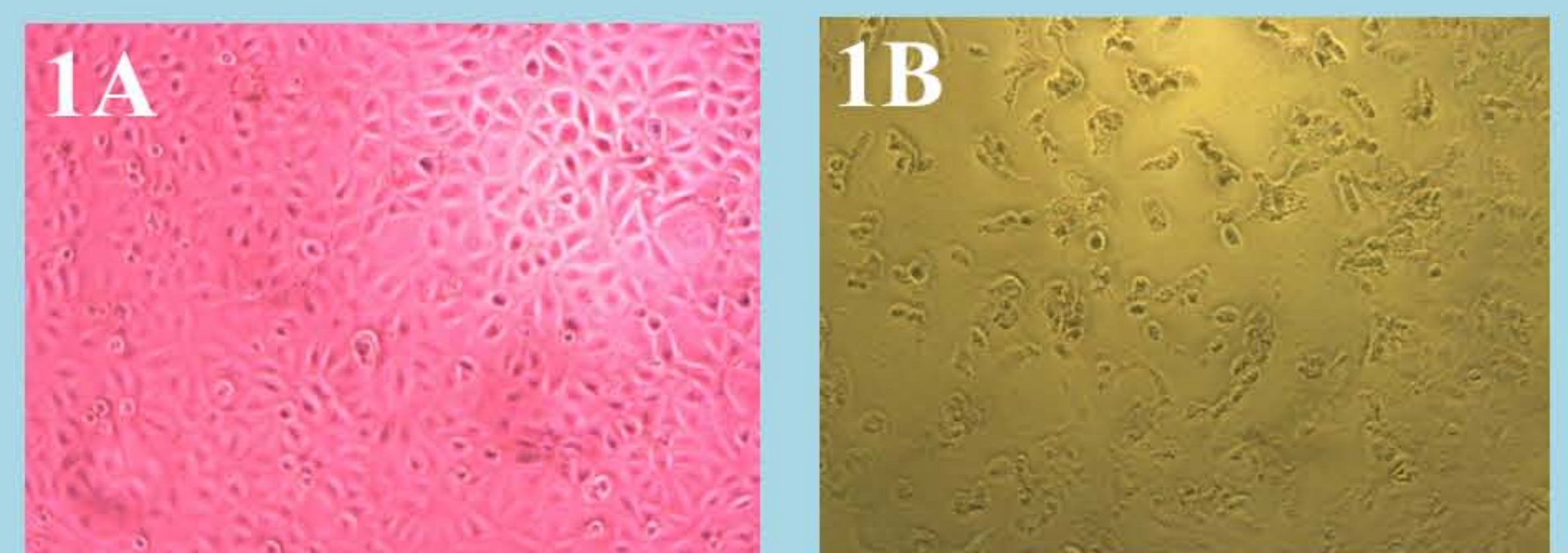


Fig.1. Cytotoxicity results; 1A: MARC-145 cells (Control) and 1B: MARC-145 cells in herb extract.

Discussion and conclusions

This study indicates that some compounds had not cytotoxicity on MARC-145 cells and may be useful for future application to the anti-PRRSV evaluation *in vitro*.