UK-China project to tackle antimicrobial resistance

Adding Chinese herbal medicine to antibiotic treatment for acute exacerbation of chronic obstructive pulmonary disease

Introduction

- COPD: over 25 million (China), 1.2 million (UK); 3rd cause of death globally by 2020
- Antibiotics: long, repeated courses; widely used in acute exacerbations of COPD
- Risk of resistance: found in approx. 34% patients with AECOPD
- Shufeng Jiedu (SFJD): potentially reduce risk and duration of hospital admission

Ex-vivo study

Test the antimicrobial properties of SFJD in human lung explant model.

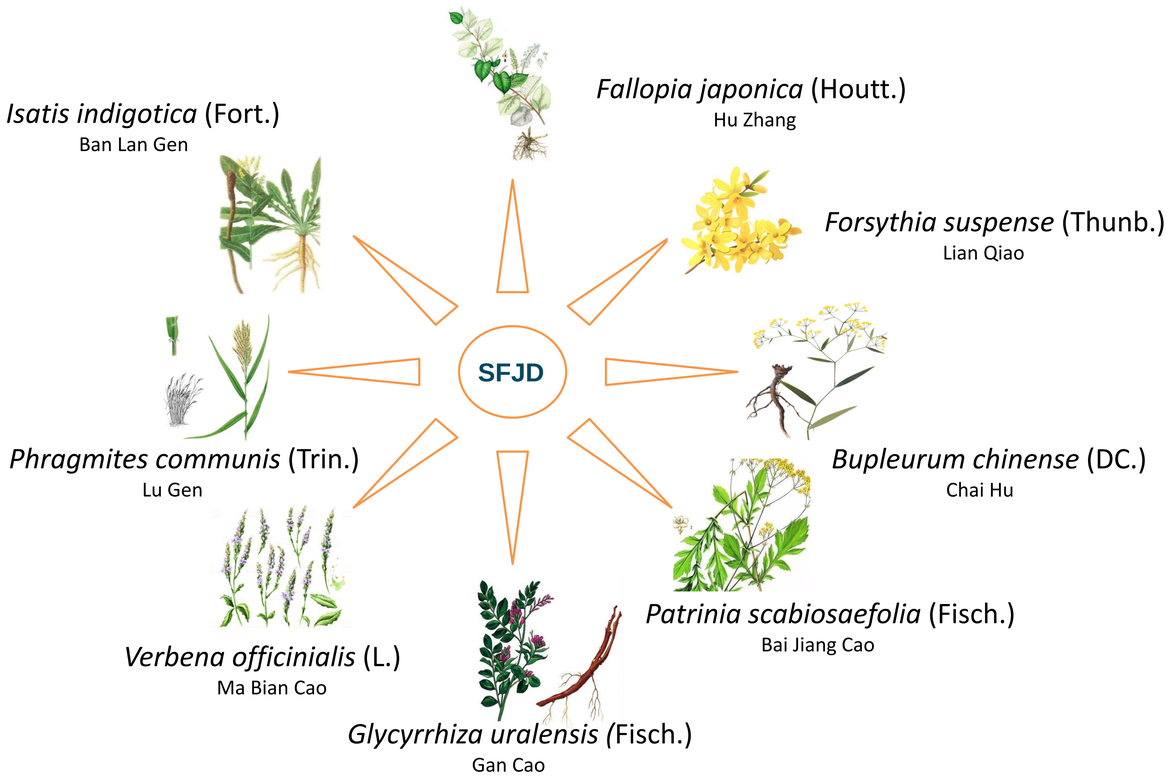
Prepared lung tissue to be infected with 5 x 10^6 CFU of NTHi for 24h, in the presence or absence of increasing concentrations of SFJD.

- Bacterial growth & survival
- Antibacterial dose of SFJD

Feasibility RCT (EXCALIBUr)

Two-arm parallel, placebo double blind, feasibility RCT, with nested qualitative study.

Setting: Primary care in the UK
Participant: 80 patients age ≥40, with a current AECOPD
Intervention: SFJD + usual care
Comparison: placebo + usual care
Outcome: Feasibility outcomes



Traditional Herbal Registration

- Evidence synthesis dossier: non-clinical and clinical research on SFJD
- Registration as a Traditional Medicinal Product in the UK
- Facilitate an application for a clinical trials license

In-vivo & In-vitro study

Establish in-vivo & in-vitro models with drug-resistant bacterial infections.

Investigate the antibacterial mechanism of SFJD + antibiotics for AECOPD using these models.

Full RCT

Two-arm parallel, placebo double blind RCT.

Setting: 2 inpatient hospitals, China
Participant: 300 hospitalised AECOPD patients, age 18-75
Intervention: SFJD + usual care
Comparison: placebo + usual care
Outcome (primary): Symptom improvement

This project is co-funded by

Department of Health (UK), Innovate UK
Minister of Science and Technology (China)
Anhui Jiren Pharmaceutical
Pheonix Medical Ltd

Participating Institutes

Respiratory and allergy Research group, UoS
Primary Care and Population Sciences, UoS
Southampton Clinical Trail Unit, UoS
Beijing University of Chinese Medicine
China Academy of Chinese Medical Sciences
Anhui Medical University 1st affiliated hospital
Dongzhimen Hospital
ShanghaiTech University

Further details can be obtained from

Dr Xiao-Yang (Mio) Hu
Aldermoore Health Centre, Southampton SO16 5ST
X.Hu@soton.ac.uk 023 8059 1786