



Co-operation possibilities between China and Pécs Region in the field of health industry coordinated by Health Industry Innovation Centre of Pécs

The Pécs region has close to ten years of history in co-operation between academic partners of the University of Pécs and different Chinese research groups. The most promising and active co-operation in health industry took place between the Department of Immunology and Biotechnology of the Clinical Centre of the University of Pécs and the Institute of Chinese Materia Medica, China Academy of Chinese Medical Sciences, Beijing. They performed two successful bilateral research grants including mutual exchange of scientists during the last five years. The co-operation is continuing with a new common research grant application.

The Health Industry Innovation Centre of Pécs Co. is a joint company of City of Pécs, University of Pécs, and of SMEs with biotechnological profile and private investors. It was established in 2007 with the aim of providing management and supporting coordinated research and innovative actions in the field of applied life sciences and biotechnology mainly for the participating SMEs of the Biotechnological Innovation Base internationally accredited cluster.

According to the successful preliminary co-operations we plan to intensify and extend the partnership between China and Pécs region, and we plan to launch a new project in three steps for middle and long term. Our aim is a complex development which includes the education and training of specialists in the field of evidence based analysis of traditional products of Chinese medicine; perform the laboratory tests of these products and treatment procedures under circumstances of internationally accepted quality assurances; establish a health industry research centre for high throughput testing and producing of Chinese medicine products and introducing them into the international (dominantly EU) market.

The development is planned in three branches:

1. Adaptation and preparatory school for young Chinese students for better integration into European higher education systems

Minimum 200, maximum 600 students allowed. Total program last for 24 months (21 academic months + 3 months break) and includes the following basic modules:

- Module 1: intensive English course from beginner to intermediate level (total of 630 hours, month 1-12)
- Module 2: intensive English course from intermediate to advanced level (total of 210 hours, month 13-24)
- Module 3: EU history and culture, EU business forms and regulations as the basic module (total of 90 hours, month 6-10)
- Module 4: Fundamental science module with theoretical lectures (in two directions: natural sciences, or social sciences) and laboratory practices specifically for the degree program. Total of 240 hours, month 14-22.

Tuition fee: 8.500 EUR/year or 15.500 EUR/total program (2 years)

Housing: 400 EUR/month.

Other expenses:

- Application fee: 100 EUR (non-refundable)

Each module is finished by exam, Module 2-4 can be taken if Module 1 is successfully accomplished.

Expected output: successful student will be able to pass entrance exam to any BA or other undergraduate degree programme offered by University of Pécs, or other higher education institution in the EU.

2. Recruitment Chinese Students to Medical Biotechnology MSc program of the University of Pécs, School of Medicine.

Potential students can apply to the accredited Medical Biotechnology MSc Program of the University of Pécs, School of Medicine:

Prerequisite for admission: at least a BSc degree in any of the following disciplines: biology, health sciences, or chemistry/biochemistry and adequate level of English knowledge.

Equivalence of submitted degree as prerequisite is evaluated on individual basis.

Maximum 100 fellows.

Tuition fee: 5.500 EUR/semester without housing.

It is advised to take short catching up English course before entering the MSc programme.

Catching up course is a 6 month long program with the aim to bring up the level of applicants to the adequate level both in English and relevant science subjects.

Catch up course fee: 3.500 EUR

3. Establishment of a new facility at the Health Industry Innovation Centre of Pécs for evidence based research, analysis, validation and commercialization of TCM products.

Standardization of Traditional Chinese medicine (TCM) products and treatments have been a topic of discussion over the past few decades in China with the goal of promoting advances in TCM in China and elsewhere around the world. Many quality and safety control standards for TCMs have been implemented in China, but systematic standards of efficacy harmonized with the western style health protocols have not been established for TCMs until now.

Regular procedure of the evidence-based medicine (EBM) is the appropriate practice to provide evidence from the analysis of TCM materials and treatment procedures in recognized *in vitro* and *in vivo* (laboratory animal) models, because the clinical trials cannot be implemented without preliminary EBM laboratory analyses. This strategy will provide the springboard for efforts to standardize TCM products and treatment procedures.

Objective: creation of an integrated research, R&D&I, quality assurance, production line, and commercial service centre for the development, validation and commercialization of TCM products according to the internationally accepted standards (e.g. ISO/GLP). This investment in the frame of the Health Industry Innovation Centre of Pécs Co. will be able to open new market fields for TCM products by the strong co-operation among Chinese and Hungarian researchers developer and businessmen.

Partners to be involved:

Health Industry Innovation Centre of Pécs Co. (coordinator)

University of Pécs, Clinical Centre, Department of Immunology and Biotechnology

University of Pécs, School of Pharmacy

Institute of Chinese Materia Medica, China Academy of Chinese Medical Sciences, Beijing
possible governmental and/or private investors

Building construction and equipment: cca. 14.5 Million EUR

The Health Industry Innovation Centre of Pécs Co. has approved construction plans and valid building construction permit at the moment.