TRANSLATIONAL MEDICINE

*"Translational Medicine Taking **Discoveries** to **Patients Benefits**"*

Introduction of Translational Medicine by

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Bilateral PhD studentship offer

The University of Pécs Centre for Translational Medicine (UP CTM) wish to build up a strong relationship between Central and Eastern European Universities & Hospitals.

In the field of Pancreatology we have built up a network between 28 countries and 100 Hospitals. We would like to extend it to other discipline as well. Therefore, **our Centre welcomes foreign and bilateral Ph.D. students** in order to educate them to translational research. During the four-year-period, students would be able to work between their Slovakian and our Centres. We wish to pass on knowledge that will enable future physicians to employ a distinctly scientific approach to their work.

Salaries: 600 Euros/month + travel costs between the Slovakian centre an Pecs + additional work related costs (laptop, etc), + support for attending courses

Scientific Benefits: high international visibility, large amount of publications (predicted amount 3-4 first author, 10-20 coauthor in Q1 journals (around 50-70 IF)

General Background

Translational medicine **forms a bridge between clinical and basic research**. It is an umbrella term for 'translating' preclinical research findings to everyday clinical practice and patient care, thus going from bench to bedside.

Basic & Clinical

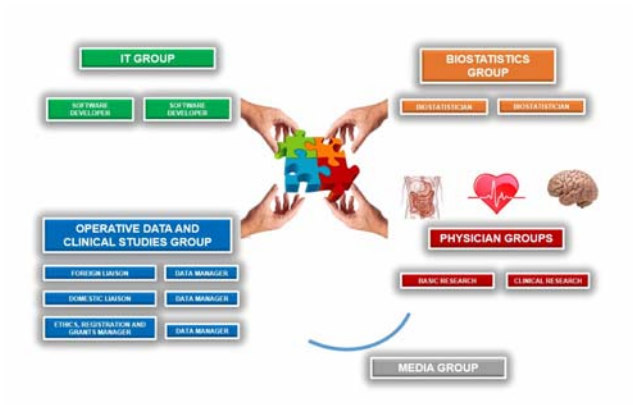
Translational medicine involves **experiments** that facilitate a better understanding of the development of diseases **within basic research**, the **discovery of pharmaceutical** points of

attack, effect studies applicable to human therapies, the biological study of human diseases and new improvements in treating human diseases. It also includes non-human or non-clinical studies, which can even form the foundation for new **clinical applications and drug development trials** in clinical phases 1–3. Like translational thinking, establishing a link between theoretical and clinical potential, that is, between the potential for basic research and patient care, is unique not only in Hungary, but also in Central Eastern Europe.

One of the main advantages of the system is that *the clinical questions can be transformed to basic research studies* and after that, basic research findings can be transformed into clinical applications and shared with the various clinical/therapeutic areas *quickly and effectively*.

Clinical medicine should be divided into two main categories: general and translational medicine. The central work of **general medicine** is to provide **basic care** and **graduate training**, while **translational medicine** – besides the good care - engages in clinically-oriented **studies** (thus increasing scientific output), **pharmaceutical phase** trials (to discover new therapies and grow institutional income) and **postgraduate training** (to raise the number of PhDs and other academic degrees). Patients are only affected by translational medicine if they undertake to participate in a clinical study (based on the National Institutes of Health (NIH) model).

Multidisciplinary



Another feature of the system is its multidisciplinary nature; that is, it facilitates theoretical and clinical research in particular medical specialties **in coordination with various fields** (IT, mathematics, clinical research, theoretical research and management).

In order to maximize the output, the main pillar of translational medicine comprises (1) the **registration system**, which covers all the clinical areas and is expanded through the appropriate IT communication infrastructure, and (2) the **biobank** which is linked to it. These systems are set up and maintained with data entered and mutually shared in accordance with strict legal and ethical principles. It is thus possible to make a sufficient number of cases available for ongoing clinical studies and provide solid evidence to better understand and treat particular diseases and to boost the scientific value of future publications.

The most outstanding centres for translational medicine, where the translational approach to medicine was first institutionalised, are the National Institutes of Health (NIH) and the Harvard Clinical and Translational Science Centre. Today, centres like these can also be found in Cambridge and Oxford. They represent the world's greatest research potential, with studies published in the most significant scientific journals.

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