

**Application of Dr. Tamás Kőszegi associate professor for full-time  
professorship  
University of Pécs, Department of Laboratory Medicine**

**2015**

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**Request of applicant with reference to the announcement of a full time professorship position**

I, the undersigned, staff member as associate professor at the Department of Laboratory Medicine, University of Pécs, Hungary hereby state that I would like to apply for obtaining the full time professorship position announced below:

**Pécsi Tudományegyetem**  
a "Közalkalmazottak jogállásáról szóló" 1992. évi XXXIII. törvény 20/A. § alapján,  
**a Pécsi Tudományegyetem**  
**Klinikai Központ, Laboratóriumi Medicina Intézetben**

**egyetemi tanári**  
munkakör betöltésére kiírt pályázata

With kindest regards,

Dr. Tamás Kőszegi  
associate professor

Pécs, November 16, 2015

## Curriculum vitae

**Name:** Dr. Tamás Kőszegi  
**Date and place of birth:** Pécs, January 5, 1955  
**Mother's name:** Mária Kolpek  
**Marital status:** married (1978), wife: Dr. Tamásné Kőszegi b. Melinda Rihmer  
Physio- and music therapist, 6 children  
**Secondary school:** Pécsi Nagy Lajos Gimnázium, English class, summa cum laude  
**Higher education:** University Medical School of Pécs, Faculty of General  
Medicine, 1979, Cum Laude, Diploma No: 69-99/1979  
**URS work:** 1976-1979, Univ. Pécs, Dept. Clinical Chemistry, 11 lectures,  
absolute winner of one national URS competition, 1 lecture in  
abroad and 1 Rector's thesis with first prize  
**Workplace:** Since 1<sup>st</sup> of October till now without interruption Dept. of  
Laboratory Medicine, University of Pécs, Hungary  
**Specialty exam:** Clinical Laboratory Investigations, 1983, excellent grade,  
(1176/1983)  
**Positions:** State scholarship holder 1979-1981, junior lecturer 1981-1984,  
assistant lecturer 1984-1993, senior lecturer 1993-2000,  
associate professor 2000-  
**Knowledge of languages:** English, C1 (A 6125/1978)  
**Foreign studies:** In 1987, 1 month scholarship at Dept. Physiology and Molecular  
Biophysics, Baylor College of Medicine, Houston, Texas, USA.  
**Prize:** 1<sup>st</sup> prize issued by Hungarian Academy of Sciences, Committee  
of Pécs for a thesis entitled „ATP release in nonionic detergent  
treated cells”, 1988-89  
**Scientific degrees:** PhD in medical sciences, (16.854)  
dr.med.Habil, 13/2003

## Major scientific field

Clinical Medicine, 3.2.

## Scientometric data based on MTMT

Number of publications: 269  
Cumulative impact factor: 109,667  
Number of independent citations: 373  
Hirsch index: 13

Website of publications:

<https://vm.mtmt.hu/www/index.php?AuthorID=10017337>

## Professional portfolio

### Scientific interests

One of my major scientific interest is to study basic life processes of living cells including cell energetics (ATP determinations), actin cytoskeleton rearrangements and molecular interactions (antigen-antibody, protein-protein, protein-nucleic acids) and to analyze the molecular processes required for maintenance of integrity of living cells. Another approach is to study the pro-inflammatory response in tissue culture models and in serum samples of tumorous and septic patients as well (pro-inflammatory cytokines and procalcitonin). In sepsis cases new promising biochemical parameters are analyzed (serum actin, gelsolin and actin/gelsolin ratio) by quantitative western blot technique. We searched for a positive correlation between the severity of the disease and the changes in actin-gelsolin parameters. I developed a novel method for direct monitoring of release of intracellular ATP due to different treatments (e.g. nonionic detergent). Also, I worked out a multiparametric luminescent viability assay (ATP/protein, ATP/nucleic acid, esterase probes) and an enzymatic fluorimetric assay for measurement of intracellular glucose levels in tissue culture cells. Both the viability and the glucose tests were adapted to microplate readers. We were the first to develop an acid precipitation method which is suitable for isolation and characterization of low molecular weight (smaller than albumin) serum proteins in degenerative diseases (malignancies, sepsis). This test was suitable for quantitative and qualitative evaluation of the acid soluble proteins (protein concentration and SDS electrophoresis + western blot). I have made an extensive experimentation on deciphering the molecular and cellular interactions of ochratoxin A mycotoxin including attempts to find and characterize the potential protective effects of certain flavonoids at the molecular level. I worked out a chemiluminescence microplate assay for the analysis of total antioxidant capacity of cytoprotective plant extracts. In clinical collaborations my major focus was on laboratory follow up of inflammatory processes, oxidative stress in patients under intensive care (sepsis) and in diabetes and nephrology cases. Recently, I have collaborative work in laboratory monitoring of sportsmen trying to find reliable parameters for characterizing the efficiency of physical exercise (training). My most recent research field is isolation, culturing and characterization of circulating tumor cells and tumor stem cells in breast cancer patients (genotype-phenotype analysis).

### Methodological palette, developments

Fluorescence polarization studies for direct monitoring of dynamic molecular interactions in biological systems (e.g. protein-ligand interactions)

Fluorescence polarization analysis of the antigen-antibody reaction

Fluorescence polarization measurements of microviscosity of amniotic fluid samples and cell membranes and cell membrane preparates

Application of ATP-dependent bioluminescence technique for highly sensitive detection of ATP in isolated blood cell populations and in different tissue culture cells

Development of novel luminescence multiparametric assays for tissue culture samples (intracellular ATP/protein, glucose, oxygen radicals, etc.)

Adaptation of the bioluminescent assay for direct monitoring of ATP release in nonionic detergent permeabilized cells

Analysis of the physical state of ATP by its release kinetics in detergent permeabilized cellular models

Application of luminol type chemiluminescence methods for detection and characterization of ischemic tissue damages

Phagocytosis monitoring by using luminol-enhanced chemiluminescence in the presence of immunostimulant plant extracts

Analysis of the role of ATP in maintenance the integrity of red blood cells  
 Study of the effect of insulin treatment on the nitrogen monoxide and oxygen radical production of isolated human platelets  
 Development of a novel acid precipitation technique for isolation, quantitative and qualitative characterization of the low molecular protein fraction of human serum samples  
 Characterization of the low molecular, acid soluble fraction of human blood serum in systemic diseases (malignancies, autoimmune and inflammatory processes)  
 Studying the relationship between cell number and size related to the intracellular ATP contents of red blood cells and platelets of different species  
 Analysis of the ATP→ADP exchange on the dynamic and conformational parameters of actin monomers  
 Immunochemiluminescent determination of human procalcitonin in sepsis and localization of its cellular origin  
 Analysis of inflammatory mediators in systemic bacterial infections with special emphasis on human procalcitonin, and the serum actin/gelsolin scavenger system  
 Adaptation of urinary orosomucoid and cystatin-C automated immunoturbidimetric tests on Cobas c 502 routine analyzer  
 Optimization of the bioautography method based on measuring the ATP/protein ratio of test microbes  
 Performing magnesium load test in migraine patients  
 Analysis of the mechanism of multidrug resistance by fluorescence and immunological techniques  
 Testing of plant extracts and essential oils in cellular models using luminescence methods  
 Measurement of antioxidant capacity of plant extracts and human samples (blood serum) by chemiluminescent assays (method development)  
 Investigation of biological effects of ochratoxin A in model systems  
 Isolation, culturing and characterization of circulating tumor cells (in progress)

#### Additional methods

Development of ATP-dependent bioluminescence technique for measurement of intracellular ATP, for direct monitoring of ATP release, establishing fluorescence spectroscopic methods including fluorescence polarization. Application of luminol type chemiluminescent techniques for monitoring of free radicals and antioxidant capacity, establishing chemiluminescent immunoassays (routine and homemade) and tissue culture models (toxicity, viability, morphology). 3 dimensional cell culturing for analysis of cancer cell behavior and effects of ochratoxin A (under development). Protein chemistry (proteomics: 1D and 2D electrophoresis, quantitative western blot), fluorescence microscopy, tissue culturing (sterile techniques). Isolation of circulating tumor cells from peripheral blood of cancer patients and culturing of them (method development).

### Professional activity in public

#### In Hungary

Memberships: Hungarian Society of Laboratory Medicine 1982-  
 Hungarian Biophysical Society 1992-  
 Hungarian Academy of Sciences, Regional Committee of Pécs, Chemical-Biochemical Working Group 1997-2002  
 Hungarian Academy of Sciences, Regional Committee of Pécs, Vth Committee of Medical Sciences, Diagnostics Working Group (secretary)  
 Hungarian Academy of Sciences, Regional Committee of Pécs, Working Group of Physical Chemistry 2012-

Coordinating international networks:

    Ceepus local coordinator 2000-

    Erasmus local coordinator 2010-

Member of journal editorial boards: Complementary Medicine 1996-2010

    Laboratory Medicine 2009-2011

### **In abroad**

Membership: European Society for Photobiology 1988-1992

### **Activity in higher education (subject, type, period):**

#### **Undergraduate teaching activity at University of Pécs, Faculty of General Medicine**

- 1982-1989 teaching activity at practices and interrogation within the frame of **Physiology** in *Hungarian/English* languages (obligatory subject)
- From 1991 up to now teaching activity (practices and lecturing) and also interrogation of „**Clinical Biochemistry**” subject in *Hungarian/English* languages for medical students (obligatory subject with semester exam)
- 1991-2006 giving elective subject courses named „**Scientific Bases of Natural Healing Methods**” in view of molecular and cellular levels, since 1997 in English language as well (written examination)
- From 2004 up to now teaching the obligatory subject of „**Clinical Laboratory Investigations**” (lecturing as *responsible teacher*) and interrogation in *Hungarian* - and from 2013 *in English* – languages (Pharmaceutical Major, mid-term mark)
- From 2012 up to now teaching the obligatory subject of „**Plants in Medicine and Dietary**” (lecturing as *responsible teacher*) and interrogation in *Hungarian* - and from 2013 *in English* – languages (Pharmaceutical Major, mid-term mark)
- From 2011 up to now teaching in „**Medical Biotechnology Major**” *English course* within the subject of „**Proteins and protein networks**” (practices, lecturing)
- From 1982 up to now mentor/tutor tasks for students joining Undergraduate Research Society, their instruction for giving lectures and writing scientific theses

#### **Undergraduate teaching activity at University of Pécs, Faculty of Health Sciences**

- In 2000-2006 teaching and interrogation of the elective course named „**Complementary Medicine**”
- From 2002 up to now giving lectures and practices within the major of „Laboratory Analytics in Medical Diagnostic Laboratories” at the center of **Kaposvár (University of Pécs)** for full-time and correspondence students in Kaposvár (and in Pécs at the Department of Laboratory Medicine), also tutoring of diploma theses
- In 2003/2004 teaching the subject named „**Phytotherapy – Alternative Medicine**” (University of Pécs, Faculty of Health Sciences, Health Visitor Major), full-time students, lecturing and interrogation
- From 2011 up to now teaching correspondence students (MSc training) at the „**Clinical Laboratory Investigator Major**” within the subject of „**Modern laboratory Methods in Protein Research and in Proteomics**” obligatory course (lecturing and practical training)

### Postgraduate teaching activity

- From 1994 up to now giving lectures for family doctors
- From 1996 up to now giving postgradual training lectures as invited speaker (especially in courses for obtaining credit points) for medical doctors, pharmacists, and health care professionals
- From 2001 up to now giving tutor/mentor services
- From 2000 up to now acting as pre-opponents, opponents of PhD students and being a member of the professional juries at PhD defenses
- From 2000 up to now methodological teaching of our PhD students, fulfilling tutor positions (Faculty of General Medicine, of Health Sciences both for full-time and correspondence PhD students), teaching at PhD credit courses
- From 2015 giving independent PhD course
- For 2 years, giving lectures at University of Pécs, Faculty of Health Sciences within the course of „**Natural lifestyle- and cures**” professional training
- From 1992 up to now being a mentor/tutor of medical doctors and non-medical doctors (biologists, chemists, pharmacists) in the process of specialization in Laboratory Medicine/Clinical Biochemistry, examiner at the specialty exams
- From 2012 up to now being responsible for the specialization of pharmacists in Clinical Laboratory Diagnostics
- From 2013 up to now, obtaining license for being a final examiner at the specialty exams in the fields of „Medical Laboratory Diagnostics” and of „Clinical Laboratory Pharmacists”

### Evaluation of teaching activity

- ***Obligatory and elective courses:*** I have 33 years of teaching experience both in ***Hungarian and in English*** languages. I have been and still I am a teacher of the obligatory subject „**Clinical Biochemistry**” and I have participated in the workout of the relevant curriculum since 1991 (in Hungarian and ***in English*** languages). I authored 3 chapters in the handout of Clinical Biochemistry in Hungarian language. I am the responsible teacher of 2 obligatory subjects at the Pharmaceutical Major and I worked out the corresponding curricula and all lectures in Hungarian and ***in English*** languages. For 15 years I have been the responsible teacher also working out the curriculum of the elective subject named “**Scientific Bases of Natural Healing Methods**” and I also worked out the curriculum of the subject „**Complementary Medicine**” taught and interrogated by me at University of Pécs, Faculty of Health Sciences. I also took part in the establishment of the curriculum of the correspondence MSc training („**Clinical Laboratory Investigator Major**”), University of Pécs, Faculty of Health Sciences. I authored/co-authored 7 book chapters of the corresponding course book entitled „**Modern laboratory Methods in Protein Research and in Proteomics**”.
- ***Regular teaching activity as a guest tutor at universities in abroad:*** As the local coordinator of Ceepus and Erasmus networks practically every year (once or two times) I participate as a lecturer in summer schools in Croatia, Romania and Slovenia. Within Ceepus and Erasmus exchange programs I also give regular lectures in Biochemistry and in Laboratory Medicine subjects for undergraduate students in the above countries. Besides regular teaching I give scientific lectures as well for the research staff of the above universities including Czech Republic.



- **Major role in establishing university majors, programs, subjects, leading role in continuous development of the subjects taught, adaptation of results of scientific activity into the curricula:** At the start (establishment) of the **Pharmacy Major** I contributed to the workout of the curriculum and as a responsible teacher I started the „**Clinical Laboratory Investigations**” obligatory subject. Also, as a responsible teacher I established and started 2 obligatory and 2 elective subjects (see above). One of my main tasks every year is to refresh the contents of all the subjects taught by me, adapting and including the latest literature data and those of my own experiments. A few examples: integration of my experimental data on prolactin research, involvement of my results on cellular toxicity models into the lectures of „**Clinical Laboratory Investigations**” and „**Plants in Medicine and Dietary**”. Every year I actualize the questions of the written examinations and also take part in the workout of the questions for oral examination.
  
- **Major role in writing/editing and introduction of course books, handouts:**  
 Author of book chapters in the following handouts and course books (in Hungarian)
  - Jobst K, Mestyán I, Kellermayer M, Ludány A, Kőszegi T  
*Segédlet a klinikai kémiai tanulmányokhoz: egyetemi jegyzet*  
 Pécs: Szikra Nyomda, 1991. 133 p.
  - Kellermayer M, Kőszegi T, Liszt F, Ludány A, Miseta A, Nagy T, Tőkés-Füzesi M, Magyarlaci T  
*Klinikai Biokémia: jegyzet*  
 Pécs: Agora Kiadó, 1995. 168 p.
  - Kőszegi T  
*Tumorok és tumor markerek*  
 In: Kellermayer M (szerk.)  
*Klinikai Biokémia: Jegyzet. Pécs: Pécsi Tudományegyetem Egyetemi Kiadó, 2001. pp. 182-190. + 2 additional chapters*
  - Kőszegi T  
*A fehérjekutatás modern módszereinek alkalmazása a klinikai patológiában - Az új módszertanok klinikai hasznosulása az orvosi kutatólaboratóriumokban: A csontanyagcsere fehérjemarkerei*  
 In: Ludány Andrea (szerk.)  
*A fehérjekutatás modern módszertana. Budapest: Medicina Könyvkiadó, 2011. pp. 347-351. + 6 additional chapters*
  
- **Tutor and supervisor in diploma theses:** So far, I have been tutor of more than 50 undergraduate students’ research activity (lectures at competitions, Dean’s essays, theses). Besides these, I have been the tutor of 2 international MSc diploma theses (University of Zagreb and University of Ljubljana) and have supervised more than 10 BSc, and/or MSc theses.
  
- **Special attention for talented students, inspiration and tutoring of undergraduate students’ research (URS) activity, its efficiency (prizes at local and national competitions, etc.):**  
**Results obtained during the past 5 years (undergraduate research students and PhD students) under my mentorship and supervision, please see at the end of this document:**  
**URS-PhD tutor of:** Bencze Bálint, Horváth-Szalai Zoltán, Ortmann Erika, Molnár Mónika, Orfné Szeivert Katalin, Kósa Brigitta,  
**URS-PhD co-tutor of:** Tóth Ildikó, Szirmay Balázs, Kustán Péter, Kövér Anna, Meiszterics Zsófia

- ***Mentoring/tutoring activity in PhD programs, efficiency within the doctoral schools, achieved results:***

**PhD students under my mentorship/co-mentorship who already defended their theses with success and obtained the doctoral degree:**

**Dr. Bogner Péter** (co-mentor): Egyértékű ionok megoszlása permeabilizált sejtekben, (1996)

**Dr.Szakmány Tamás** (co-mentor): A szepszis és a többszervi elégtelenség biokémiai és klinikai jeleinek vizsgálata kritikus állapotú betegeknél (2003),

**Dr.Nagy Sándor** (co-mentor): ATP különböző biológiai rendszerekben (2007)

**Dr.Márton Sándor** (co-mentor): A korai posztoperatív szövődmények vizsgálata tumor miatt nyelőcső eltávolításon átesett betegeknél (2007)

**Dr.Poór Miklós** (mentor): Ochratoxin A molekuláris interakcióinak vizsgálata in vitro modell rendszerekben (2014)

#### **Function in the Doctoral School of University of Pécs**

**Core member:** Doctoral School of Clinical Medicine

**Supervisor:** Doctoral School of Pharmaceutical Sciences  
Doctoral School of Clinical Medicine  
Doctoral School of Health Sciences

**Teacher:** Doctoral School of Chemistry

**Full time PhD students under my supervision up to now:** Dr.Horváth-Szalai Zoltán, Dr.Kustán Péter (50%), Temesfői Viktória, Kurdi Csilla and Sourav Das (India, Stipendium Hungaricum scholarship), **correspondence students:** Dr. Pászthy Vera (50%), Dr.Bencze Bálint, Sali Nikolett, Mészáros Vilmosné

- ***Appreciated pedagogical work and proven lecturing ability:*** Based on the feedback of students my teaching activity has been rated at an average of 4.0.
- ***Organizational skills in education and experience in a leadership position:***  
I have educational experience of more than 30 years in the undergraduate university program including workout and establishment of obligatory and elective subjects. During this period I have been involved in teaching and interrogation of these subjects in Hungarian and ***in English*** languages. I teach at the Faculty of Medicine and at the Faculty of Health Sciences of University of Pécs. During the last 15 years I have been mentor and tutor in specialty training for Laboratory Medicine (medical doctors) and I am the responsible person for the specialty training of the program of „Clinical Laboratory Pharmacists”. My work involves organizing and working out of the schedule during the basic two years and also of the special programs in the following periods. I prepare the young colleagues for teaching activities as well. As the leader of a special territory in my workplace I am directly responsible for the routine work of 10-15 lab technicians.

#### **Evaluation of professional public activity in Hungary and in abroad**

- ***Member in academic doctoral, university habilitation and doctoral processes (opponent, member of the committees), activity in the processes of scientific qualification:***  
Several times I have done PhD pre-opponent tasks, I was member in scientific committees at PhD examinations and at PhD defenses and at one occasion I was one of the opponents at a PhD defense.

- ***Membership in scientific advisory boards of congresses, chairing of conferences, giving introductory lectures, organizing congresses:***

**Membership of scientific advisory boards and chairing of conference sections:**

1. MLDT 55. Nagygyűlése Pécs, 2010. augusztus 26-28.
2. IC ANMBES - Second International Conference on Analytical and Nanoanalytical Methods for Biomedical and Environmental Sciences, Brasov, Romania, May 24-27, 2012
3. New Trends on Sensing - Monitoring - Telediagnosis for Life Sciences, Braşov, România, NT-SMT-LS, July 24-26, 2014
4. New Trends on Sensing - Monitoring - Telediagnosis for Life Sciences, Braşov, România, NT-SMT-LS, September 3-5, 2015

- ***Membership of editorial boards of scientific journals:***

Member of editorial board:           Complementary Medicine 1996-2010  
   Laboratory Medicine 2009-2011

- ***Peer reviewing activity in committees dedicated to judge grant proposals, reviewing manuscripts of books and scientific journals:***

Evaluation of OTKA grant proposals

**Peer reviewing activities for scientific journals:**

Laboratory Medicine

Analytical and Bioanalytical Chemistry

Clinical Chemistry and Laboratory Medicine

Cytometry

Journal of Luminescence

Brain Research Bulletin

Fertility and Sterility

Croatica Chemica Acta

The Journal of the International Federation of Clinical Chemistry (eJIFCC)

European Journal of Pharmacology

Collegium Antropologicum

Drug and Alcohol Dependence

Biochemia Medica

J of Photochemistry and Photobiology: B Biology

Luminescence

Acta Biochimica et Biophysica Sinica

Toxicon

Food Research International

Neurodegenerative Diseases

- ***Professional decorations, prizes:*** Pándy Kálmán medal (lifetime achievement prize),  
   MLDT 2014  
   Pro Facultatae Medicinae silver medal, 2015

**Selected results of mentoring/tutoring activity**

[URS theses and diploma theses 2009-2015](#)

**Univ Pécs, Faculty of Sciences, Biology Major (MSc)**

Molnár Mónika: Ochratoxin A hatásának vizsgálata szövetkultúrákon

URS and diploma work tutor, 2008-2009

**Univ Pécs, Faculty of Health Sciences, Dept of Dietetics (BSc)**

Kajdi Júlia: A flavonoid tartalmú termékek összetétele, összehasonlítva a gyümölcsök flavonoid tartalmával

Diploma work tutor, 2009

**Univ Pécs, Faculty of Health Sciences, Laboratory Analytics in Medical Diagnostic Laboratories Major (BSc)**

Nagyné Kovács Szilvia: Citokin válasz szisztémás kórképekben

MOLSZE XI. Nagygyűlése poszter és diplomamunka, 2009

URS and diploma work tutor

**Univ Pécs, Faculty of Medicine**

Ortmann Erika: Ochratoxin-A molekuláris kölcsönhatásainak vizsgálata

URS and diploma work tutor, 2009-2011

**Univ Pécs, Faculty of Medicine**

Meiszterics Zsófia: TDK Konferencia Marosvásárhely, 2011

Meiszterics Zsófia: CROSS 2013 Zágráb nemzetközi TDK konferencia

URS and diploma work co-tutor

**Univ Pécs, Faculty of Health Sciences, Natural lifestyle- and cures special training**

Molnár János: A sav-bázis egyensúly szerepe a prevencióban

Diploma work tutor, 2011

**Univ Pécs, Faculty of Health Sciences, Natural lifestyle- and cures special training**

Bodó Krisztina: A toxikus faktorok kiküszöbölése, a makrobiotikus táplálkozás és az étrend-kiegészítő terápiák szerepe a civilizációs népbetegségek kezelésében

Diploma work tutor, 2011

**Univ Pécs, Faculty of Health Sciences, Laboratory Analytics in Medical Diagnostic Laboratories Major (BSc)**

Orfné Szeivert Katalin: SAVOLDÉKONY SZÉRUMFEHÉRJÉK VIZSGÁLATA  
SZEPTIKUS BETEGEKBEN

URS and diploma work tutor, 2010-2011

**Univ Pécs, Faculty of Medicine, Pharmacy Major (MSc)**

Gábor Szidónia: Az ochratoxin A molekuláris kölcsönhatásainak vizsgálata

URS and diploma work co-tutor, 2012

**Univ Pécs, Faculty of Health Sciences, Laboratory Analytics in Medical Diagnostic Laboratories Major (BSc)**

Simonné Orosz Ibolya: Gyulladásos- és szívizom markerek prediktív értékének vizsgálata stroke betegekben

MOLSZE XIII. Nagygyűlése poszter, 2013.

URS and diploma work tutor, 2012-2013

**Univ Pécs, Faculty of Medicine**

Kövér Anna: XXXI. OTDK Szeged, II. díj, 2013

URS and diploma work co-tutor

**Univ Pécs, Faculty of Health Sciences, Laboratory Analytics in Medical Diagnostic Laboratories Major (BSc)**

Kósa Brigitta: Antioxidáns kapacitás mérések biológiai mintákban  
URS and diploma work tutor, 2014-

**Univ Pécs, Faculty of Health Sciences, Dept of Dietetics (BSc)**

Susztér Boglárka: Antidiabetikus hatású növényi kivonatok vizsgálata  
Diploma work tutor, 2014-

**Univ Pécs, Faculty of Health Sciences, Dept of Dietetics (BSc)**

Smodics Lidia: Daganatellenes hatású növényi kivonatok vizsgálata  
Diploma work tutor, 2014-

**MSc training**

**Univ Pécs, Faculty of Health Sciences, Clinical Laboratory Investigator Major**

Gödöny Krisztina: KARNITINEK SZEREPE AZ ASSZISZTÁLT REPRODUKCIÓBAN  
Diploma work co-tutor, 2014

**MSc training**

**Univ Pécs, Faculty of Health Sciences, Clinical Laboratory Investigator Major**

Szabó Tímea: Az ovarium daganatra jellemző tumor markerek diagnosztikai hatékonyságának vizsgálata  
Diploma work co-tutor, 2014

**MSc training**

**Univ Pécs, Faculty of Health Sciences, Clinical Laboratory Investigator Major**

Nagy Zsuzsanna: Antioxidáns kezelés hatásának vizsgálata krónikus vesebetegéknél  
Diploma work tutor, 2014-  
Veres-Székelly Apor: Vesefibrózis mértékének mérésére alkalmas modell optimalizálása, antifibrotikus hatóanyagok preklinikai vizsgálata  
Diploma work tutor, 2014-

**MSc training**

**Univ Pécs, Faculty of Health Sciences, Clinical Laboratory Investigator Major**

Lukács Melinda: Új szepszis biomarkerek vizsgálata  
Diploma work tutor, 2015

**Univ Pécs, Faculty of Health Sciences, Dept of Dietetics (BSc)**

Németh Mónika: Gyógyteák, gyógyhatású készítmények hatása a tejelválasztásra  
Diploma work tutor, 2015

**Scientific output of selected students under my guidance**

**Horváth-Szalai Zoltán**

**URS lectures:**

1. Korányi Frigyes Szakkollégium XVII. Tudományos Fórum. **Előadói különdíj**, 2012. április 20.
2. Balatonfüredi HMAA Konferencia. Biokémia szekció **I. Díj**. 2012. augusztus 19.
3. PTE ÁOK hazai TDK konferencia, előadás: Új potenciális biomarker vizsgálata szepszisben; Konzervatív klinikai orvostudomány II. szekció, **I.hely**. 2013.02.07-09.

4. XXXI. Országos Tudományos Diákköri Konferencia, Orvostudományi Szekció, Molekuláris Biológia tagozat. 2013.04.02-05.
5. „20th IFCC-EFLM European Congress of Clinical Chemistry and Laboratory Medicine (EuroMedLab)” nemzetközi konferencia, társszerzős poszter: Serum actin/gelsolin ratio: a new potential biomarker in sepsis? 2013.04.19-23.
6. 5th International Student Medical Congress in Kosice, Basic Science szekció, előadás címe: New potential biomarker in sepsis, **III. hely.** 2013.06.26-28.
7. 2013: **Eötvös Lóránd Hallgatói Ösztöndíj.**
8. 10th János Szentágotthai Transdisciplinary Conference and Student Competition Medical and Natural Sciences, **Elismerő oklevél.** 2013.11.

#### **PhD lectures:**

1. 8. IFCC WorldLab Istanbul 2014, társszerzős poszter: Serum actin and gelsolin: new biomarkers in sepsis? 2014.06.22-26.
2. 9. Ceepus Summer School, Portoroz, Slovenia. Előadás címe: Serum actin and gelsolin: new potential biomarkers in sepsis? 2014.08.24-29.
3. 10. XX. Korányi Figyes Tudományos Fórum, előadás címe: Unusual protein markers of sepsis: serum actin and gelsolin. 2015.03.12.
4. 11. 2015.05.07-10. XIV. International Congress of Medical Sciences (ICMS), Sofia, Bulgaria. Előadás címe: Promising markers of sepsis: serum actin and gelsolin. Clinical Chemistry szekció.
5. 12. 2015.05.28. Magyar Aneszteziológiai és Intenzív Terápiás Társaság (MAITT) 43. Kongresszusa, Siófok, Hotel Azúr. E-poszter: Nem szokványos szepszis markerek: szérum aktin és gelsolin (P35).

#### **Citable abstracts:**

1. Z. Horvath-Szalai, A. Ludany, D. Muhl, P. Kustan, B. Bugyi, T. Koszegi. Serum actin and gelsolin: new biomarkers in sepsis? Clin Chem Lab Med 2014; 52, Special Suppl, pp S1 – S1760. IF: 2.955.
2. P. Kustan, A. Ludany, D. Muhl, Z. Horvath-Szalai, T. Koszegi. Urinary orosomucoid in sepsis: laboratory approaches. Clin Chem Lab Med 2014; 52, Special Suppl, pp S1 – S1760. IF: 2.955.
3. Koszegi T, Horvath-Szalai Z, Ludany A, Woth G, Muhl D, Kovacs GL. Serum actin/gelsolin ratio: a new biomarker in sepsis? Biochimica Clinica 2013; 37:(SS) p. S298.
4. Koszegi T, Horvath-Szalai Z, Ludany A, Gyorgyi E, Woth G, Muhl D, Kovacs GL. Serum actin/gelsolin ratio: new biomarker in sepsis? Clin Chem Lab Med 2012; 50:(8) pp. eA1-eA46. IF: 3.009.

#### **Book chapters:**

1. Zoltán Horváth-Szalai, Péter Kustán, Tamás Kőszegi: Laboratory diagnostics of sepsis. In: A. Chesca (Ed.) *Methods for Diseases Diagnostic with Applicability in Practice*. LAP Lambert Academic Publishing, Saarbrücken, Germany, 2014. pp. 27-52. (ISBN: 978-3-8473-4502-2)
2. Péter Kustán, Zoltán Horváth-Szalai, Tamás Kőszegi: Biochemical markers of systemic diseases. In: A. Chesca (Ed.) *Methods for Diseases Diagnostic with Applicability in Practice*. LAP Lambert Academic Publishing, Saarbrücken, Germany, 2014. pp. 69-104. (ISBN: 978-3-8473-4502-2)
3. Zoltán Horváth-Szalai, Péter Kustán, Tamás Kőszegi: New laboratory findings in sepsis. In: Tamás Kőszegi, Antonella Chesca (szerk.). *LABORATORY TECHNIQUES WITH APPLICABILITY IN MEDICAL PRACTICE*. Saarbrücken: LAP Lambert Academic Publishing, 2015. pp. 38-51. (ISBN: 978-3-659-31724-8)

## Bencze Bálint

### PhD lectures:

#### 2015

1. XIV. Magyar Gyógynövény Konferencia Pannonhalma: Szájhygiénia? Természetesen! előadás
2. 11th János Szentágothai Interdisciplinary Conference: „*Why to use a herbal mouthwash?*” presentation
3. 2015- Magyar Farmakológiai Társaság Kongresszusa: „*Why to use a herbal mouthwash?*”

#### 2013

1. World Dental Congress (FDI) 2013 in Istanbul: "*Medicinal plants in dental prevention*" **oral presentation**
2. Hungarian Medical Association of America - Hungary chapter: "*Medicinal plants in dental prevention*": Best presentation in Prevention section
3. Erasmus Intensive Programme in Brasov: „*Classic and modern methods for molecular diagnostics in human Pathology*”; LLP 12-EIP-RO
4. XII. Hazai és IX. Nemzetközi Grastyán Konferencia: **legközérthetőbb előadás díja**
5. Cséffa: Nemzetközi Fitoterápiás Szimpózium: szóbeli prezentáció
6. TÁMOP-4.2.3-12/1/KONV-2012-0016 számú „Tudomány-kommunikáció a Z generációnak” projektben közreműködés
7. 5th International Student Medical Congress in Kosice: prezentáció első szerző
8. 9th János Szentágothai Interdisciplinary Conference: **I. helyezett**
9. Professzorok az Európai Magyarorszáért VI. PhD konferencia: előadás + tanulmánykötet publikáció (ISBN: 978-963-88433-8-8)
10. Enterprise Europe Network Technology Profile: “*Natural mouthwash [provides long term dental prevention](#)*” (Ref: [12 HU 50S2 3QK1](#))

### URS lectures:

#### 2012

1. PTE Innovatív ötletpályázat: **III. helyezett**
2. PTE Innovatív ötletpályázat: **Baranya megyei Kereskedelmi és Iparkamara különdíj**
3. Szakdolgozat jeles eredménnyel: „*Gyógynövények a fogászati prevencióban*”

#### 2011

1. Dícséretes dékáni pályamunka
2. XII. Magyar Gyógynövény Konferencia – poszter prezentáció első szerző. Cím: Gyógynövények a fogászati prevencióban
3. TDK házi konferencia **III. helyezett**

### Book chapter

1. Bálint Bencze, Tamás Kőszegi: BASIC SCREENING METHODS IN MICROBIOLOGY. In: Tamás Kőszegi, Antonella Chesca (szerk.) LABORATORY TECHNIQUES WITH APPLICABILITY IN MEDICAL PRACTICE. Saarbrücken: LAP Lambert Academic Publishing, 2015. pp. 9-17. (ISBN: 978-3-659-31724-8)

## Kustán Péter

### PhD lectures and abstracts:

1. Dr. Szirmay Balázs, **Dr. Kustán Péter**, Dr. Ludány Andrea: Humán orosomucoid a klinikai laboratóriumi diagnosztikában. *Tavaszi Szél Konferencia*, Eger, 2015.
2. **Dr. Kustán Péter**: Vizelet fehérjék szépsziszben. *Tavaszi Szél Konferencia*, Eger, 2015.

3. Horváth-Szalai Z, **Kustán P**, Kőszegi T: Unusual protein markers of sepsis: serum actin and gelsolin. *XX. Korányi Frigyes Tudományos Fórum*, Budapest, 2015.
4. **Kustán P**, Horváth-Szalai Z, Ludány A, Mühl D, Kőszegi T: Orosomucoid in urine. A useful biomarker? *International CEEPUS Summer School*, Portoroz, 2014.
5. Horváth-Szalai Z, **Kustán P**, Ludány A, Mühl D, Bugyi B, Kőszegi T: Serum actin and gelsolin: new potential biomarkers in sepsis? *International CEEPUS Summer School*, Portoroz, 2014.
6. Z. Horvath-Szalai, A. Ludany, D. Muhl, **P. Kustan**, B. Bugyi, T. Koszegi: Serum actin and gelsolin: new biomarkers in sepsis? *22nd International Congress of Clinical Chemistry and Laboratory Medicine IFCC-WordLab*, Isztambul, 2014.
7. **P. Kustan**, A. Ludany, D. Muhl, Z. Horvath-Szalai, T. Koszegi: Urinary orosomucoid in sepsis: Laboratory approaches. *22nd International Congress of Clinical Chemistry and Laboratory Medicine IFCC-WordLab*, Isztambul, 2014.
8. **Kustán P**, Horváth-Szalai Z, Ludány A, Kőszegi T, Mühl D: Vizelet orosomucoid szepszisben. *Magyar Aneszteziológiai és Intenzív Terápiás Társaság 42. Kongresszusa*, Siófok, 2014.

#### URS lectures:

1. Z. Horváth-Szalai, **P. Kustán**, T. Kőszegi, A. Ludány, D. Mühl: New potential sepsis biomarker. *10th János Szentágotthai Transdisciplinary Conference and Student Competition*, Pécs, 2013.
2. **P. Kustán**, Z. Horváth-Szalai, A. Ludány, T. Kőszegi, D. Mühl: Urinary orosomucoid and sepsis. *10th János Szentágotthai Transdisciplinary Conference and Student Competition*, Pécs, 2013.
3. Ludany, **P. Kustan**, T. Koszegi, G. Woth, D. Muhl, G.L. Kovacs: Urinary orosomucoid in sepsis. *20th IFCC-EFCC European Congress of Clinical Chemistry and Laboratory Medicine*, Milánó, 2013.
4. **Kustán Péter**: Vizelet orosomucoid, mint lehetséges szepszis biomarker. *V. Nemzetközi és XI. Országos Interdiszciplináris Grastyán Konferencia*, Pécs, 2013.
5. Szirmay Balázs, Kövér Anna, **Kustán Péter**: Módszer a vizelet és könny orosomucoid vizsgálatára. *XXXI. OTDK*, Szeged, 2013.
6. **Péter Kustán**: Urinary orosomucoid as a marker of sepsis. *9th International Biomedical Croatian Student Summit*, Zágráb, 2013.
7. Szirmay Balázs Gábor, Kövér Anna, **Kustán Péter**: Módszer a vizelet és könny orosomucoid vizsgálatára. *PTE ÁOK Tudományos Diákköri Konferencia*, Pécs, 2013.
8. T. Kőszegi, **P. Kustán**, A. Ludány, E Györgyi, G Woth, D. Mühl, G.L. Kovács: Urinary orosomucoid in sepsis. *Magyar Laboratóriumi Diagnosztikai Társaság 56. Nagygyűlése*, Budapest, 2012.
9. **Kustán Péter**: Vizelet orosomucoid mérések szепtikus betegek mintáiban. *PTE ÁOK Tudományos Diákköri Konferencia*, Pécs, 2012

#### Publications:

1. **Péter Kustán**, Balázs Szirmay, Diána Mühl, Andrea Ludány: Human orosomucoid in the clinical laboratory. In: T. Kőszegi (Ed.) *Laboratory Techniques with Applicability in Medical practice*. LAP Lambert Academic Publishing, Saarbrücken, Germany, 2015. pp. 95-112. (ISBN: 978-3-659-31724-8)
2. Zoltán Horváth-Szalai, **Péter Kustán**, Tamás Kőszegi: New laboratory findings in sepsis. In: T. Kőszegi (Ed.) *Laboratory Techniques with Applicability in Medical practice*. LAP Lambert Academic Publishing, Saarbrücken, Germany, 2015. pp. 55-72. (ISBN: 978-3-659-31724-8)
3. Zoltán Horváth-Szalai, **Péter Kustán**, Tamás Kőszegi: Laboratory diagnostics of sepsis. In: A. Chesca (Ed.) *Methods for Diseases Diagnostic with Applicability in*



*Practice*. LAP Lambert Academic Publishing, Saarbrücken, Germany, 2014. pp. 27-52. (ISBN: 978-3-8473-4502-2)

4. **Péter Kustán**, Zoltán Horváth-Szalai, Tamás Kőszegi: Biochemical markers of systemic diseases. In: A. Chesca (Ed.) *Methods for Diseases Diagnostic with Applicability in Practice*. LAP Lambert Academic Publishing, Saarbrücken, Germany, 2014. pp. 69-104. (ISBN: 978-3-8473-4502-2)
5. **Kustán Péter**: Vizelet orosomucoid, mint lehetséges szepszis biomarker. In: Szamonek Vera (szerk.) *XI. Grastyán konferencia kötet*. Pécs, 2013. pp. 223-229. (ISBN: 978 963 642 547 0)

#### **Citable abstracts:**

1. **P. Kustán**, A. Ludany, D. Muhl, Z. Horvath-Szalai, T. Koszegi: Urinary orosomucoid in sepsis: Laboratory approaches. *Clin Chem Lab Med* 2014 Jul Supplement, Vol.52, S1368
2. Z. Horvath-Szalai, A. Ludany, D. Muhl, **P. Kustán**, B. Bugyi, T. Koszegi: Serum actin and gelsolin: new biomarkers in sepsis? *Clin Chem Lab Med* 2014 Jul Supplement, Vol.52, S1365
3. T. Kőszegi, **P. Kustán**, A. Ludány, E Györgyi, G Woth, D. Mühl, G.L. Kovács: Urinary orosomucoid in sepsis. *Clin Chem Lab Med* 2012 Aug Vol.50, eA33

#### **Szirmay Balázs**

##### **URS lectures:**

1. Házi Tudományos Diákköri Konferencia: **I. helyezett előadás** **2012**  
cím: Vizelet orosomucoid (AGP) és Crohn betegség
2. Magyar Laboratóriumi Diagnosztikai Társaság 56. Kongresszusa: poszter prezentáció 2012  
cím: Vizelet orosomucoid, mint a Crohn betegség aktivitási markere
3. Dékáni pályamunka. cím: Vizelet orosomucoid a Crohn betegségben 2012
4. Házi Tudományos Diákköri Konferencia: előadás 2013  
cím: Módszer a vizelet és könny orosomucoid vizsgálatára
5. Országos Tudományos Diákköri Konferencia: **II. helyezett előadás** **2013**  
cím: Módszer a vizelet és könny orosomucoid vizsgálatára
6. Amerikai Magyar Orvosszövetség Konferenciája: előadás 2013  
cím: Módszer a vizelet és könny orosomucoid vizsgálatára
7. Szakdolgozat. cím: Vizelet orosomucoid a Crohn betegségben 2014

##### **PhD lectures:**

1. Doktoranduszok Országos Szövetsége – Tavaszi Szél Konferencia: előadás 2015  
cím: Humán orosomucoid a klinikai laboratóriumi diagnosztikában
2. 7th International Student Medical Congress in Košice, Slovakia. előadásra elfogadott absztrakt 2015

##### **Book chapter**

1. Péter Kustán, Balázs Szirmay, Diána Mühl, Andrea Ludány: HUMAN OROSOMUCOID IN THE CLINICAL LABORATORY In: Tamás Kőszegi, Antonella Chesca (szerk.) *LABORATORY TECHNIQUES WITH APPLICABILITY IN MEDICAL PRACTICE*. Saarbrücken: LAP Lambert Academic Publishing, 2015. pp. 101-120. (ISBN: 978-3-659-31724-8)