

# Medicinska fakulteta Univerze v Mariboru – prvih deset let

## The Faculty of Medicine of the University of Maribor – the first ten years

Avtor / Author

Ustanova / Institute

Ivan Krajnc<sup>1</sup><sup>1</sup>Medicinska fakulteta Univerze v Mariboru, Maribor, Slovenija<sup>1</sup>Faculty of Medicine, University of Maribor, Maribor, Slovenia**Ključne besede:**

Medicinska fakulteta Univerze v Mariboru, ustanovitev, desetletnica delovanja, nadaljnji načrti

**Key words:**

the Faculty of Medicine of the University of Maribor, the establishment, a decade of operating, further plans

**Članek prispel / Received**

3.11.2014

**Članek sprejet / Accepted**

17.11.2014

**Naslov za dopisovanje /****Correspondence**

Akad. prof. dr. Ivan Krajnc, dr. med.,  
dekan MF UM

Telefon +386 22345821

E-pošta: ivan.krajnc@um.si

**Izvleček**

Ustanovitev Medicinske fakultete Univerze v Mariboru leta 2003 in začetek pedagoškega procesa v študijskem letu 2004/2005 sta tisti pomembni točki v razvoju visokega šolstva in rasti lokalne bolnišnice, ki predstavljata pomembno pridobitev za mariborsko univerzo, zdravstvo, mesto in tudi državo Slovenijo. V letu, ko Medicinska fakulteta Univerze v Mariboru praznuje deseto obletnico delovanja, in v letu, ko mesto Maribor beleži 850-letnico prve pisne omembe (1164, Castrum Marburch), dobiva jubilej pridih novega mejnika. V desetih letih je Medicinska fakulteta prehodila pot do sodobnega, evropsko primerljivega univerzitetnega študija, se soočila z bolonjsko prenovno in si s preselitvijo v novogradnjo v neposredni bližini temeljne učne baze – današnjega Univerzitetnega kliničnega centra Maribor – zagotovila podstat za nadaljnji razvoj, zlasti pa za razmah temeljne raziskovalne dejavnosti.

Zgovoren je podatek, da je na fakulteti uspešno zaključilo študij več kot 250 zdravnikov, ki v času izjemno težkih

**Abstract**

The establishment of the Faculty of Medicine of the University of Maribor in the year 2003 and the beginning of a pedagogical process in the 2004/2005 academic year are those important points in the development of higher education system and growth of the local hospital which present an important achievement for the University of Maribor, health care, town and also the Republic of Slovenia. In the year when the Faculty of Medicine of the University of Maribor celebrates its tenth anniversary of operating, and in the year when the town Maribor records the 850th anniversary of its first written mention (1164, Castrum Marburch) the jubilee is getting a touch of a new milestone. In ten years the Faculty of Medicine has travelled its way to a contemporary, European comparable university study, faced Bologna reform and with relocation to the new construction in the direct vicinity of the fundamental educational base - today the University Medical Centre Maribor – ensured the foundation for

družbenih in ekonomskih razmer vse pogosteje iščejo svojo priložnost za delo in strokovni razvoj v tujini, a bi jih doma še kako potrebovali, saj je bil eden od pomembnih razlogov za ustanovitev druge medicinske fakultete v Sloveniji prav izrazito pomanjkanje zdravnikov.

Fakulteta je s podiplomskim študijskim programom Biomedicinska tehnologija ponudila tudi sodoben doktorski študij, ki ambicioznim, novih znanj željnim omogoča udeležanje številnih idej, vse z namenom, da bi omogočili, kar se da kakovostno zdravstveno oskrbo. Več kot štirideset doktorjev znanosti že uresničuje svoje ideje, številni med njimi so se že habilitirali in so naši cenjeni učitelji, ki sledijo svojim predhodnikom.

Pred fakulteto so številni izzivi – deset let je za tovrstno ustanovo kratko obdobje, a prerez dosedanjih dosežkov, ki smo jih številni avtorji zbrali v monografiji, katere izid pričakujemo ob prazniku fakultete, vendarle nakazuje tudi nove smeri razvoja. Odličnost na vseh ravneh je tista, ki nas mora delati drugačne, konkurenčne fakultetam z dolgoletno tradicijo, ostati moramo tako s programom kot pedagoškimi pristopi in opremo vedno korak pred drugimi. In pomembno se moramo odpreti v svet. Naloge za novo desetletje ali morda več njih?

further development, especially for expansion of the basic research activity.

Telling is a piece of information that in our faculty more than 250 physicians have successfully completed their studies and who, in the period of extremely hard social and economic circumstances, with increasing frequency are looking for their opportunity for work and professional development abroad although they are very much needed at home, for one of the important reasons for the establishment of the second medical faculty in Slovenia was distinctly lack of physicians. The faculty has with the postgraduate study programme Biomedical technology offered also a contemporary doctoral study which to the ambitious, eager for new knowledge enables to realize numerous ideas, all with a purpose to facilitate as qualitative health care as can be. More than forty Doctors of Science are already realizing their ideas, numerous among them have already been habilitated and are our esteemed professors who follow their predecessors.

In front of our faculty there are numerous challenges - ten years is for such an institution a short period but a cross section of previous achievements which we, numerous authors, have gathered in this monography of which the outcome we expect on the celebration of the faculty, yet everything shows also new directions of development. Excellence on all levels is that which has to make us different, competitive to faculties with long tradition, we need to remain always a step ahead of others with the programme as much as with the pedagogical approaches and equipment. And importantly we need to open up into the world. Tasks for a new decade or perhaps more of them?

## UVOD

Pot do ustanovitve Medicinske fakultete Univerze v Mariboru (MF UM) so s svojim dobrim kliničnim, raziskovalnim in pedagoškim delom ter z odmevnimi publikacijami tlakovali številni odlični zdravniki. V pravem trenutku smo združili dosežke iz preteklosti in oblikovali ustrezno strategijo nadaljnega razvoja Splošne bolnišnice v Mariboru (SBM). Tako smo pravzaprav uresničili sanje številnih predhodnikov. Bilo je treba nekaj poguma, nekaj smelih

## PREFACE

The path to the establishment of the Faculty of Medicine of the University of Maribor has been paved by numerous excellent physicians with their good clinical, research and pedagogical work and with their notable publications. In the right moment we have joined achievements from the past and formed appropriate strategy for further development of the Maribor General Hospital. In this way we have actually realized the dreams of numerous predecessors. Some courage

odločitev, pri vsem tem pa je bila ves čas pomembna tudi popolna podpora Učne bolnišnice Maribor in Univerze v Mariboru.

Strokovni uspehi in imenovanja prvih kliničnih oddelkov v Splošni bolnišnici Maribor na predlog Medicinske fakultete Univerze v Ljubljani so temelji nadaljnje strokovne rasti Učne bolnišnice Maribor v Univerzitetni klinični center Maribor. Na tej prehojeni poti so v bolnišnici beležili vzpone in padce, vendar so številni sodelavci, ki so pri tem razvoju sodelovali, dokazali, da je mogoče z voljo, s strpnostjo in z ustvarjalnim dialogom premagati vse ovire. To so bili ambasadorji mariborske in slovenske medicine. Bili so dovolj prosvetljeni, morda dovolj preroški, da so dovolj zgodaj razmišljali o tem, v kaj in kako naj se razvija ta drugi slovenski medicinski center.

Svoje pedagoške vrline so kalili tudi pri delu s študenti Medicinske fakultete Univerze v Ljubljani, ki so prihajali v Splošno bolnišnico Maribor na klinične vaje v večjem številu že od 1990. leta dalje. Pedagoško so sodelovali pri kliničnem delu na Višji in pozneje na Visoki zdravstveni šoli v Mariboru, kakor tudi na Medicinski fakulteti Univerze v Ljubljani (1, 2).



**Slika / Figure 1:** Odprtje Inštitutov za anatomijo, histologijo in embriologijo ter Inštituta za fiziologijo / Opening of the Institute for Anatomy, Histology and Embryology and the Institute for Physiology (on September 30, 2004)

was needed, some bold decisions were made, along these there was also all the time a complete support of the Teaching Hospital Maribor and of the University of Maribor that was important.

Professional successes and designations of the first clinical wards of the Maribor General Hospital on a proposal of the Faculty of Medicine of the University of Ljubljana are foundations of further professional growth of the Maribor Teaching Hospital into the University Medical Centre Maribor. On this trodden path in the hospital there were ups and downs that were recorded but numerous co-workers, who cooperated in this development, have proved that it is possible to overcome all obstacles with will, tolerance and with creative dialogue. These are the ambassadors of Mariborian and Slovenian medicine. They were enlightened enough, perhaps prophetic enough that they were thinking early enough about into what and how this second Slovenian medical centre should develop.

They also strengthened their pedagogical virtues while working with the students of the Faculty of Medicine of the University of Ljubljana, which have been already coming to the Maribor General Hospital for clinical practices in a greater number since the year 1990. They cooperated pedagogically in clinical work at the Graduate School of Medical Sciences and later on the Higher School of Medical Sciences in Maribor and as well at the Faculty of Medicine of the University of Ljubljana (1, 2).

### **THE PROJECT OF THE ESTABLISHMENT OF THE FACULTY OF MEDICINE OF THE UNIVERSITY OF MARIBOR**

The first realistic discussions and efforts for the establishment of the Faculty of Medicine of the University of Maribor began in the year 1999. We received theoretical foundations for an up-to-date curriculum from the Faculty of Medicine of the University of Oulu (Finland, with an agreement from Prof. Heikki Ruskoah, MD, PhD, the then dean of the Faculty of Medicine of Oulu), from the School of Medicine from the University of Manchester (England) and from the

## PROJEKT USTANOVITVE MEDICINSKE FAKULTETE UNIVERZE V MARIBORU

Prve realnejše razprave in prizadevanja za ustanovitve Medicinske fakultete Univerze v Mariboru so se začele leta 1999. Teoretične osnove za sodoben kurikulum smo dobili na Medicinski fakulteti Oulu (Finska, s soglasjem prof. dr. Heikkija Ruskoaha, tedanjega dekana Medicinske fakultete Oulo), na Medicinski fakulteti Manchester (Anglija) in na Medicinski fakulteti Harvard (Boston, ZDA). Za pomoč, nasvete in spodbude smo bili izjemno hvaležni. Za Finsko smo se npr. odločili zato, ker velja njihov šolski sistem za enega najboljših, o čemer govorijo številne mednarodne študije.



**Slika / Figure 2:** Odprtje Laboratorijskega centra / Opening of the Laboratory Centre (on January 27, 2006)

Z Medicinske fakultete Manchester smo dobili študijsko gradivo o kliničnih primerih, ki jih uporabljamo pri problemsko naravnem pouku (PBL). Postopoma smo del kliničnih primerov pripravili na novo, upoštevajoč pravila priprave tovrstnega študijskega gradiva in specifično našega zdravstvenega sistema. S pomočjo Medicinske fakultete Harvard (Boston, ZDA) in Medicinske fakultete München smo usposobili prve usposobljene učitelje z veljavnim certifikatom za izvedbo novega načina pedagoškega procesa.

Odločitev, da v Mariboru ustanovimo medicinsko fakulteto, je odločno podprlo tudi vodstvo univer-

Harvard Medical School of the Harvard University (Boston, USA). We were very grateful for the help, advice and encouragement. We decided for Finland because their school system is regarded as one of the best and of this speak numerous international studies.

From the School of Medicine from the University of Manchester we received study material about clinical cases which we use in the Problem-Based Learning (PBL). Gradually we prepared a part of clinical cases anew and with that we followed the rules of preparation of such a study material and the specifics of our healthcare system. With the help of the Harvard Medical School of the Harvard University (Boston, USA) and the Faculty of Medicine of the University of Munich, we have qualified the first trained teachers with a valid certificate for the performance of a new manner of the pedagogical process.

The decision to establish a new medical faculty in Maribor has been also firmly supported by the leadership of the University. Under the supervision of Prof. Željko Knez, MD, PhD a special task force analyzed the laboratory capacities for implementation of pre-clinical subjects - during the first years the students were listening to them on numerous faculties of the University of Maribor.

In the preparation of the study programme of the Faculty of Medicine of the University of Maribor a group of professionals collaborated: Prof. Ivan Krajnc, MD, PhD, Assist. Prof., Vojko Flis, MD, PhD, Prof. Eldar M. Gadžijev, MD, PhD, Prof. Borut Gorišek, MD, PhD, Prof. Elko Borko, MD, PhD, Prof. Alojz Gregorič, MD, PhD, Prof. Dušanka Mičetić Turk, MD, PhD, Prof. Kazimir Miksić, MD, PhD, Assist. Prof. Radovan Hojs, MD, PhD, Assist. Prof. Erih Tetičkovič, MD, PhD, Assist. Prof. Zmago Turk, MD, PhD and Assist. Prof. Iztok Takač, MD, PhD.

The person responsible for the programme was Full Prof. Ivan Krajnc, MD, PhD.

The programme was discussed and approved by the Senate of the University of Maribor on September 30,

ze. Posebna delovna skupina pod vodstvom prof. dr. Željka Kneza je analizirala laboratorijske kapacitete za izvedbo predkliničnih predmetov – prva leta so jih študentje poslušali na številnih fakultetah Univerze v Mariboru.

V pripravi elaborata učnega načrta MF UM je sodelovala skupina strokovnjakov: prof. dr. Ivan Krajnc, doc. dr. Vojko Flis, prof. dr. Eldar M. Gadžijev, prof. dr. Borut Gorišek, prof. dr. Elko Borko, prof. dr. Alojz Gregorič, prof. dr. Dušanka Mičetić Turk, prof. dr. Kazimir Miksić, doc. dr. Radovan Hojs, doc. dr. Erih Tetičkovič, doc. dr. Zmago Turk in doc. dr. Iztok Takač. Odgovorna oseba programa je bil prof. dr. Ivan Krajnc.

Program je bil 30. 9. 2003 obravnavan in sprejet na Senatu Univerze v Mariboru in nato posredovan v obravnavo Svetu za visoko šolstvo RS. Predhodno ga je obravnavala še Komisija za socialo in medicino, ki jo je vodila prof. dr. Andreja Kocijančič, dr. med. V predsednici komisije prof. dr. Andreji Kocijančič, dr. med., smo imeli predlagatelji verodostojnega sogovornika; zelo kritična profesorica je priloženo gradivo natančno proučila in si tudi posebej ogledala vse možnosti študija na UM in v Splošni bolnišnici Maribor. Svet za visoko šolstvo je 11. aprila 2003 sprejel sklep, da se daje pozitivno mnenje k ustanovitvi novega visokošolskega zavoda, Medicinske fakultete Univerze v Mariboru (3).

Parlament Republike Slovenije je z aklamacijo 2. 10. 2003 z odlokom ustanovil Medicinsko fakulteto Univerze v Mariboru. 3. 12. 2003 je nato Svet za visoko šolstvo Republike Slovenije potrdil študijski program študija splošne medicine na Medicinski fakulteti Univerze v Mariboru in to je dan, ki ga na fakulteti praznujemo kot dan Medicinske fakultete Univerze v Mariboru. Fakulteta je nato v oktobru 2004 vpisala prvih 89 študentov dodiplomske stopnje. Oblikovani so bili organi fakultete – akademski zbor in senat, avtor sem postal dekan mlade fakultete.

Kot je znano, se je prva generacija študentov medicine vpisala v študijskem letu 2004/2005, tedaj še

2003 and then passed for discussion to the Council of Higher Education of the Republic of Slovenia. Beforehand it was also discussed by the Commission for social services and medicine which was led by Prof. Andreja Kocijančič, MD, PhD. We, the proposers, had in the chairman of the commission Prof. Andreja Kocijančič, MD, PhD, a credible co-speaker; a very critical professor thoroughly examined the enclosed material and also especially viewed all the possibilities of study at the University of Maribor and at the Maribor General Hospital. The Council for Higher Education passed a resolution on April 11, 2003 that a positive opinion is given for the establishment of the new higher education institution - the Faculty of Medicine of the University of Maribor (3).

The National Assembly with an acclamation and a decree established on October 2, 2003 the Faculty of Medicine of the University of Maribor. Then, the Council for Higher Education of Slovenia on December 3, 2003 confirmed the university study programme of General Medicine on the Faculty of Medicine of the University of Maribor and that is the day that is celebrated on the faculty as the Day of the Faculty of Medicine of the University of Maribor. The faculty then in October 2004 enrolled the first 84 students of undergraduate programme. University Bodies were formed – the Academic Assembly and the Senate, the author – myself, has become the dean of the young faculty.

As it is known, the first generation of students of medicine enrolled in the 2004/2005 academic year and then they enrolled yet at the University study programme of General Medicine.

In the 2009/2010 academic year the first generation of students enrolled with the modernized and in accordance with the Bologna declaration adjusted programme of a uniform master's degree study programme in General Medicine confirmed by the Council of Higher Education of Slovenia on May 5, 2008. The characteristics of this modernized study programme is the tight connection of subjects inside individual years (horizontal) and between individual

na univerzitetni študijski program Splošna medicina. V študijskem letu 2009/2010 se je vpisala prva generacija študentov po prenovljenem, z bolonjsko deklaracijo usklajenem programu enovit magistrski študijski program Splošna medicina, ki ga je potrdil Svet za visoko šolstvo Republike Slovenije 5. maja 2008. Značilnost tega prenovljenega študijskega programa je tesna prepletenost predmetov znotraj posameznih letnikov (horizontalno) in med letniki (vertikalno). Vlogo povezovalca imajo PBL-moduli, ki na osnovi središčnih problemov v obliki spirale pokrivajo vsa področja medicine od poznavanja temeljev teorije in prakse, usposabljanja v kliničnem okolju in postopnega doseganja samostojnosti. Vse to študente pripelje na samostojno pot odgovornega, empatičnega in z visoko mero etike opremljenega zdravnika. V horizontalnem smislu so predmeti v posameznih letnikih vsebinsko povezani in integrirani. Tako je histologija integrirana v anatomijo, patofiziologija pa celo v več predmetih: od fiziologije, patologije, farmakologije s toksikologijo, PBL-modulih, v vseh kliničnih predmetih.



**Slika / Figure 3:** Odprtje Simulacijskega centra / Opening of the Simulation centre (on November 3, 2009)

Cilj študijskega programa medicina (dodiplomski program za pridobitev univerzitetne izobrazbe) je od vsega začetka pripraviti študente za samostojno delo zdravnika. Študij traja 6 let oz. 12 semestrov in je ovrednoten s 360 ECTS točkami. Študijski program je po predmetih usklajen z evropskim kreditnim sistemom za tovrstne programe in z evropskimi direk-

study years (vertical). The PBL-modules have the role of connectors, which on the basis of central problems in a spiral form cover all areas of medicine, from knowing the basic theory and practice, efficiency in a clinical environment to gradually attaining independence as a physician, who is responsible, emphatic and has a strong sense of ethics. In a horizontal sense the study subjects in individual study years are in content connected and integrated. Therefore histology is integrated into anatomy and pathophysiology is even integrated in several subjects: from physiology, pathology, pharmacology with toxicology, PBL-modules, in all clinical subjects.

The goal of the study programme of medicine (undergraduate study programme for attaining an university education) is from the very beginning to prepare students for an independent career as a physician. The study lasts for 6 years or 12 semesters and it is worth 360 ECTS points. The study programme is by the subjects adjusted to the European credit system for such programmes and with the European Directives. Fundamental preclinical subjects of the programme were in the beginning connected with some subjects of already existing programmes, which are on the University of Maribor carried out by individual members. In time the Faculty of Medicine has (also with the Institute of Anatomy and Physiology and especially with the establishment of the Laboratory Centre) in entirety carried out also all preclinical subjects with the help of its own resources.

Nearly simultaneously with the beginning of the study process of the young faculty we prepared foundations for a postgraduate study of Biomedical Technology, which represents a new, modern and internationally comparable postgraduate, doctoral study in the area of Biomedicine. Study programmes with comparable contents were in the past introduced to the Medical Faculties in Finland (Oulu), Denmark (Copenhagen), Sweden (Stockholm), Austria (Innsbruck and Graz) and USA (Harvard). After a positive opinion was given by the Council of Higher Education of Slovenia in the year 2005 and after accomplishing all requested proceedings, the University of Maribor accepted and

tivami. V temeljnih predkliničnih predmetih je bil v začetku program povezan z nekaterimi predmeti obstoječih programov, ki jih na mariborski univerzi izvajajo posamezne članice. Sčasoma je Medicinska fakulteta (tako z Inštitutom za anatomijo in fiziologijo in še zlasti z vzpostavitvijo Laboratorijskega centra) v celoti izvajala tudi vse predklinične predmete s pomočjo lastnih resursov.

Domala sočasno z začetkom študijskega procesa na mladi fakulteti smo pripravili podlage za podiplomski študij »Biomedicinska tehnologija«, ki predstavlja nov, sodobno zasnovan in mednarodno primerljiv podiplomski, doktorski študij s področja biomedicine. Študijski programi s primerljivo vsebino so bili v preteklosti uvedeni na medicinskih fakultetah na Finskem (Oulu), Danski (Kopenhagen), Švedski (Stockholm), Avstriji (Innsbruck in Gradec) in ZDA (Harvard). Univerza v Mariboru je po pozitivnem mnenju Sveta za visoko šolstvo Republike Slovenije v letu 2005 in opravljenih vseh zahtevanih postopkih, sprejela in razpisala podiplomski program »Biomedicinska tehnologija«.

Prvi študentje so se vpisali v študijskem letu 2005/2006, namen novega podiplomskega študijskega programa pa je bila povezava interdisciplinarnih naravoslovnih in tehnoloških področij s stičiščem v medicini.

## **NEKAJ BESED O DESETLETNEM DELOVANJU FAKULTETE**

V preteklih desetih letih smo omogočili izjemne pogoje za pedagoško in raziskovalno delo tako našim študentom kot učiteljem, in to od odprtja Inštituta za anatomijo, histologijo in embriologijo ter Inštituta za fiziologijo jeseni leta 2004, ob odprtju Laboratorijskega centra dve leti kasneje, začasnega domovanja Simulacijskega centra v UKC Maribor od leta 2009 in laboratorija za urjenje kliničnih veščin od leta 2010, do Laboratorija za multifotonsko mikroskopijo in Laboratorija za biokemijo in farmakologijo s toksikologijo, in ne nazadnje s preselitvijo v novogradnjo na Taborskem nabrežju.

announced the postgraduate programme 'Biomedical Technology'.

The first students enrolled in the 2004/2005 academic year and the purpose of a new postgraduate study programme was the connection of the fields of interdisciplinary natural sciences and technology, with a juncture in medicine.

## **A FEW WORDS ABOUT THE 10 YEARS OF FUNCTIONING OF THE FACULTY**

In the past ten years we have enabled exceptional conditions for pedagogical and research work for our students as well as for our professors and that was possible since the opening of the Institute for Anatomy, Histology and Embryology and the Institute of Physiology in the autumn of 2004; at the opening of the Laboratory Centre two years later, temporary housing of the Simulation Centre in the University Medical Centre Maribor since the year 2009, to the Laboratory for multiphoton microscopy and the Laboratory for biochemistry and pharmacology with toxicology, and also last but not least with the movement into the new building on the Tabor embankment.

It is necessary to emphasize that the study on our faculty is European comparable. We have signed more than 36 contracts of cooperation with European medical centres, which enables especially our students within the Erasmus programme to finish a part of study requirements in other European countries. So far more than 70 students have taken the advantage of this possibility. In this way our graduates can become top european intellectuals. And also vice-versa: students from foreign environments come here for practical training and in the long-term we have to think about performing the pedagogical process in a foreign language because interest is evident.

The specifics of our study are herein that the preclinical part of the study lasts for 2 years, the clinical part for 4 years and that preclinical and clinical parts of the study are intertwined especially with the help of the PBL-modules. Therefore the students receive al-

Poudariti je treba, da je študij na naši fakulteti evropsko primerljiv. Z evropskimi medicinskimi centri imamo podpisanih več kot 36 pogodb o sodelovanju, kar našim študentom zlasti v okviru programa Erasmus omogoča, da del študijskih obveznosti opravijo v drugih evropskih državah. Doslej je to možnost izkoristilo več kot 70. Na ta način bodo naši diplomanti lahko postali vrhunski evropski intelektualci. In obratno: na praktično izpopolnjevanje prihajajo tudi študentje iz tujih okolij, dolgoročno pa bo treba razmisliti tudi o izvedbi pedagoškega procesa v tujem jeziku, saj je interes za to evidenten.

Specifika našega študija je v tem, da predklinični del študija traja 2 leti, klinični del 4 leta in da se predklinični in klinični del študija prepletata, še zlasti s pomočjo PBL-modulov. Tako študenti že v prvem letniku dobijo številne informacije iz kliničnega dela študija. Vsi predmeti so točkovani z evropskim kreditnim sistemom (ECTS), celoten študij ima 360 ECTS, vsak semester pa po 30 ECTS. Ta sistem točkovanja omogoča izmenjave in priznavanje opravljenih študijskih predmetov. Vsak študijski predmet je namreč posebej ovrednoten po urah in z ECTS-točkami (4).

Hitro po vpisu prvih študentov v študijskem letu 2004/2005 je bilo več kot očitno, da so pogoji za izvedbo pedagoškega procesa v zgradbi rektorata Univerze v Mariboru in v prostorih nekaterih zdravstvenih zavodov ter fakultet sicer primerna začasna rešitev, nikakor pa ne optimalna za nadaljnji razvoj ene mlajših članic mariborske univerze.

Leta 2006 je vodstvo fakultete skupaj z vodstvom Univerze začelo z intenzivnimi pripravami za gradnjo Medicinske fakultete Univerze v Mariboru. O teh prizadevanjih in iskanju možnosti, kako čimprej iz začasnega domovanja v novi dom, je bilo vzpodbudnih kar nekaj pomembnih pridobitev kot so: obnova zgradbe na Ljubljanski ulici 5, kjer so svoje prostore našli Inštitut za anatomijo, histologijo in embriologijo ter Inštitut za fiziologijo (odprtje 30. 9. 2004), prenovljeni prostori Laboratorijskega centra na Magdalenskem trgu 5, kjer so bili locirani laboratoriji za biokemijo,

ready in the first study year numerous pieces of information from the clinical part of the study. All of the subjects are graded with the European Credit Transfer System (ECTS), the whole study is worth 360 ECTS points and each semester is worth 30 ECTS points. This grading system enables the exchanges and the validation of the study subjects that a student passes. Each study subject is, namely, especially evaluated by the hours and by the ECTS points (4).

Quickly after the enrollment of first students in the 2004/2005 academic year it was more than obvious that the conditions for implementation of a pedagogical process in the Rectorate of the University of Maribor and in the premises of some health care institutes and faculties were, though suitable as a temporary solution, by no means an optimal solution for a further development of one of the younger members of the University of Maribor.

In the year 2006 the Faculty leadership together with the leadership of the University started with intensive preparations for the building of the Faculty of Medicine of the University of Maribor. About these aspirations and in the search of possibilities of how to as quickly as possible move from the temporary housing into a new home, there were quite a few important achievements like: the renovation of a building on Ljubljanska ulica 5, where the Institute for Anatomy, Histology and Embryology and the Institute for Physiology (opened on September 30, 2004) found their work location, the renewed premises of the Laboratory Centre at the Magdalenski trg 5 where there were situated Laboratories for Biochemistry, Biophysics, Cell Biology, Pharmacology with Toxicology, Genetics etc. (opened on January 27, 2006) (Fig. 1, 2).

The Faculty of Medicine, with the understanding from the University Medical Centre, adjusted the premises in the basement of the new Department of Otorhinolaryngology and equipped it as the most state-of-the-art simulation centre in this part of Europe (the celebratory opening was on November 3, 2009); on the former Department of Otorhinolaryngology there were also adjusted the premises for training of clinical





**Slika / Figure 4:** OSCE laboratorij / OSCE-laboratory (opened on June 11, 2010)

biofiziko, biologijo celice, farmakologijo s toksikologijo, genetiko itd. (odprtje 27. 1. 2006) (Slika 1, 2).

Z razumevanjem Univerzitetnega kliničnega centra je Medicinska fakulteta s prilagoditvijo prostorov v kleti novega ušesnega oddelka opremila najsodobnejši simulacijski center v tem delu Evrope (slovesno smo ga predali namenu 3. 11. 2009); na nekdanjem ušesnem oddelku pa še prostore za urjenje kliničnih veščin (OSCE-laboratorij, 11. 6. 2010) (Slika 3, 4). 29. 10. 2010 so bili predani namenu tudi laboratorij za multifotonsko mikroskopijo (Slika 5).

Pri snovanju in izdelavi dokumentov, ki so bili potrebni za kandidiranje za sredstva Evropskih strukturnih skladov, brez katerih ob deležu Republike Slovenije ne bi bilo mogoče uresničiti načrtov za novogradnjo Medicinske fakultete Univerze v Mariboru, je bilo opravljenega veliko dela in z združenimi močmi nam je uspelo – dočakali smo pozitivno odločitev tedanjega Ministrstva za šolstvo in Vlade Republike Slovenije, da je gradnja Medicinske fakultete uvrščena med državne projekte pri kandidiranju za evropska sredstva. Projekt je bil uspešen; oba vira investicijskih sredstev, državni in evropski, sta bila zagotovljena.

Ob velikem razumevanju Mestne občine Maribor za potrebe naše fakultete smo se med razpoložljivimi lokacijami, kje naj stoji zgradba Medicinske fakulte-

skills (OSCE-laboratory, June 11, 2010) (Fig. 3, 4). On the October 29, 2010 there was an opening of a Laboratory for Multiphoton Microscopy (Fig. 5).

With the formulation and preparation of the documents which were needed for the candidature for the funds from the European Structural Funds; without the share of contribution of the Republic of Slovenia it would not have been possible to realize the plans for the building of the Faculty of Medicine of the University of Maribor; a lot of work was done and with joint efforts we succeeded - we all awaited a positive decision of the then Minister of Education and the Government of the Republic of Slovenia so that the construction of the Faculty of Medicine was placed among national projects in the candidature for European funds. The project was a success; both of the sources of investment funds, national and European, were assured.

With a great understanding from the Municipality of Maribor for the needs of our faculty, we decided among the available locations for the construction of otherwise the most demanding location but on a long-term the most acceptable fit for the new faculty at the Taborska 8, because it is directly in the vicinity of its most important study base - that is the clinics and departments of the University Medical Centre Maribor. Based on the ideological-programme basis there was for the chosen location of the faculty on the Tabor embankment accepted a Decree amending Decree on the Management plan for renewal of the Tabor embankment.

The acceptance of the decree meant that the University of Maribor was obliged to organise for the selection of a project leader an architecture competition or to carry out another proceeding, which would guarantee the commitment of an established architect with references which are internationally comparable. The University performed a public contract on the December 29, 2006 and on the tender there, as the most favourable provider, the company Plan B d.o.o. from Maribor was chosen (the author of the proposal scheme was Prof., Master of Architecture, Boris Po-

te, odločili za gradbeno sicer najzahtevnejšo, a dolgoročno najbolj sprejemljivo umestitev nove fakultete na Taborsko 8, ker je v neposredni bližini njene najpomembnejše učne baze, to je klinik in oddelkov Univerzitetnega kliničnega centra Maribor. Na podlagi izdelanih idejno-programskih izhodišč je bil za izbrano lokacijo fakultete na Taborskem nabrežju sprejet Odlok o spremembah in dopolnitvah odloka o ureditvenem načrtu za prenovo Taborskega nabrežja.

Sprejeti odlok je nalagal Univerzi v Mariboru, da je za izbiro projektanta dolžna organizirati javni arhitekturni natečaj ali izvesti drug postopek, ki bo zagotovil angažiranje uveljavljenega arhitekta z referencami, primerljivimi v mednarodnem prostoru. Univerza je izvedla 29. 12. 2006 javno naročilo, na razpisu pa je bilo za najugodnejšega ponudnika izbrano podjetje Plan B d. o. o. iz Maribora (avtor idejne zasnove je bil prof. mag. arch. Boris Podrecca, u. d. i. a.). Oktobra 2007 je bila s tem podjetjem sklenjena pogodba za izdelavo projektne dokumentacije za novogradnjo objektov zagotovitve prostorskih potreb Medicinske fakultete UM.

Po vrsti zapletov in vsaj dveletni izgubi časa, se je s podpisom pogodbe o izvedbi gradbeno-obrtniških-inštalacijskih del 8. 6. 2011 in po postavitvi temeljnega kamna 20. 6. 2011 gradnja tudi dejansko začela odvijati (Slika 6). 18. 9. 2013 smo novogradnjo tudi uradno prevzeli in študijsko leto 2013/2014 se je začelo v novih prostorih (Slika 7).

## **PO LETIH DELOVANJA MLADA, PO DOSEŽKIH VEČ KOT PREPOZNAVNA**

V desetletju od ustanovitve Medicinske fakultete Univerze v Mariboru so raziskovalci in sodelavci fakultete zabeležili nekaj izjemnih dosežkov. Na zemljevid medicinskih fakultet se je s certifikatom odličnosti v sodelovanju študentov na področju njihovega sodelovanja v življenju in delu fakultete na vidno mesto postavila druga slovenska medicinska fakulteta, in s tem zavezala fakulteto k nadaljnji skrbi za dvig kakovosti. Certifikat je Medicinska

drecca, Bachelor in Architectural Engineering). With this company, on the October 2007, a contract was concluded for preparation of the project documentation for the new construction of facilities and it was ensured that the special needs of the Faculty of Medicine of the University of Maribor were met.

After numerous complications and at least a two-year loss of time and after the contract signature on the implementation of construction-craft-installation works on June 8, 2011 and after the foundation stone laying ceremony on the June 20, 2011 the building started (Fig. 6). On the September 18, 2013 we officially took over the new construction and the 2013/2014 academic year started in the new premises (Fig. 7).

## **YOUNG BY THE YEARS OF FUNCTIONING, MORE THAN RECOGNIZABLE BY ACHIEVEMENTS**

In a decade from the establishment of the Faculty of Medicine of the University of Maribor the researchers and co-workers of the faculty have recorded some incredible achievements. On the map of medical faculties, the second Slovenian Faculty of Medicine has been elevated to a visible place with the Certificate of Excellence of Student Engagement in the area of their cooperation in the life and work of the faculty and with that the faculty is committed to further provide the growth of quality. The Certificate of Excellence was given to the Faculty of Medicine of the University of Maribor at the end of August 2013 at the Conference of the International Association for Medical Education (AMEE - Association for Medical Education in Europe) in Prague and, namely, within the project ASPIRE (1-3).

The results of international studies and publications in the most esteemed scientific journals and recognitions are an important encouragement and also encouraging is the direction of further scientific research and journalistic work of co-workers of one of the younger members of the University of Maribor.

The journal Acta Medico-Biotechnica is the first scientific journal that is published by one of the medical

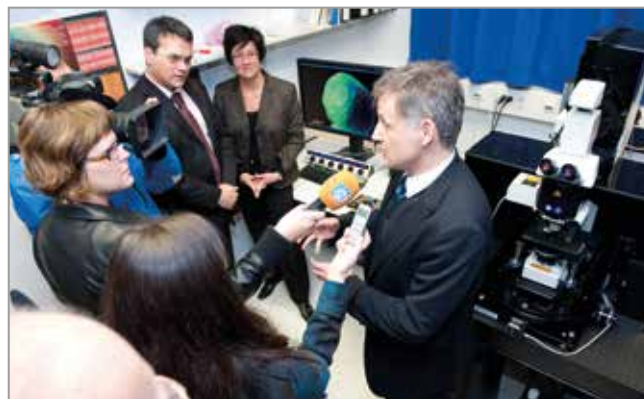
fakulteta Univerze v Mariboru dobila konec avgusta 2013 na kongresu Mednarodnega združenja za medicinsko izobraževanje (AMEE – Association for Medical Education in Europe) v Pragi, in sicer v okviru projekta ASPIRE (1–3).

Rezultati mednarodnih raziskav in objave v najuglednejših znanstvenih revijah ter priznanja so pomembna vzpodbuda in začrtana smer nadaljnjega znanstvenoraziskovalnega in publicističnega dela sodelavcev ene mlajših članic mariborske univerze.

Revija Acta medico–biotechnica je prva znanstvena revija, ki jo izdaja katera izmed medicinskih fakultet na Slovenskem; prva številka je izšla decembra 2008; 20. 12. 2012 je prejela priznanje Prometej znanosti za odličnost v komuniciranju. Revija Acta medico–biotechnica je od septembra 2011 uvrščena v seznam revij ARRS, ki sicer še niso vključene v mednarodne bibliografske baze podatkov, se pa upoštevajo pri kategorizaciji znanstvenih publikacij. Uredniška politika Acta medico–biotechnice je zasledovanje cilja pridobitve faktorja vpliva oziroma zagotavljanje ustrezne kakovosti domače znanstvene periodične publikacije. Revija izhaja dvakrat na leto v slovenskem in angleškem jeziku. Odziv raziskovalcev na področju medicine in biotehničnih ved je bil izreden: v desetih številkah je bilo skupno objavljenih 85 člankov, med njimi 45 izvirnih in 13 preglednih člankov.

Izjemen uspeh je dosegla skupina mariborskih znanstvenikov pod vodstvom prof. dr. Iztoka Takača, s sodelovanjem v mednarodni klinični raziskavi, ki je omogočila uspešnejše zdravljenje raka dojk. Prof. dr. Iztok Takač, dr. med., predstojnik Klinike za ginekologijo in perinatologijo UKC Maribor ter predstojnik Katedre za ginekologijo in porodništvo na Medicinski fakulteti Univerze v Mariboru, je eden izmed sodelavcev Breast Cancer International Research Group (BCIRG), mednarodne organizacije, ki usmerja in vodi klinične raziskave na področju zdravljenja raka dojk.

Izjemen je tudi dosežek red. prof. dr. Maje Rupnik, predstojnice Katedre za mikrobiologijo na MF UM



**Slika / Figure 5:** Laboratorij za multifotonsko mikroskopijo / Laboratory for Multiphoton Microscopy (opened on October 29, 2010)

faculties in Slovenia; the first edition was published in December 2008; on December 20, 2012 the journal received the Prometheus in Science Award. The journal Acta Medico-Biotechnica has been since September 2011 classified into the journal list ARRS, which is otherwise still not included in international bibliographic database but it is included in the categorization of scientific publications. The editorial policy of Acta Medico-Biotechnica is reaching the goal of attaining the impact factor or to ensure the quality of domestic scientific periodic publications. The journal is published twice a year in the Slovenian and English language. The reaction of the researchers in the area of medicine and biotechnical sciences was exceptional: in the ten publications there were together published 85 articles and among them 45 original articles and 13 review articles.

An exceptional success was achieved by a group of Mariborian scientists under the leadership of Prof. Iztok Takač, MD, PhD, who cooperated in an international clinical research which enabled a more successful treatment of the breast cancer. Prof. Iztok Takač, MD, PhD, Head of the Clinic of Gynecology and Obstetrics at the University Medical Centre Maribor and Head of the Department of Gynecology and Obstetrics on the Faculty of Medicine of Maribor, is one of the coworkers of the Breast Cancer International Research Group (BCIRG), international organization which directs and leads clinical research in the area of breast cancer treatment.

in predstojnice Oddelka za mikrobiološke raziskave Centra za mikrobiologijo Nacionalnega inštituta za varovanje zdravja (NIJZ). Članek z naslovom *Clostridium difficile* infection in Europe: a hospital-based survey je bil objavljen v eni izmed najbolj odmevnih revij s področja medicine *The Lancet*, ki je druga najpomembnejša revija na področju medicine (faktor vpliva 38,278). Publikacijo je Javna agencija za raziskovalno dejavnost RS (ARRS) izbrala kot izjemen dosežek na področju mikrobiologije za leto 2012.

Znatno mednarodno odzivnost sta dosegla tudi prof. dr. Uroš Potočnik in Mitja Mitrovič. Oba sta sodelavca združene mednarodne raziskovalne skupine, ki pod vodstvom prof. dr. Uroša Potočnika deluje na Medicinski fakulteti v okviru Centra za humano molekularno genetiko in farmakogenomiko in na Fakulteti za kemijo in kemijsko tehnologijo in sta soavtorja znanstvenega članka, objavljene ga v reviji *Nature* (faktor vpliva 36,28), ki poroča o odkritju 163 genov za kronično vnetno črevesno bolezen (KVČB) (5-8).

## POGLED V PRIHODNOST

V letu, ko praznujemo deseto obletnico delovanja, prihaja na knjižne police monografija, v kateri številni avtorji z različnih vidikov pišemo o vseh mejnikih; poskusili smo zaobjeti vse razsežnosti desetletnega razvoja. Domala neslutene možnosti nadaljnje rasti naše fakultete se že izrisujejo v novih prostorih, z dodatno vrhunsko opremo, sodobnimi predavalnicami, študijskimi pripomočki in z neposredno povezavo z našo najpomembnejšo učno bazo.

Veliko več kot tisoč zapisanih besed povedo vtisi obiskovalcev - od odprtja novogradnje 18. septembra 2013 - pa vse do sredine jubilejnega leta je fakulteto obiskalo več kot tisoč ljudi, vseh starosti, izobrazbe in interesnih skupin. In vsi so bili brez izjeme navdušeni - morda prav zaradi prenovljenega, z bolonjsko deklaracijo usklajenega, mednarodno primerljivega študijskega programa in zaradi novih prostorov ter izjemnih možnosti za študijsko in raziskovalno delo narašča tudi interes za vpis na fakulte-

Remarkable is also an achievement of Full Prof. Maja Rupnik, MD, PhD, Head of the Department of Microbiology at the Faculty of Medicine of the University of Maribor and Head of the Ward for Microbiological Research of the Centre for Microbiology of the National Institute of Public Health. The article with the title '*Clostridium difficile* infection in Europe: a hospital-based survey' has been published in one of the most acclaimed journals in the area of medicine *The Lancet* which is the second most important journal in the area of medicine (impact factor 38.278). The publication was chosen, by the Slovenian Research Agency, as a remarkable achievement in the area of microbiology for the year 2012.

Significant international responsiveness has been achieved also by Prof. Uroš Potočnik, MD, PhD and Mitja Mitrovič. Both are co-workers of the united international research group which under the leadership of Prof. Uroš Potočnik, MD, PhD functions at the Faculty of Medicine within the Centre for Human Molecular Genetics and Pharmacogenomics and at the Faculty for Chemistry and Chemical Technology and are co-authors of the scientific article, published in the journal *Nature* (impact factor 36.28) which reports on a discovery of 163 genes for chronic inflammatory bowel disease (5-8).

## A GAZE INTO THE FUTURE

In the year when we celebrate the tenth anniversary of functioning, a monography is coming to the bookshelves in which numerous authors from various aspects write of all milestones; we have tried to encompass all dimensions of a ten-year development. Almost unimagined possibilities of further growth of our faculty are already plotting in the new premises, with additional state-of-the-art equipment, contemporary lecture rooms, study aids and with a direct connection to our most important educational base.

Much more than a thousand written words say the visitors' impressions from the opening of the new construction on September 18, 2013 and all the way to the jubilee year the faculty has been visited by

to. Naši raziskovalci so si že doslej dodobra utrdili ugled v mednarodnih krogih, saj beležijo številne odmevne objave v najpomembnejših tujih strokovnih revijah (npr. Nature, Lancet ipd.). V novih pogojih, ki jih je omogočil v veliki meri Operativni program krepitve regionalnih razvojnih potencialov za obdobje 2007–2013, upravičeno pričakujemo razmah raziskovalne in publicistične dejavnosti.

Nove možnosti, tako prostorske kot glede vrhunske opreme, omogočajo razvoj predvsem bazičnih predkliničnih raziskav. Študentje in učitelji lahko v pedagoški proces vključujejo najsodobnejše simulatorje, virtualne bolnike, laboratorij za prakticanje kliničnih veščin, elektronske mize za pouk anatomije, sodobno opremo za diagnostiko bolezni prebavil in ginekološke bolezni, sodobne ultrazvočne aparate, aparate za diagnostiko in zdravljenje gibal, uporabo telemedicine, video-konferenčne prostore itd.



*Slika / Figure 6: Postavitev temeljnega kamna / Foundation stone laying ceremony on the June 20, 2011*

more than a thousand people of all ages, educational backgrounds and interest groups. And all were without exception impressed - perhaps so also because of modernized and in accordance with the Bologna declaration adjusted programme which is internationally comparable and because of new premises and exceptional possibilities for study and research work; therefore there is also an interest for enrollment, for our faculty grows. Our researchers have already until now thoroughly strengthened their reputation in international circles, for they have recorded numerous notable publications in the most important foreign scientific journals (e.g. Nature, Lancet, etc.). In new conditions which have been enabled largely by the Operational programme for strengthening regional development potentials 2007-2013, we justly expect expansion of research and publishing activities.

New possibilities, spatial and as well as of the state-of-the-art equipment, enable development especially of basic preclinical research. Students and professors may include in the pedagogical process state-of-the-art simulators, virtual patients, laboratory for practicing clinical skills, electronic tables for lessons of anatomy, modern equipment for diagnostics of gastrointestinal diseases and gynecological diseases, modern ultrasound devices, devices for diagnostics and treatment of locomotor system, usage of telemedicine, video-conferencing facilities etc.

In our new research laboratories there will be numerous laboratory instruments which will be needed by researchers in the area of pathology, physiology, molecular biology, microbiology, biochemistry, chemistry. We have to look to the new times, for we are bound to growth and development to all who supported us: first of all to the local environment, including the Faculty of Medicine of the University of Maribor, our country and Europe and also to our students. The Tabor embankment is with the Faculty of Medicine of the University of Maribor henceforth a place of important national centre of medical knowledge (9).

V naših novih raziskovalnih laboratorijih bodo številni novi laboratorijski instrumenti, ki jih bodo raziskovalci potrebovali na področju patologije, fiziologije, molekularne biologije, mikrobiologije, biokemije, kemije.

Zazreti se moramo v nove čase, saj smo za rast in razvoj zavezani vsem, ki so nas podprli: v prvi vrsti lokalnemu okolju, vključno z Univerzo v Mariboru, državi in Evropi, in ne nazadnje tudi našim študentom. Taborsko nabrežje je z Medicinsko fakulteto Univerze v Mariboru poslej kraj pomembnega nacionalnega središča medicinskega znanja (9).



**Slika / Figure 7:** Študijsko leto 2013/14 se je začelo v novih prostorih / The academic year 2013/2014 started on the new premises

## REFERENCE

1. Toplak C. ur., Monografija SBM 1799–1999.
2. Pertl E., Zbornik Splošne bolnišnice Maribor 1855–1955.
3. Elaborat študijskega programa Splošna medicina na Medicinski fakulteti Univerze v Mariboru
4. Skok P. Biomedicinska tehnologija: podiplomski študij. Maribor: Medicinska fakulteta, 2009.
5. <http://www.aspire-to-excellence.org/ASPIRE+Medical+Schools/>
6. D. Slamon, W. Eiermann, N. Robert, T. Pienkowski, M. Martin, M. Press, J. Mackey, J. Glaspy, A. Chan, M. Pawlicki, T. Pinter, V. Valero, MC. Liu, G. Sauter, G. von Minckwitz ... the Breast Cancer International Research Group – I. Takač&al: Adjuvant Trastuzumab in HER2-Positive Breast Cancer; The New England Journal of Medicine, vol. 365, No. 14, 1273-83
7. M. P. Bauer, D. W. Notermans, B. HB van Benthem, j. S. Brazier, M. H. Wilcoy, M. Rupnik, D. L. Mannet, J. T. Van Diessel, E. J. Kuijper fot the ECDIS Study Group,: Clostridium difficile infection in europe: a hospital-based survey; The Lancet, vol. 377, No. 9759, january 1-7,2011, 63-73.
8. L. Jastins, S. Ripke, R. K. Weersima ... U. Potočnik, M. Mitrovič &al: Host-microbe interactions have shaped the genetic architecture of inflammatory bowel disease; The international weekly journal of science Nature,vol. 491, issue No 7422, 1 Nov 2012; 119-24.
9. Krajnc I., ur., Deset let Medicinske fakultete Univerze v Mariboru – Stičišče prehojenih poti na področju izobraževanja v medicini v Mariboru skozi čas, monografija, v tisku, 2014.