Prvo poglavje je napisano, prihodnost je pred nami: prva generacija študentov farmacije v Mariboru

Pred letom dni je vzpostavitev enovitega magistrskega študijskega programa Farmacija na Univerzi v Mariboru pomenila pomemben mejnik po dolgem in zahtevnem procesu njegove priprave. Dolgotrajno strateško načrtovanje, medinstitucionalno sodelovanje in vztrajnost so omogočili njegovo uresničitev. Oktobra 2025 je prva generacija študentov farmacije vstopila v predavalnice Medicinske fakultete ter Fakultete za kemijo in kemijsko tehnologijo Univerze v Mariboru, s čimer je začela pisati novo poglavje v zgodovini farmacevtskega izobraževanja v Sloveniji. Danes, po zaključenem prvem letu izvajanja programa, ko je v študijske klopi sedla že druga generacija, imamo priložnost, da se ozremo na doseženo, ter hkrati usmerimo pogled v prihodnost.

V ospredju prvega leta so bili študenti prve generacije, ki so vstopili v nov študijski program brez izkušenj predhodnih generacij, ustaljenih praks in starejših kolegov, na katere bi se lahko oprli. Zato so bili prav oni prvi, ki so neposredno spoznavali značilnosti, zahteve in začetne izzive študijskega programa. Prehod iz srednješolskega v univerzitetno okolje je bil za številne študente zahteven, hkrati pa je tudi izvajalcem programa ponudil dragocen vpogled v področja, ki jih je mogoče pri nadaljnjem izvajanju programa še izboljšati. Ob zaključku prvega študijskega leta je večina generacije napredovala v drugi letnik, pridobljene izkušnje pa so in bodo pomembno prispevale k nadaljnjemu prilagajanju in kakovostnemu razvoju programa.

Prvo leto izvajanja je namreč prineslo številne izzive tudi institucijama, ki študijski program izvajata skupaj. Njegova interdisciplinarna zasnova, ki povezuje Medicinsko fakulteto ter Fakulteto za kemijo in kemijsko tehnologijo, predstavlja eno največjih prednosti, hkrati pa prinaša precejšnjo organizacijsko zahtevnost. Študenti so se morali prilagoditi študiju na dveh fakultetah, vključno s praktičnimi izzivi prehajanja

The First Chapter Is Written, the Future Lies Ahead: The First Generation of Pharmacy Students in Maribor

One year ago, the establishment of the Integrated Master's Programme in Pharmacy at the University of Maribor marked an important milestone following a long and demanding preparation process. Long-term strategic planning, interinstitutional cooperation, and perseverance made its implementation possible. In October 2025, the first generation of pharmacy students entered the lecture halls of the Faculty of Medicine and the Faculty of Chemistry and Chemical Engineering of the University of Maribor, thereby opening a new chapter in the history of pharmaceutical education in Slovenia. Today, following completion of the programme's first year, with the second generation of students already enrolled, we have an opportunity to reflect on what has been achieved while also looking ahead.

At the centre of the first year were the students of the pioneering generation, who entered a new study programme without the experience of previous cohorts, established practices, or senior students on whom they could rely. They were therefore the first to encounter its characteristics, demands, and initial challenges directly. The transition from secondary school to university-level study proved demanding for many students, but also provided the programme's teaching staff with valuable insights into areas in which the programme could be further improved. By the end of the first year, the majority of the cohort had progressed to the second year, and the experience gained will make an important contribution to the continued refinement and improvement of the programme.

The first year of implementation also brought numerous challenges for the two institutions jointly responsible for delivering the programme. Its interdisciplinary structure, linking the Faculty of Medicine and the Faculty of

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med lokacijama. Pedagoški sodelavci so vložili veliko truda v pripravo in usklajevanje novih učnih vsebin, strokovne službe pa so se soočale z zahtevno nalogo vključevanja novega programa v obstoječe akademske in administrativne procese. Priprava urnikov, zagotavljanje laboratorijskih prostorov, prostorske omejitve in usklajevanje pedagoških obveznosti so dejavniki, ki so zahtevali stalno pozornost, še posebej ob infrastrukturnih omejitvah, s katerimi se soočata obe strani. Vse rešitve niso bile optimalne že od začetka, vendar so posamezni izzivi omogočili sprotno prilagajanje in izboljševanje izvedbe. Ravno pripravljenost na poslušanje, prilagajanje in sodelovanje so omogočili, da smo študijsko izkušnjo lahko izboljševali tudi skozi študijsko leto.

Za temi prizadevanji stoji skupnost predanih visokošolskih učiteljev, raziskovalcev, tehničnih sodelavcev in sodelavcev strokovnih služb. Kakovost študijskega programa ni odvisna zgolj od njegove vsebinske zasnove, temveč tudi od ljudi, ki le tega izvajajo. Veseli nas, da pri implementaciji sodelujejo visoko usposobljeni in predani strokovnjaki, mdr. tudi mednarodno priznani raziskovalci, katerih znanstvene in strokovne izkušnje bogatijo pedagoški proces, ter tudi študentom približujejo sodobni razvoj farmacije. Njihova vloga presega tako predavanja kot preverjanje znanja, saj vključuje mentorstvo, spodbujanje radovednosti ter razvijanje strokovne integritete, ki jo pričakujemo od bodočih farmacevtov.

Medtem ko je prva generacija zaključevala prvi letnik, so intenzivno potekale priprave že na naslednjo stopnjo študija. Drugi letnik prinaša več strokovnih farmacevtskih predmetov, ki se na Univerzi v Mariboru izvajajo prvič, med njimi Farmacevtsko kemijo na Fakulteti za kemijo in kemijsko tehnologijo ter Farmacevtsko tehnologijo na Medicinski fakulteti. Njihova vzpostavitev je zahtevala obsežna vlaganja v učna gradiva, laboratorijske vaje, kadre in infrastrukturo. Zaposlili smo nove pedagoške in strokovne sodelavce, dodatni strokovnjaki so pridobili ustrezne habilitacije, laboratorije pa smo opremili s sodobnimi instrumenti in učno opremo. Ta vlaganja ustvarjajo pogoje za praktično izobraževanje, v okviru katerega bodo študenti razvijali ključne laboratorijske spretnosti, ter tudi farmacevtske znanosti spoznavali še skozi praktično delo. Hkrati predstavljajo dolgoročno

Chemistry and Chemical Engineering, represents one of its greatest strengths, while at the same time introducing considerable organisational complexity. Students had to adapt to studying at two faculties, including the practical challenges of moving between locations. Teaching staff invested substantial effort in preparing and coordinating new course content. At the same time, administrative and professional services faced the demanding task of integrating the new programme into existing academic and administrative processes. Timetabling, the provision of laboratory facilities, spatial constraints, and the coordination of teaching responsibilities required continuous attention, particularly given the infrastructural limitations faced by both faculties. Not all solutions were optimal from the outset, but individual challenges enabled ongoing adjustment and improvement of the programme delivery. The willingness to listen, adapt, and cooperate played a key role in improving the student experience throughout the year.

Behind these efforts is a community of dedicated university teachers, researchers, technical staff, and colleagues from professional and administrative services. The quality of a study programme depends not only on its academic content, but also on the people who deliver it. We are pleased that the programme involves highly qualified and committed professionals, including internationally recognised researchers whose scientific and professional experience enriches the teaching process and brings students closer to contemporary developments in pharmacy. Their role extends beyond lectures and assessment to include mentoring, encouraging curiosity, and fostering the professional integrity expected of future pharmacists.

While the first generation was completing its first year, intensive preparations were already underway for the next stage of study. The second year introduces several professional pharmacy courses being taught at the University of Maribor for the first time, including Pharmaceutical Chemistry at the Faculty of Chemistry and Chemical Engineering and Pharmaceutical Technology at the Faculty of Medicine. Establishing these courses required substantial investment in teaching materials, laboratory exercises, personnel, and infrastructure. New teaching and professional staff were recruited, additional experts obtained the necessary academic teaching qualifications, and laboratories

naložbo v razvoj farmacevtskega izobraževanja, raziskovanja in inovacij v Mariboru.

Enako pomembna razsežnost razvoja programa je mednarodno povezovanje. V preteklem letu smo veliko pozornosti namenili krepitvi mednarodnih akademskih mrež, vzpostavljanju in širjenju partnerstev Erasmus+ ter pripravi skupnih evropskih projektnih prijav. S temi dejavnostmi nameravamo ustvariti možnosti za prihodnje izmenjave študentov in zaposlenih, skupne izobraževalne pobude ter raziskovalno sodelovanje. Posebno pozornost smo namenili tudi evropskim pobudam za krepitev inovativnosti in podjetnosti v visokem šolstvu, mdr. pobudi EIT Higher Education Initiative. Čeprav bodo rezultati teh prizadevanj izraziteje vidni šele v prihodnjih letih, gradimo pogoje za mednarodno povezano, znanstveno ambiciozno in na nove tehnološke ter družbene izzive odzivno farmacevtsko izobraževanje že danes.

Pomen razvoja farmacevtskega izobraževanja v Mariboru potrjuje tudi širše strokovno in gospodarsko okolje. Farmacija je področje hitrega znanstvenega in strokovnega razvoja, ki ga pomembno oblikujejo napredek biotehnologije, razvoj bioloških zdravil, personalizirano zdravljenje, napredne proizvodne tehnologije ter vse večji pomen brezšivne skrbi. V Sloveniji so v zadnjih letih opazna obsežna vlaganja v farmacevtski sektor. Družba Sandoz prek Leka v Sloveniji v večletnem obdobju načrtuje naložbe, ki presegajo milijardo evrov, mdr. v velik proizvodni obrat za podobna biološka zdravila v Lendavi. Tudi Novartis nadaljuje vlaganja v napreden razvoj in proizvodnjo zdravil, pri čemer so naložbe tega podjetja v Sloveniji zgolj v letu 2025 dosegle 233 milijonov evrov. Takšne naložbe ne odražajo le rasti farmacevtskega sektorja, temveč tudi dolgoročno potrebo po visoko usposobljenih strokovnjakih, ki bodo prispevali k farmacevtskim inovacijam, proizvodnji, zagotavljanju kakovosti in raziskovanju. Prihodnost farmacije pa seveda sega precej dlje od industrije. Javne in bolnišnične lekarne, klinične farmacevtske storitve ter interdisciplinarni zdravstveni timi vse bolj potrebujejo farmacevte, ki znanstvena spoznanja povezujejo s klinično presojo, komunikacijskimi spretnostmi in strokovno odgovornostjo. Mariborski študijski program povezuje lekarniško, klinično in industrijsko

were equipped with modern instruments and teaching equipment. These investments provide the conditions for practical education, enabling students to develop key laboratory skills and gain a deeper understanding of pharmaceutical sciences through hands-on work. At the same time, they represent a long-term investment in the development of pharmaceutical education, research, and innovation in Maribor.

Internationalisation is an equally important dimension of the programme's development. Over the past year, considerable attention has been devoted to strengthening international academic networks, establishing and expanding Erasmus+ partnerships, and preparing joint European project proposals. These activities are intended to create opportunities for future student and staff mobility, joint educational initiatives, and research collaboration. Particular attention has also been paid to European initiatives that promote innovation and entrepreneurship in higher education, including the European Institute of Innovation and Technology Higher Education Initiative. Although the results of these efforts will become more visible in the coming years, we are already creating the conditions for pharmaceutical education that is internationally connected, scientifically ambitious, and responsive to emerging technological and societal challenges.

The importance of developing pharmaceutical education in Maribor is also reinforced by the broader professional and economic environment. Pharmacy is a field of rapid scientific and professional development, shaped by advances in biotechnology, the development of biological medicines, personalised treatment, advanced manufacturing technologies, and the growing importance of seamless care. In recent years, Slovenia has seen substantial investment in the pharmaceutical sector. Sandoz, through Lek, is planning investments in Slovenia exceeding 1 billion euros over a period of several years, including a major biosimilar manufacturing facility in Lendava. Novartis has likewise continued investing in advanced pharmaceutical development and manufacturing, with its investments in Slovenia reaching 233 million euros in 2025 alone. Such investments reflect not only the growth of the pharmaceutical sector but also the long-term need for highly qualified professionals who will contribute to pharmaceutical innovation, manufacturing, quality assurance, and research.

farmacijo s trdno znanstvenoraziskovalno osnovo. Takšna povezanost ostaja ena njegovih ključnih značilnosti in pomemben prispevek k razvoju farmacevtskega izobraževanja v Sloveniji.

Prihod druge generacije študentov oktobra 2026 pomeni nov korak v razvoju študija farmacije v Mariboru. Novi študenti se vključujejo v okolje, v katerem se že oblikuje akademska skupnost, prva generacija pa postopoma prevzema vlogo starejših kolegov, ki z novimi generacijami deli svoje izkušnje in pomaga soustvarjati tradicije programa. Njihova opažanja in predlogi bodo dragoceni še pri nadaljnjem razvoju programa.

Naše ambicije za prihodnost segajo dlje od uspešne izvedbe petletnega študijskega programa. Želimo razvijati živahno akademsko okolje, v katerem se izobraževanje, raziskovanje, zdravstvo in industrija medsebojno krepijo ter študente spodbujajo h kritičnemu razmišljanju, zastavljanju znanstvenih vprašanj in sodelovanju pri inovacijah. Naš cilj je, da bodo diplomanti pripravljeni ne le izpolnjevati današnja strokovna pričakovanja, temveč prihodnost farmacije zmožni tudi soustvarjati.

Prvi generaciji se zahvaljujemo za zaupanje in pripravljenost, da se skupaj z nami poda na novo pot. Prvo leto izvajanja študijskega programa je prineslo številne izkušnje, ki bodo pomembno izhodišče za njegovo nadaljnje izboljševanje. Na tej osnovi želimo skupaj s prihodnjimi generacijami graditi kakovostno in prepoznavno tradicijo farmacevtskega izobraževanja v Mariboru.

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The future of pharmacy, however, extends far beyond industry. Community and hospital pharmacies, clinical pharmacy services, and interdisciplinary healthcare teams increasingly need pharmacists who can combine scientific knowledge with clinical judgement, communication skills, and professional responsibility. The Maribor programme integrates community, clinical, and industrial pharmacy with a strong scientific and research foundation. This integration remains one of its key characteristics and an important contribution to the development of pharmaceutical education in Slovenia.

The arrival of the second generation of students in October 2026 marks another step in the development of pharmacy studies in Maribor. New students are entering an environment in which an academic community is already beginning to take shape, while the first generation is gradually assuming the role of senior students, sharing their experience and helping to establish the programme's emerging traditions. Their observations and suggestions will also be valuable for the programme's further development.

Our ambitions for the future extend beyond the successful delivery of a 5-year study programme. We aim to develop a vibrant academic environment in which education, research, healthcare, and industry reinforce one another and encourage students to think critically, ask scientific questions, and participate in innovation. Our goal is to prepare graduates not only to meet today's professional expectations, but also to help shape the future of pharmacy.

We thank the first generation for their trust and willingness to embark on this new path together with us. The first year of implementation has provided valuable experience that will serve as an important basis for the programme's continued improvement. On this foundation, together with future generations, we aim to build a high-quality and distinctive tradition of pharmaceutical education in Maribor.

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