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The Role of Medical Faculty Graduates in the Pharmaceutical Industry in Turkey and Globally

Türkiye ve Dünya Genelinde Tıp Fakültesi Mezunlarının İlaç Endüstrisindeki Rolü

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Abstract

Objective: This article aims to examine the roles of medical faculty graduates in the pharmaceutical industry globally and in Turkey, focusing on their motivations, required competencies, and professional development processes. It highlights physicians' contributions across diverse departments such as Medical Affairs, Clinical Research, Regulatory Affairs, Pharmacovigilance, and Research & Development (R&D), emphasizing the importance of integrating medical education with industry needs.

Methods: This is a narrative review based on national and international literature (1–23) and professional observations. Comparative analysis was conducted to explore physicians' motivations for entering the pharmaceutical industry, their career trajectories, and challenges faced during the transition. Data on the structure of the Turkish pharmaceutical sector, physician employment trends, and educational dynamics were evaluated in relation to global benchmarks. The analysis integrates the author's professional experience as contextual evidence.

Results: The number of physicians employed in the pharmaceutical industry is steadily increasing worldwide and in Turkey. Medical Affairs departments have evolved from support units to strategic centers where physicians actively contribute to scientific communication, leadership, and data-driven decision-making. Key motivations for physicians to enter the industry include improved working conditions, the opportunity to contribute to innovation, intellectual diversity, and leadership potential. However, lack of awareness, perceived loss of clinical identity, and limited educational exposure remain significant barriers. In Turkey, the predominantly clinical focus of medical education reduces awareness of non-clinical career paths. Nevertheless, technological advancements—such as artificial

intelligence, biotechnology, and personalized medicine—are expanding new employment areas for physicians.

Conclusion: The pharmaceutical industry offers medical graduates a rewarding alternative to traditional clinical or academic careers. Turkey's dynamic pharmaceutical sector, combined with its young physician population and growing R&D ecosystem, provides fertile ground for strategic physician leadership. Realizing this potential requires stronger collaboration between universities, industry, and public authorities, as well as the inclusion of industry-oriented training in medical curricula. This transition represents not merely a career shift but a redefinition of the medical profession itself—one that serves public health on a broader scale.

Özet

Amaç: Bu çalışmanın amacı, tıp fakültesi mezunlarının Türkiye ve dünya genelinde ilaç endüstrisindeki rollerini incelemek, bu alana yönelmelerini etkileyen faktörleri, gereksinim duyulan yetkinlikleri ve kariyer gelişim süreçlerini değerlendirmektir. Makale, hekimlerin medikal departman, klinik araştırma, ruhsatlandırma, farmakovijilans ve Ar-Ge gibi farklı iş alanlarındaki katkılarını vurgulayarak, tıp eğitimi ve endüstri arasındaki köprüye dikkat çekmektedir.

Yöntem: Bu çalışma bir derleme niteliğindedir. Ulusal ve uluslararası literatürden (1–23) yararlanılarak, tıp fakültesi mezunlarının ilaç endüstrisindeki mevcut konumları, motivasyonları, kariyer yönelimleri ve geleceğe yönelik beklentileri karşılaştırmalı olarak incelenmiştir. Türkiye'deki sektör yapısı, istihdam verileri ve eğitimsel yönelimler değerlendirilmiş; küresel örneklerle ilişkilendirilmiştir. Ayrıca yazarın sektörel deneyimlerinden elde edilen gözlemler destekleyici nitelikte kullanılmıştır.

Bulgular: Dünya genelinde olduğu gibi Türkiye'de de ilaç endüstrisinde görev yapan hekimlerin sayısı artmaktadır. Özellikle medikal departmanlar, hekimlerin bilimsel iletişim, stratejik liderlik ve veri analizinde etkin roller üstlendiği birimlere dönüşmüştür. Hekimlerin sektöre geçiş motivasyonları arasında düzenli çalışma koşulları, inovatif süreçlere katkı isteği, kariyer çeşitliliği ve liderlik fırsatları öne çıkmaktadır. Bununla birlikte, klinik kimliğin yitirilmesi korkusu ve sektör farkındalığının düşüklüğü önemli engeller olarak belirlenmiştir. Türkiye'de tıp eğitimi müfredatının klinik ağırlıklı olması, ilaç endüstrisine ilişkin bilinç eksikliğini artırmaktadır. Ancak biyoteknoloji, yapay zekâ ve kişiselleştirilmiş tıp alanlarındaki gelişmeler hekimler için yeni istihdam alanları doğurmaktadır.

Sonuç: İlaç endüstrisi, hekimler için klinik pratiğin ötesinde geniş ve anlamlı bir çalışma alanı sunmaktadır. Türkiye'nin genç hekim potansiyeli, güçlü sağlık altyapısı ve küresel Ar-Ge entegrasyonu, hekimlerin sektördeki rollerini stratejik düzeye taşıyabilir. Bunun gerçekleşebilmesi için tıp fakültelerinde endüstri odaklı seçmeli derslerin açılması, şirketlerin hekimlere liderlik fırsatları tanıması ve kamu-özel iş birliklerinin güçlendirilmesi gerekmektedir. Bu geçiş yalnızca bir meslek değişimi değil, tıp bilgisinin başka bir biçimde icrasıdır.

1. Introduction

As a neurosurgeon and pharmaceutical industry professional who has observed both the clinical and industrial aspects of the career journey, I believe that the potential of medical school graduates in the pharmaceutical industry is still not sufficiently evaluated and understood in Turkey. While the vast majority of medical graduates pursue a career in patient care or academic research (1), the pharmaceutical industry also offers a significant and attractive career alternative for physicians (2). The pharmaceutical sector is a dynamic field that continually progresses thanks to advancements in science and technology, having a major impact on human health (6). With the increase in global population and extended human lifespan, demand for the pharmaceutical sector is steadily growing (6). This growth and complexity allow medical faculty graduates to utilize their unique knowledge and clinical experience in various roles (2). In Turkey, too, the pharmaceutical sector is rapidly developing as an integral part of healthcare services, and this development is opening new career doors for physicians. However, opening these doors requires rethinking some areas in medical education and a radical transformation in physicians' career perception. But it's clear that contributing to the

journey of a molecule that could impact the lives of thousands is as much at the core of medicine as striving to treat a single patient. So why are the vast majority of young physicians in Turkey still unaware of this field? Why is the pharmaceutical industry still seen as a "Plan B"? These questions should bother us. This article aims to deeply examine the place of medical faculty graduates in the pharmaceutical industry, their motivations, roles, and future potential from both a global and Turkish perspective.

2. The Role of Medical Faculty Graduates in the Pharmaceutical Industry Globally

Physicians occupy a significant number of key positions in the pharmaceutical industry (1). However, a large proportion of clinicians are often unaware of the variety of career paths within the pharmaceutical industry or the structure of a pharmaceutical company (1). Although this sector offers a work environment quite different from individual patient care, the opportunity to develop innovative drugs, communicate their benefits, and thus impact the treatment of thousands of patients has become a rewarding alternative for many physicians (2).

2.1. Key Roles and Departments in the Pharmaceutical Industry

The main roles and departments undertaken by physicians in the pharmaceutical industry include:

• Research and Development (R&D): Physicians play a critical role in the discovery of new drug candidates, and the design and management of preclinical and clinical development processes (2).

• Clinical Research: Clinical research is a fundamental process that evaluates the safety and efficacy of drugs in humans. Physicians are actively involved in preparing clinical study protocols, ethical committee applications, selecting sites, patient enrollment, data collection, and analysis (1, 2). Additionally, numerous Contract Research Organizations (CROs) operating in Turkey offer significant employment opportunities to physicians in the fields of clinical trial process management, monitoring and consultancy.

• Medical Affairs: Although there is no quantitative data on this subject, this is the field where medical doctors are employed the most in the pharmaceutical industry. This department facilitates the exchange of scientific and medical information between pharmaceutical companies and healthcare professionals (4, 5). Physicians, acting as Medical Science Liaisons (MSL) and Medical Manager (MM), work in the field to provide scientific information to physicians, organize scientific events related to products, and contribute to the preparation of scientific articles (1, 4). The medical affairs function has evolved from a support unit to a strategic leadership role in recent years (5). This evolution has enabled physicians to directly influence strategic decisions in the sector by utilizing their leadership skills and business acumen (5).

• Regulatory Affairs: This department monitors the legal processes and regulations required for drugs to be marketed. Physicians can take part in submitting clinical data to regulatory authorities and managing approval processes (2).

• Pharmacovigilance and Drug Safety: This department is responsible for monitoring the safety of drugs after they are marketed, collecting and evaluating adverse event reports. Physicians play an important role in this area because they possess the necessary medical knowledge to understand patients' responses to drugs and evaluate potential side effects (2).

• Marketing and Product Management: Physicians can be involved in creating scientific messages for products and ensuring the medical appropriateness of marketing strategies. They can use their clinical knowledge and understanding of the healthcare system in this field (1). It's an ideal field for medical doctors who enjoy sales, analysis, and mathematics, where they can exercise these skills. The greater variety and variety of career paths increases interest in the field. The fact that many senior executives in companies currently operating in Turkey have medical backgrounds is a testament to this.

2.2. Motivations for Physicians to Transition to the Pharmaceutical Industry

Several motivations lead many physicians to leave clinical practice and transition to the pharmaceutical industry:

• Career Dissatisfaction: Career dissatisfaction in clinical practice can be one reason physicians move to non-clinical jobs (2). A significant proportion of physicians consider changing careers due to "burnout" in clinical practice (1).

• Better Working Conditions: Factors such as more

regular working hours, less on-call burden, and a better work-life balance in the pharmaceutical industry can be appealing (1). In addition, the risk of malpractice lawsuits and intense legal pressures increase the desire for many physicians to leave the sector.

• Contribution to Innovative Drug Development Processes: Physicians may be interested in this sector due to the potential to develop new drugs and impact the lives of thousands of patients (2). This reflects the desire to impact broader populations rather than just individual patient treatment (2).

• A Different Intellectual Environment: A search for an environment that is different from clinical practice, where they can utilize their scientific and strategic thinking skills more, and that encourages continuous learning and development (1).

• Financial Factors: In some cases, positions in the pharmaceutical industry can offer more attractive financial opportunities compared to clinical practice.

• Leadership Opportunities: The credibility and scientific competence provided by their medical background offer physicians the potential to rise to leadership positions within the sector (17).

2.3. Required Competencies and Career Development

To have a successful career in the pharmaceutical industry, medical faculty graduates need to develop specific competencies:

• Communication and Behavioral Change: The ability to communicate effectively with healthcare professionals, patients, and internal stakeholders is essential (5). This is a key skill, especially for Medical Manager (MM) and Medical Science Liaisons (MSL) (4).

• Business Leadership Capability: The ability to understand business processes, think strategically, and manage projects is important (5). With the evolution of the medical affairs function into a strategic role, physicians' business leadership competencies have become even more crucial.

• Knowledge Acquisition and Self-Development: Keeping up with constantly changing scientific and medical information, learning new technologies, and being proactive for personal development are vital in the pharmaceutical industry (5, 13).

• Data Science and Analytics: The ability to generate and analyze Real World Evidence (RWE) is becoming increasingly important (5). This competency will become even more critical with the widespread adoption of big data and artificial intelligence applications in the sector.

• Teamwork and Multidisciplinary Approach: As the pharmaceutical industry is an environment where experts from different disciplines come together, the ability to work harmoniously within a team is critically important (1).

• Mentorship: For physicians transitioning into the pharmaceutical industry, mentorship is an important support mechanism for adapting to the new environment and determining career goals (2, 21). Mentorship contributes to career development in both academic and industrial settings (20).

3. The Role of Medical Faculty Graduates in the Pharmaceutical Industry in Turkey

The pharmaceutical sector in Turkey is an important component of healthcare services and has a constantly growing structure (6). Similar to global trends, medical faculty graduates in Turkey are increasingly taking on roles in the pharmaceutical industry. Especially in recent years, the employment of physicians in areas such as medical affairs, clinical research, and pharmacovigilance has increased.

3.1. Structure of the Turkish Pharmaceutical Industry and Physician Employment

The Turkish pharmaceutical sector has a competitive structure where international and local companies operate (6). In the sector, a wide range of activities are carried out, from R&D to production, marketing to distribution. These activities offer various career opportunities for medical faculty graduates.

Approximately 550 pharmaceutical companies operate in Turkey, 13% of which have R&D center status (6). The sector employs approximately 42,000 people, and an estimated 1,500-2,000 physicians work in medical departments. The majority of these physicians hold Medical Manager or MSL positions, while a small number work in R&D, clinical research, or pharmacovigilance. Language and strategy competencies are decisive in international companies.

This field is virtually absent in medical schools. In a study examining post-graduation career plans, only 1.2% of senior students indicated a preference for the pharmaceutical industry (3).

• Medical Departments: In Turkey, medical

departments are also the areas where physicians are most heavily employed. Especially Medical Manager (MM) and Medical Science Liaison (MSL) roles enable physicians to maintain scientific communication with healthcare professionals by using their clinical knowledge in the field. These roles allow physicians to build a bridge between the pharmaceutical company and healthcare professionals.

• Clinical Research Units: Turkey has become an attractive center for global clinical research in recent years. This situation is increasing the need for physicians to work in clinical research. Ensuring the compliance of clinical research with international standards makes the roles of physicians in this area even more important. Physicians can work as investigator physicians in clinical research centers or as project managers/monitors in the clinical research departments of pharmaceutical companies.

• Regulatory Affairs and Pharmacovigilance: Compliance with legal regulations in Turkey and monitoring drug safety necessitate the involvement of physicians in these departments. Particularly in the field of pharmacovigilance, physicians' clinical experience is critically important due to their ability to accurately evaluate and report adverse events.

• Public and Private Collaborations: The role of physicians in the pharmaceutical sector in Turkey is not limited to the private sector. Public-private cooperation projects enable physicians to take part as consultants or managers in drug development and health technology areas. For example, pharmaceutical R&D projects supported by TÜBİTAK (The Scientific and Technological Research Council of Turkey) or national drug development and domestic vaccine projects (such as ERUCOV-VAC) conducted with the Ministry of Health demonstrate that physicians can also have a voice in this area within the public sector. However, the number and effectiveness of these collaborations are still not at the desired level, and more concrete steps are needed.

3.2. Medical Education in Turkey and Orientation towards the Sector

Medical education in Turkey is primarily focused on clinical practice and specialization areas (3). A study on the career choices of final-year medical faculty students after graduation showed that students mostly prefer traditional paths such as specialty training and public service (3). This situation indicates that awareness about career paths in the pharmaceutical industry may still be low among medical faculty students.

To address this deficiency, universities need to add informative seminars, panels, or elective courses about career opportunities in the pharmaceutical industry to their curricula. Similar to pharmacy faculties, including topics such as "pharmaceutical industry" or "pharmaceutical medicine" in medical faculties will broaden the career alternatives for students after graduation. Furthermore, establishing internship and short-term rotation programs between pharmaceutical companies and medical faculties will offer a significant opportunity for students to experience the work environment in the sector and the roles of physicians.

My personal observation is that such programs are virtually nonexistent, and students' individual efforts to gain an understanding of the industry are insufficient. However, the voluntary internship project, which was implemented through a protocol signed between Istanbul University and Abdi İbrahim İlaç A.Ş. in recent years, has not been continued for various reasons.

3.3. Challenges and Opportunities in Turkey

There are some challenges and opportunities for physicians transitioning to the pharmaceutical industry in Turkey:

• Challenges:

- Lack of Awareness: There is insufficient awareness among medical faculty students and young physicians about career opportunities in the pharmaceutical industry (1). This may lead to the talent pool in the sector not being fully utilized.
- Perception of Career Change: The perception that leaving clinical practice is a career "loss" can be an obstacle for some physicians. Societal and family expectations can also reinforce this perception.
- Specialty-Oriented Education: Since medical education is generally oriented towards a specific specialty, adapting to a multidisciplinary role in the sector can initially be challenging. The difference in job descriptions and requirements in the industry compared to the clinical world can prolong the adaptation process.
- Competition: Increased demand in the sector and competition from graduates of other health

professions (pharmacists, biologists, etc.) can be challenging for physicians in some positions.

- Individual and Emotional Challenges: My conversations with physicians in the industry and those aspiring to enter it, along with my personal observations and experiences, suggest that this transition involves not only structural challenges but also significant individual struggles. One of the most important of these is the difficulty of navigating relationships in a new work environment.

Beginning with their medical education, physicians become accustomed to a physician-centric lifestyle. This can lead to communication difficulties in an industry with very different dynamics. A key reason for this is that physicians, who are used to being in a position of authority as clinicians, may find this attribute is not recognized among colleagues from very different disciplines.

Additionally, demanding travel and conference schedules can challenge work-life balance. Many of my colleagues mention in their job applications that they enjoy traveling. However, the reality of this travel—such as catching a 5 a.m. flight to attend a long meeting in another city—is a concept far removed from the tourism-related travel they might imagine.

The constant need for effective communication with numerous stakeholders (physicians, pharmacists, patient associations, government institutions) can cause mental fatigue. For physicians, especially those in medical affairs, the ongoing workload and pressure to be digitally available via email, even on public holidays, can lead to burnout.

In some corporate cultures, a lack of adequate managerial support, an unclear career path, or the possibility of job insecurity can create a sense of negativity. A significant emotional challenge is the fear of "losing one's physician identity" due to moving away from clinical practice.

These and similar reasons may disappoint physicians who entered the sector expecting only a "more comfortable life, away from patients."

• Opportunities:

- Sector Growth: As the Turkish pharmaceutical sector is a continuously growing and developing market, it creates new employment areas for physicians (6). Especially developments in biotechnology and biosimilar drugs are increasing the demand for physicians in R&D and clinical research areas.

- Global Integration: Turkey's integration into the global clinical research network is increasing opportunities for working in international companies. Turkish physicians can gain global experience by participating in international projects.

- New Technologies: Digitalization, artificial intelligence, big data, and personalized medicine, among other new technologies, are opening new areas where physicians can use their various competencies in the pharmaceutical industry (5). In these areas, physicians' ability to understand and interpret clinical data will play a critical role in the future development of the sector. The rise of telemedicine and digital health platforms may also offer physicians new roles in the sector.

- Real World Data (RWD) and Real World Evidence (RWE): The use of RWD and RWE to understand drug performance and patient impact after market launch is increasing (5). Physicians, through their clinical experience, can provide valuable contributions to the collection, analysis, and interpretation of this data.

4. Contributions and Importance of Medical Faculty Graduates in the Pharmaceutical Industry

The presence of medical faculty graduates in the pharmaceutical industry is of vital importance in many respects:

• Clinical Perspective: Physicians have in-depth clinical knowledge of disease pathophysiology, diagnosis, and treatment methods. This knowledge ensures that drug development processes focus on patient needs and plays a critical role in the design of clinical research (1). Furthermore, their clinical experience helps them better anticipate the potential effects of drugs on patients.

• Patient Centricity: Physicians are the best at understanding the effects of drugs on patients and patient expectations. This helps in adopting a patient-centric approach in drug development and marketing strategies (5). Adopting a patient-centric strategy by pharmaceutical companies is critically important for the success and acceptability of their products.

• Ethical and Scientific Integrity: Physicians play an important role in ensuring that clinical research and medical communication adhere to ethical and scientific standards. This increases the credibility

of the pharmaceutical sector and helps gain stakeholders' trust (15).

• Integration into the Healthcare System: Physicians are knowledgeable about the functioning of the healthcare system, the needs of healthcare professionals, and treatment guidelines. This enables them to develop strategies for the integration and accessibility of drugs within the healthcare system. Physicians' perspective is also valuable in evaluating drugs in terms of reimbursement processes and health economics.

• Scientific Leadership: Physicians can rise to scientific leadership positions in the pharmaceutical industry, leading the discovery, development, and delivery of new drugs to patients (17). In the R&D departments or medical director positions of pharmaceutical companies, physicians' scientific vision and leadership skills can make a significant difference.

5. The Future Role of Medical Departments: Vision 2025

The "A Vision for Medical Affairs in 2025" report published by McKinsey & Company emphasizes the future strategic importance and evolution of medical departments in the pharmaceutical industry (23). The report states that medical departments have become the third strategic pillar of the organization, alongside R&D and commercial functions. This evolution is driven by innovation, increasing data volume, and advancements in digital technologies that are transforming the healthcare landscape. However, I believe that the predictions of this report should be interpreted in the context of Turkey and go beyond it.

The report summarizes the key areas that will shape the future role of medical departments as follows:

• Strategic Leadership and Scientific Partnership: Medical departments will move beyond being merely a supporting unit to become a leading entity that establishes scientific partnerships and guides strategic decisions. This will require physicians to directly contribute to the strategic goals of pharmaceutical companies by utilizing their clinical knowledge and scientific competence. This transformation is still in its infancy in Turkey. Medical departments are often still viewed as "scientific support units" for marketing departments and lack a significant voice in strategic decision-making. This mindset shift will be possible through the development of leadership skills by both company senior management and physicians.

• Data Science and Real World Evidence (RWE) Generation: Digitalization and the increasing use of big data will make the ability of medical departments to collect, analyze, and generate meaningful evidence (RWE) from real-world data critical. Physicians, with their clinical experience, will play an indispensable role in accurately interpreting this data and integrating it into decision-making processes.

Although Turkey possesses a rich RWD resource, such as the Social Security Institution (SGK) database, there are deficiencies in the analytical infrastructure and trained workforce to process this data. Confidentiality of data and the lack of sharing it with the industry are also important considerations. The industry draws conclusions, particularly regarding drug preferences for specific diseases and physicians' prescribing habits, from projection data such as IMS and Vademecum. Physicians' data science skills are critical in this regard and should be integrated into their training.

• Patient Centricity and Value-Based Approach: In the future, medical departments will be the cornerstone of patient-centric healthcare services. Demonstrating not only the efficacy of drugs but also the real value they provide to patients will become one of the most important tasks of medical departments. This will be possible through physicians' understanding of the patient experience and their ability to scientifically demonstrate the impact of drugs on patient quality of life.

In Turkey, the concept of patient-centricity generally remains theoretical, with limited conceptual implementation of collaboration with patient associations and the collection of patient experience data. Today, the industry largely operates on the basis of finding suitable patients for the drug being produced. The patient-centric model, however, seeks to answer the question of "which drug for which patient?" Gaining this insight can only be shaped by the insights and observations of employees who have experienced active patient-physician relationships. Physicians are the most important actors who can fill this gap by bringing the patient perspective within the company

• Continuous Learning and Competency Development: Rapid changes and technological advancements in the pharmaceutical industry will

necessitate that physicians in medical departments continuously acquire new knowledge and competencies. Particularly, competencies in areas such as communication, business leadership, data analysis, and behavioral change management will become even more important (5).

• Development of Stakeholder Relationships: Medical departments will continue to strengthen their relationships with healthcare professionals, patients, regulatory bodies, and other stakeholders. These relationships are vital for ensuring that drugs reach patients safely and effectively, maintaining scientific communication, and understanding the needs of the healthcare system.

This vision indicates that physicians' roles in the pharmaceutical industry will become even more diversified, with an increase in strategic and leadership-oriented positions. Therefore, it is of great importance that medical education curricula and career development programs prepare physicians for this dynamic and constantly evolving field.

Beyond the McKinsey report, I believe Turkey's unique dynamics (young population, strong healthcare infrastructure, and geographic location) offer even greater potential for physicians. Within the next 10 years, physicians in Turkey have the opportunity to become a leading center for clinical research, a regional (Middle East, North Africa, and the Turkic Republics) medical education and scientific communication hub, play a key role in domestic pharmaceutical and biotechnology R&D, and cultivate global players in digital therapies/telemedicine. The fact that many companies have established sales and marketing organizations alongside production centers in these regions is a testament to this.

However, the realization of this vision depends on medical schools updating their curricula to include the pharmaceutical industry, companies having the courage to empower physicians with strategic leadership roles, and physicians themselves stepping out of their comfort zones and developing themselves in this challenging yet rewarding field.

6. Conclusion and Future Perspective

For medical faculty graduates, the pharmaceutical industry offers significant and rewarding alternatives beyond traditional clinical practice or academic career paths. As discussed in this article, the motivations for physicians to enter the pharmaceutical industry in both global and Turkish contexts show similarities. Both globally and locally, physicians are drawn to the pharmaceutical industry by factors such as more regular working conditions, a desire to contribute to innovative processes, different intellectual environments, and leadership opportunities.

In Turkey, the pharmaceutical sector, as a crucial component of healthcare services, demonstrates dynamic growth potential. This situation creates new employment areas for physicians and offers opportunities for global integration. Particularly, developments in biotechnology and biosimilar drugs are increasing the demand for physicians in R&D and clinical research. Similar to global trends, new technologies such as digitalization, artificial intelligence, big data, and personalized medicine are expanding the fields where physicians can utilize their diverse competencies in Turkey.

However, the primary focus of medical education curricula in Turkey on clinical practice can lead to a lack of awareness among young physicians regarding career opportunities in the pharmaceutical industry. This is a challenge also observed sometimes from an international perspective; however, in Turkey, additional steps need to be taken in this regard. The perception that leaving clinical practice is a "loss" of career and the specialty-oriented structure of education are common points in both geographies that complicate physicians' transition to the sector.

In the future, the leadership role of the medical affairs function is expected to strengthen further, both globally and in Turkey (5). Data analysis and digital health skills will become more critical for physicians in Turkey, just as they are globally (5). Fields such as personalized medicine, gene therapies, AI-supported drug discovery, and digital therapeutics will pave the way for physicians to undertake innovative roles that combine both clinical and technological knowledge. The Turkish pharmaceutical sector will also continue to offer a wider variety of career opportunities for physicians by adapting to these global trends.

This transition isn't just a career change; it's also a different form of practicing medicine. Physicians have the opportunity to combine the patient and disease knowledge they gain in the pharmaceutical industry with scientific rigor to contribute to public

health on a much broader scale. For Turkey to fully realize this potential, education, industry, and regulatory bodies must collaborate. I believe that programs about what the pharmaceutical industry is and what opportunities exist for graduates here could be incorporated into medical school curricula over time. While aware of the current challenges, I am extremely optimistic about the future of physicians in the pharmaceutical industry in Turkey. Because medical doctors are essential for the healthy growth and development of the pharmaceutical industry.

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