

## Pharmaceutical Science Development Events in Uzbekistan

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**ABSTRACT:** This article presents the changes in the pharmaceutical science of the Republic of Uzbekistan during the years of independence. Initially, problems in pharmaceutical science, their solutions and achievements in this field are presented in this article.

**KEYWORD:** Tashkent Pharmaceutical Institute, Pharmaceuticals, pharmacy, agrobiotechnology, provisional, Biotechnology, Agroecology, "Uzkhimfarm", Botanic garden of UzFA, pharmacist personnel, standardization, pharmacognosy.

Since the first period of independence in Uzbekistan, a number of measures have been taken to socially support young students. For example, since 1991, 1,726 students of the Tashkent Pharmaceutical Institute have been locked up in 33 stores in Tashkent city, and the students have taken food once a month. The supply of food to the students was controlled by the trade union. Regarding financial support, 1 soum 50 tiyani (that is, 37 soums per month) was paid for each student's meal from the fund of the institute. In addition, 1065 soums of aid was provided by the student union. A reward of 700 soums was awarded for the good performance of team work<sup>1</sup>.

A number of measures were taken for students' cultural recreation. In 1991-1992, about 300 students rested in Chimyon zone, 6 students rested in Botanic Garden, Chinobot and Lunacharsky sanatoriums<sup>2</sup>.

At the same time, the institute had many problems and shortcomings in various areas. There were problems such as the absence of study rooms and hygiene and shower rooms for girls in the dormitories, the lack of student dormitories, the heating system of the dormitories being old and in need of repair, the training sessions being in two or three shifts due to the lack of classrooms, and the lack of a single car at the base of the institute<sup>3</sup>.

In the 1993-1994 academic year, the Tashkent Institute of Pharmacy organized activities according to the plan to improve the living culture and living conditions of students by the trade union. Scholarships were delivered to students on time according to the decision of the Tashkent regional trade union. In addition, the compensation money of 150 soums given to the citizens of the Republic was regularly delivered to the students every month on time. The material and technical base of the gymnasium of the institute was in a very poor condition. Despite this, the teachers of the physical education department tried to develop mass sports games and organized sections on 10 types of sports. In the 1993-1994 academic year, 4 athletics and 7

<sup>1</sup> National archive of scientific and technical medical documents of Uzbekistan, Fund 380, List 1, Case 12, Sheet 130.

<sup>2</sup> National archive of scientific and technical medical documents of Uzbekistan, Fund 380, List 1, Case 12, Sheet 130.

<sup>3</sup> National archive of scientific and technical medical documents of Uzbekistan, Fund 380, List 1, Case 12, Sheet 131.

basketball students from the pharmaceutical institute participated in the spartacade of Tashkent higher educational institutions<sup>4</sup>.

Subscription department, academic and student reading rooms functioned in the library of the Tashkent Pharmaceutical Institute. On December 1, 1994, the library stock had 354,698 books. During the year, 122867 books were given and 10793 people were served<sup>5</sup>.

There was no literature in the Uzbek language in the library. With the opening of "Agroecology" and "Biotechnology" specialties, the issue of textbooks for them became one of the urgent issues. Some were issued only in single copies and only for reading in the study hall. Information days for students on some issues have been introduced. These days, library staff prepared information from newspapers and delivered it to students. In the library, bibliographic catalogs on 11 subjects were created. The topics "Medicinal plants", "About our country", "Medicine and health care" were widely used by readers<sup>6</sup>.

In the academic year 1993-1994, the main attention was paid to the newly established specializations at the meetings of the Methodological Council of the institute. The preparation of teaching-methodical manuals, curricula, and the quality of lessons for "Agroecology" and "Biotechnology" specialties were discussed several times<sup>7</sup>.

In the preparation of "Pharmacy", "Agroecology" and "Biotechnology" specializations, it was required to incorporate knowledge on current issues such as synthesis of drugs, determination of their quality, storage of drugs. Seminars, Olympiads, working games were used as active teaching methods for this purpose<sup>8</sup>.

In the 1993-1994 academic year, 183 students were members of the Student Scientific Society. 83 of them took part in the student scientific conference dedicated to the 600th anniversary of the birth of Mirzo Ulugbek, and 4 of the winners were awarded with valuable gifts and 14 with souvenirs and an honorary certificate. In the academic year 1993-1994, 1 student participated in the project under the economic contract. 8 students published an article in co-authorship<sup>9</sup>.

Students from Syria, Jordan, Lebanon and Morocco studied at the Tashkent Institute of Pharmacy. After the reception, their documents were formalized by the city and regional internal affairs bodies, and they underwent a medical examination<sup>10</sup>.

A new direction "Industrial formation" was established in order to achieve independence in the supply of medicines in Uzbekistan and to train personnel to provide pharmaceutical support services to the population in accordance with international standards. Training of pedagogues in the direction of "Vocational education" in the field of pharmaceuticals has been carried out in the institute since the 2001-2002 academic year.

The fact that a large part of the currency reserve in Uzbekistan is spent on the purchase of cosmetics, the fact that in most cases these drugs are supplied with fake samples, and the presence of a rich reserve of natural plants in our country, the preparation of perfumes and cosmetics, taking into account the qualified pedagogical staff and scientific research in this field cosmetologist-technologist personnel training began in 2006-2007 academic year.

<sup>4</sup> National archive of scientific and technical medical documents of Uzbekistan, Fund 380, List 1, Case 26, Sheet 17.

<sup>5</sup> National archive of scientific and technical medical documents of Uzbekistan, Fund 380, List 1, Case 26, Sheet 23.

<sup>6</sup> National archive of scientific and technical medical documents of Uzbekistan, Fund 380, List 1, Case 26, Sheet 25.

<sup>7</sup> National archive of scientific and technical medical documents of Uzbekistan, Fund 380, List 1, Case 26, Sheet 25.

<sup>8</sup> National archive of scientific and technical medical documents of Uzbekistan, Fund 380, List 1, Case 26, Sheet 36.

<sup>9</sup> National archive of scientific and technical medical documents of Uzbekistan, Fund 380, List 1, Case 26, Sheet 43.

<sup>10</sup> National archive of scientific and technical medical documents of Uzbekistan, Fund 380, List 1, Case 26, Sheet 45.

In the Republic of Uzbekistan, by Order No. 125 of the Ministry of Health dated May 30, 2006, the qualification descriptions defining the drugs of the following professional activities in the field of pharmacy, and by Order No. 160 of April 17, 2006, the nomenclatures of positions were approved:

- on the basis of "clinical pharmacy" direction - clinical pharmacist
- Pharmacist-technologist on cosmetology based on the field of "cosmetics"<sup>11</sup>.

During this period, efforts were also made to replenish the library fund of the institute. For example, during 2002-2007, 15,000 copies of educational literature with more than 2,000 titles were brought to the library of the institute. 37376.8 million for this. sums of money were spent. More than 1,000 literatures were brought from abroad in order to increase educational literature in general and specialized subjects. The professors and teachers of the Tashkent Pharmaceutical Institute have also created several educational literature. For example, in 2002, 4 in 2003, 2 in 2004, 8 in 2005, 4 in 2006, and 9 in 2007 textbooks and training manuals were published by professors and teachers of the institute. Of these, 20 textbooks and manuals were published in Latin script<sup>12</sup>.

The textbooks and manuals created by professors and teachers of the Tashkent Institute of Pharmacy regularly took pride of place in the competition "The best textbook of the year" organized by the Ministry of Higher and Secondary Special Education. In particular, the textbook "Pharmacognosia" created by professors U.Ahmedov and Kh.Kholmatov won the 1st place, the manual "Practical training in inorganic chemistry" created by professor S.Aminov and others, created by L.Bozorova, N.Suyundikov and Kh.Kholmatov won the 1st place. The "Latin language" textbook took 2nd place and was awarded with special diplomas and cash prizes.

From year to year, the number of applicants who expressed their desire to study at the Tashkent Pharmaceutical Institute has been increasing. For example, in 2000, 1,232 applicants expressed their desire to study in the full-time department of the Tashkent Pharmaceutical Institute, and 142 in the part-time department, totaling 1,373 applications<sup>13</sup>.

The development of the pharmaceutical system depends to a large extent on the process of training the personnel of the field, and in this regard certain works were carried out in the years of independence in Uzbekistan. Tashkent pharmaceutical institute continued to lead in the training of pharmacist personnel in the region. In the institute, new areas of the pharmaceutical industry were opened, training of specialists in such areas as agrobiotechnology, biotechnology, agroecology, pharmaceutical management and economics was launched. Researches on a number of current topics of pharmaceutical science were carried out at the institute and positive results were obtained.

## List of references:

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<sup>11</sup> Materials of the current archive of the Tashkent Pharmaceutical Institute. The materials of the database on the history of the educational institution kept in the library of the institute.

<sup>12</sup> Materials of the current archive of the Tashkent Pharmaceutical Institute. The materials of the database on the history of the educational institution kept in the library of the institute.

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