

УДК 61:001:608.1(479.24)

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MEDICAL SCIENCE, RESEARCH AND HIGHER EDUCATION IN AZERBAIJAN FROM BIOETHICAL DEVELOPMENTS PERSPECTIVE

Azerbaijan is a modern, rapidly developing democratic country at the crossroads of Europe and Asia. The country is currently harmonizing its national legislation with international norms, and reforming its national scientific and medical. Higher standards of medical research and education will enhance public health and protect human rights to life and health that are specified in Azerbaijan Constitution.

In order to raise its medical research and education to international standards, Azerbaijani scientists and authorities are studying the experience of other countries and taking measures to implement international standards and norms in the country's national legislation. Cooperation with the WHO, UNESCO and other international and foreign organizations, both on regional and global level is creating steps to achieve this goal. These steps include, for example, creation of the Azerbaijan unit of the UNESCO Chair in Bioethics and teaching bioethics based on UNESCO's Bioethics Core Curriculum. Another step is providing research fellowship for young Azerbaijani professionals to study at leading medical research and educational centers around the world including Harvard Medical School and Boston Children's Hospital in the USA, and Koc University in Turkey.

A complementary step is the development of local bioethical research, including its legal, ethical and scientific foundations. Adherence to ethical principles in different spheres of life is currently one of the most challenging social and professional issues, especially, this is true with the development of new medical technologies in recent decades and the development of new ethical and legal standards, issues involving different areas of health and medicine and their relation to human rights. Bioethics in Azerbaijan is develop-

ing as an important field that deals with universal moral principles within the context of both national laws and the UNESCO Universal Declaration on Bioethics and Human Rights.

Key words: bioethics, medical law, bioethics education, bioethical principles, human rights, higher medical education, medical science in Azerbaijan.

State policy and national standards in science and higher education

Azerbaijan, a country at the cross roads of Western and Eastern cultures, has both a rich cultural heritage and great economic potential. As a former member of the Soviet Union, Azerbaijan science and education developed in last century on the basis of German-Russian model. In recent years, however, scientific, medical, and education fields are also drawing on American, British, French and Turkish models in developing new research/education standards, Azerbaijan's leaders harmonizing international norms with existing national legislation and social values, and drawing on exchange of knowledge and study of relevant international experience. Several government programs have been directly supporting not only education and development of science, but also training of qualified personal. These programs include the following: «A state program on the education of young Azerbaijanis in foreign countries in 2007–2015», a «national strategy on development of science in 2009–2015», and in 2013 a «state strategy on development of education». These enabled Azeri students, young specialists and future scientists to learn from international experiences and standards by receiving undergraduate and graduate education in more than 300 universities of 25 developed countries, including UK, USA, Germany, Australia, Sweden, Switzerland, Canada, and others*. «Support for scientific potential and innovative activity» and «the formation of a modern education system» are among the main objectives of «Azerbaijan 2020: Look into the Future» – Concept of Development**. These programs will train specialists also use international experience and standards to guide development of science/education in the country. At the present stage of development of Azerbaijan, commitment to international ethical values has become a major focus of state policy and strategy of development. This policy applies to all areas, including the development and incorporation of these principles in the field of science and medicine, higher medical education on national level. It should be also mentioned that 2016 was declared «Year of Multiculturalism»*** in Azerbaijan as part of the earlier mentioned strategy.

* Ministry of Education. The List of higher educational institutions selected for the purpose of education of Azerbaijani youth abroad. web: www.edu.gov.az and State program on the education of young Azerbaijan is in foreign countries in the years of 2007–2015. web: <http://www.xaricdetehsil.edu.gov.az> (accessed 10.02.2015).

** President of Azerbaijan. Ilham Aliyev. «AZERBAIJAN 2020: LOOK INTO THE FUTURE» CONCEPT OF DEVELOPMENT. web: http://www.president.az/files/future_en.pdf (accessed: 25.02.2015).

*** APA news. 2016 declared Year of multiculturalism in Azerbaijan (accessed 16.01.2016) http://en.apa.az/xeber_2016_declared_year_of_multiculturalism_i_237571.html

Regulation of research activities in the country is carried out by scientific and educational governmental institutions and is subjected to existing state laws, legal norms and other provisions. Research includes studies conducted by students for Ph.D. and postdoctoral dissertations, as well as by governmental institutions such as scientific-research institutes and universities. Azerbaijan continues to have two-step path in scientific careers as was true in the Soviet Union. After 3–4 years of research and a successful dissertation defense, a researcher gets a Ph.D. degree, and then, after 4–5 years of fruitful research and a successful postdoctoral dissertation, a second «Doctor of Sciences» degree is obtained. To get a professorship, a Doctor of Sciences degree is a condition that makes our system different from Western systems and similar to systems in Russian Federation and most other former Soviet countries.

The principal government body for scientific research is the National Academy of Sciences of Azerbaijan Republic (NASA), which consists of more than 40 main scientific-research institutes and centers, with many thousands of research staff. Health and medical sciences in NASA are concentrated in the Section of Medico-Biological Sciences*. A pure medical center and institution is absent in the system of the Academy.

The system of medical science and education in the country has been centralized under control of the Ministry of Health. All medical educational institutions are state agencies whose activities are determined and regulated by state structures, in particular the Ministry of Health. Enrollment in higher educational institutions at any scientific level is carried out according to the general regulations established by the Ministry of Education and the State Students Admission Commission.

Medical education institutions

In order to describe the medical education and research system of the country it is important to provide general information about main scientific and educational medical institutions of Azerbaijan. Although Azerbaijan is a relatively small country in view of its geographic size, public educational institutions present in all administrative regions. The education system has some conceptual differences with the Western system. However, currently significant actions are undertaken in order to implement the Bologna System** on national level following the European standards.

Higher education can be obtained in university graduate and postgraduate levels, which are respectively bachelor and master's degrees in Azerbaijan. In contradistinction to the American education system*** Azerbaijan higher education system includes only two levels Bachelor and Master, considered graduate and postgraduate. Definition of undergraduate education implies college level, which is first-professional degree. This degree does not grant

* ANAS. Institutes and Organizations. <http://science.gov.az/institutes> (accessed 10.05.2015).

** The Bologna Process and the European Higher Education Area. http://ec.europa.eu/education/policy/higher-education/bologna-process_en.htm

*** US Department of Education U.S. Department of Education. USNEI Structure of U.S. Education <http://www2.ed.gov/about/offices/list/ous/international/usnei/us/edlite-structure-us.html> accessed 15.01.2016.

the right to study at masters; neither does it considered higher education. However, education received in college also gives students opportunity to obtain specialty and work in medical field. Medical colleges in the country operate in different regions. Some medical specialties such as nurse, obstetrics and some others do not require higher education. College educational institutions (undergraduate level) generally provide knowledge and skills on specialties such as nursing, general medicine, obstetrics and pharmacy etc. The duration of education is 2–3 years, depending on the faculty. Graduates cannot provide medical treatment services and instead work as nurses or assistants under the supervision of medical doctors.

Higher medical education institution existing currently for both graduate and postgraduate levels is the Azerbaijan Medical University (AMU). At the same time, Azerbaijan State Advanced Training Institute for Doctors named after A. Aliyev (ASATID) is also available for education of postgraduate qualified professionals.

The largest public institution in medical field – AMU, has been operating since 1930. It originally was formed based on the medical faculty of the Baku State University, which was established in 1919*. Developed into an independent institution, whose medical faculty formed the Azerbaijan State Medical Institute (AMI), which gained the status of a university in 1991. Postgraduate medical studies (aspirantura) were organized in 1930 for the first time at the AMI.

Currently AMU has academic staff of more than 1000 persons, and its workers are represented by lecturers including active and correspondent members of the NASA. The medical university is one of the most popular in the country higher education institutions. The total number of students at the AMU is about 10,000. Every year, about 1000 students are admitted to a bachelor degree program at the university**. AMU consists of 66 clinical and non-clinical departments, which are divided among 7 major faculties, devoted respectively to treatment-prevention I, treatment-prevention II, pediatrics, medical prevention and medical biology, stomatology, military medicine faculty, and pharmacy.

Faculty of treatment-prevention I – the largest one: According to the AMU, this faculty provides education in English for citizens of the foreign countries, which are mainly Russia, Turkey, Iran, Afghanistan, Iraq, Sudan, Syria and other. During the last 10 years the workers of the faculty published more than 2500 scientific works. The Faculty includes 15 departments and 1 course on «Neurosurgery». An academic year of 10 months at the faculty is determined by availability of mandatory and selective courses. A Medical Ethics course is part of Biomedical Science and is taught at the Philosophy Department as the mandatory subject that is available for students of the 2nd course, represented by 10 hours of lectures, 20 hours of practical lessons and 30 hours of seminars. Knowledge about physician ethics and bioethics is obligatory for all students as the result of undertaken courses. It should be noted that according to state standards, duration of full-time education at the

* Azerbaijan Medical University. History. <http://www.amu.edu.az/az/pages/2/12> (accessed 09.05.2015).

** Ministry of Health. Order dated 27 June, 2014. http://www.sehiyye.gov.az/files/pdf/emr_2014_56.pdf (accessed 09.05.2015).

Faculty lasts 6 years, and 360 credits are required for successful obtaining of the scientific professional degree of «physician». Currently more than 1600 students study at the faculty, including foreign citizens.

Faculty of treatment-prevention II: This faculty has 16 departments and «Course of medical service of civil defense (MSCD)». Duration of the education and general standards, including teaching bioethics, are the same as in the Faculty of treatment-prevention I.

The Scientific-Research Center also operates at the AMU. Currently about 28 workers are engaged in the research on different topics such as study of the features of the herbal compositions made from original national plants and other. Scientific-Research Laboratories also operate at the AMU, such as «Patho-biochemistry» and «Laboratory of systemic physiology named after P.A Anokhin». Currently, 1 Postdoctoral and 4 PhD Scientific Councils, specialized on dissertations defense, operate at the AMU. The Postdoctoral Council combines thesis defense procedure for 4 specialties, and the PhD Council – for 16 specialties. According to the State Law on Protection of Public Health the workers of the AMU currently investigate about 70 topics on 4 scientific directions on 10 issues.

As mentioned above the subject of medical ethics is taught at the AMU only for 2 faculties of treatment-prevention and is taught by professors of philosophy. «Medical ethics, deontology and bioethics» are also taught as one lecture of 2 hours for students of the medical prevention faculty. Although an interest to medical ethics is significant in the country, and it can also be found in many scientific works, there are, yet no established norms for receiving special medical education on responsible conduct of research. It can't be done in the existing system, because, the professors of philosophy lack knowledge in medical practice and research. Moreover, taking into account the most recent UNESCO recommendations and international standards the teaching of bioethics is better to combine with medical law teaching and to implement it for students of higher level of education at last years of study, when they have passed already most of clinical disciplines and have a clear vision of different clinical situations and bioethical dilemmas. At the moment, medical law teaching at AMU is done mainly in formal way at the department of political economy as few hours lectures that represent «the old» approach to this subject in medical universities.

The other significant institution of medical education is ASATID, established in 1935. This institute does not provide basic medical education; on contrary, it is aimed at professional development and retraining of the post-graduate medical staff*. The Institute has 28 departments within 3 faculties – therapy, surgery and medical prevention. Overall 513 courses are available for postgraduate students, including 283 on general training and 202 on thematic training, 28 preparatory courses with 43 of them itinerant and 15 itinerant-distant at the Institute. The carried out research showed that bioethics and medical ethics courses are not available at the Institute.

Central Scientific Research Laboratory (CSRL) operating within the institute has significantly impacted national medical field. Thus, studies in the field of hemophilia, kidney diseases and other issues promoted

* Azerbaijan State Advanced Training Institute for Doctors named after A. Aliyev (ASATID). <http://adhti.edu.az/> (accessed 23.04.2015).

development of new approaches to treatment of related diseases in the country and establishment of 3 departments of the CSRL such as «Immunology», «Biochemistry» and «Sitogenetics». Moreover, by the workers of the CSRL several courses for all post graduate students were undertaken on above-mentioned topics that had important impact for modern education of physicians.

It should be emphasized that residency is one of significant aspects of medical education/research. Students at residency implement numerous researches that indicate importance of regulation of the field. In Azerbaijan the Ministry of Health regulates list of the institutions where the residency can be implemented. Thus, currently according to the Order of 27 June 2014* for 2014–2015 academic years, the institutions include AMU, ASATID and other scientific-research institutions (SRI) like National Oncology Center, National Ophthalmology Center n.a. Z. Aliyeva, Scientific Surgery Center n.a. M. Topchubashov, SRI on Pediatrics n.a. K. Farajova, SRI on Obstetrics Gynecology, Clinical Medical Center, Forensic Medicine and Anatomical Pathology Union, Neurosurgery Hospital, SRI on Lung Diseases, SRI of Preventive Medicine, SRI of Hematology and Blood Transfusion, SRI of Cardiology, SRI of Medical Rehabilitation, SRI of Traumatology and Orthopedics, SRI of Clinical Medicine, Scientific Arthrology Center, Central Oil Workers Hospital, State Urology Hospital n.a. J.M. Abdullayev and few others. In total, about 30 state and private medical institutions are indicated in the list with more than 500 places have been allocated for residency purposes.

Rules of admission and the process of enrollment itself for residency are based on state level testing that is organized and implemented by the State Commission of Students Admission. According to the State Commission statistical data for 2014/2015 academic years shows that admission plan for residency was 528 places, major part of which more than 31% were allocated for AMU – 167 places**. It can be specifically emphasized that education in residency for planned places is implemented at the expense of the state. Admission consists of two-level testing held on state level. On the 1st level, students are given tests of knowledge of basic subjects, on the 2nd level – on specialty; each level exam consists of 100 tests with time of 2.5 hours for each level. According to the «List» approved by the Cabinet of Ministers*** of the Republic of Azerbaijan training for 40 specialties on preparation of physicians-specialists is carried out at the residency. The duration of education in the residency depends on the specialty and varies from a minimum of 2 years up to 5 years for some specialties, such as surgeon, oncologist etc.

* The Ministry of Health. Order on residency admission plan for academic years 2014–2015 of 27 June, 2014. <http://www.sehiyye.gov.az> (accessed 01.05.2015).

** State Commission on Students Admission. Statistical analysis of results of admission to residency for 2013/2014 academic year. <http://tqdk.gov.az/exam/residency/> (accessed 07.04.2015).

*** The Cabinet of Ministers of Azerbaijan Republic. «Rules of organization and content of residency education». The Collection of Legislation of the Azerbaijan Republic, 2010 (amended in 2013).

Medical research/scientific career and procedures

Scientific careers in medical fields in Azerbaijan correspond to the general norms for receiving scientific degrees, however has a number of distinctive features. Thus, generally education to obtain scientific degrees is represented as following levels – bachelor, master, Ph.D. and Doctor of Medical Sciences. In addition, those, who are engaged in teaching, can also receive the scientific titles of Professor and Docent (Associate Professor). Associate professor and professor are considered scientific titles. As was mentioned earlier a scientific degree consists of 2 steps: the Ph.D. and then the Doctor of Sciences. The minimal duration for obtaining PhD degree is 3 years. After the PhD, the researcher can continue scientific work by enrolling to work on a postdoctoral dissertation. Postdoctoral degree programs (Doctor of Sciences) requires minimum of 4 years. Requirements for obtaining of scientific degree, the process of defense of the thesis is regulated by the Supreme Attestation Commission under the President of the Republic of Azerbaijan (the Commission)*, whose structure consists of Presidium, Dissertation Councils, Experts Councils and several departments.

The Commission regulates codes and names of specialties, examines attestation works presented to higher education institutions, and awards scientific degrees and titles (PhD and Doctor of Science, Docent and Professor). The Commission was established by the decree no. 857 of the President of the Republic of Azerbaijan on 2003 February 21**. Thus, the regulations concerning dissertations in detail describe requirements both to scientific works, to abstracts and scientific articles following results of research conducted during dissertation work. The materials that are considered by the Commission in awarding of the scientific degree include scientific articles published in approved journals (a list of them is provided by the Commission). In addition, to the main list of journals, researchers can also publish in selective foreign journals recognized «by the international scientific community» as cited by the Commission: 1) Science Citation Index Expanded (on exact, natural and technical sciences); Social Science Citation Index (social sciences database); Arts and Humanities Citation Index (arts and humanities); Science Citation Index Expanded 2014 (exact, natural and technical sciences on); Social Science Citation Index 2014 (social sciences database); Arts Humanities Citation Index 2014 (arts and humanities); 2) Materials of scientific conferences organized by the Ministry of Education of Azerbaijan Republic and NASA; 3) Materials of significant scientific events such international and national scale symposiums, conferences and other. Requirements, for journals publications established by the Commission consist of 36 points***. Thus, according to the p. 2 of the Requirements, «periodic scientific publication should receive International Standard Serial Number (ISSN). If there is an electronic version of the publication of scientific periodicals, it ought to get registered E-ISSN code and

* Supreme Attestation Commission under the President of the Republic of Azerbaijan. <http://www.aak.gov.az/> (accessed 27.04.2015).

** Collection of Legislation of the Azerbaijan Republic, 2003, no. 2, article 89.

*** Supreme Attestation Commission under the President of the Republic of Azerbaijan. The requirements to scientific publications recommended for publication of main results of dissertations. <http://www.aak.gov.az/> (accessed 27.04.2015).

posted on the Internet»*. Point 5 states that «periodic publication is required to have editorial board», and p. 13 stresses that «periodic publication, according to scientific field, should enter at least one of the international summary and index systems: Web of Science, Current Abstracts, CAB Abstracts, BIOSIS/Biological Abstracts, Historical Abstracts, Sociological Abstracts, Geological Abstracts, SCOPUS, Web of Knowledge, Astrophysics, Pub Med, Springer, Agris, Index Copernicus, Veterinarius, ABI/Inform, ANBAR, COREJ, Business Periodical Index, Philosopher's Index, Science Citation Index Expanded, Arts and Humanities Citation Index, Social Sciences Citation Index, INSPEC, EMBASE, SPIN, Electrical and Electronics Index, Energy Research Abstracts, Current Physics Index, GeoRef etc.» The requirements also emphasize strict rules of citations and measures against plagiarism.

The process of research itself requires researchers, admission to one of the scientific institutions of the country and the approval of the scientific supervisor. After passing the doctoral exams and providing all necessary documents, the student is considered admitted and then the dissertation topic proposed by him or her is examined by the Presidium of the NASA. After the approval of the Presidium, the researcher (PhD student or postdoctoral student) is eligible for implementation of research on a selected theme.

It should be mentioned that currently there is no separate law regulating medical research on the state level. Thus, all medical research are implemented according to different provisions and legal norms concerning research work. Thus, the basic law that provides rights and defines the basic concepts and norms connected with the research activity is the Law on Education of the Azerbaijan Republic**. In higher educational institutions, including medical ones, there search process is regulated by «Regulations on organization of scientific research work by students of higher educational institutions» approved by order of Minister of Education No. 752 on 27 June 2014. There are also several statues of Cabinet of Ministers regarding scientific work, such as the «Statue on scientific research laboratories of the university». Moreover, each institution has its own Scientific Councils (and sometimes Problem Councils) that are engaged checking the process of responsible conduct of research and works presented for defense by students. Some institutions also have internal rules of research activities, such as requirements for the number of publications.

In addition to the above-mentioned legal norms concerning medical research, there are also some specific laws and provisions regulating clinical trials in the country. Thus, the main health law – the Law on Protection of Public Health*** adopted in 1997– covers issues of medical research conduct. Thus, article 37 of Rules of biomedical research conduct state the following principles:

* Supreme Attestation Commission under the President of the Republic of Azerbaijan. The requirements to scientific publications recommended for publication of main results of dissertations. <http://www.aak.gov.az/> (accessed 27.04.2015).

** The Ministry of Education. Law on Education of the Azerbaijan Republic. <http://edu.gov.az/> (accessed 05.03.2015).

*** The Ministry of Health of Azerbaijan Republic. Law on Protection of Public Health (literal translation – Law on Protection of Health of Population). http://sehiyye.gov.az/ehalinin_saqlamliqi_qorunmasi_haqqinda_qanun.html (accessed 03.03.2015).

- It is permissible to conduct biomedical research based on the results of the laboratory experiments in government and non-government health institutions.
- Involvement of a person as a subject to any biomedical research can be conducted only with his or her consent.
- In the case of consent to participation in biomedical research, information about purposes of the survey, as well as side effects that can occur, duration and results must be provided to the subjects. Regardless of the stage of the study a subject has the right to stop participating at any time.
- Promotion in mass media of drugs issued on the basis of a doctor's prescription, as well as prevention, diagnosis and treatment methods is prohibited, if they have not been tested in the proper manner.

Therefore, the law establishes main basic rules for conduct of medical research, specifically research involving human subjects. The above mentioned norms indicate that they completely conform to international standards regarding participation of persons in biomedical research, specifically regarding informed consent* as stated in the World Medical Association Declaration of Helsinki on Ethical Principles for Medical Research Involving Human Subjects. However, some** national scientists, lawyers and ethicists argue that the notion of consent should be extended and amended by the term «informed consent».

The other significant legal norm in the field of medical research is the Resolution № 083 of the Cabinet of Ministers of Azerbaijan Republic dated 30.04.2010 on approval of Rules of «Conduct of scientific research, preclinical studies and clinical trials of medicines»***. These rules consist of 9 parts, each of which gives information on different norms connected with carrying out of the research. Thus, its parts are as follows: 1) general provisions, 2) terms and definitions, 3) implementation of scientific research and pre-clinical studies, 4) general principles of conducting clinical trials, 5) permission to conduct a clinical trial, 6) conduct of clinical trials, 7) information about side effects and reactions, 8) inspection of clinical trial of the medicine and 9) suspension of the clinical trial and elimination of shortcomings. These regulations reconfirm the importance of obtaining «informed consent» from individuals involved in clinical trials as subjects. They also provide descriptive information about the quality measures of scientific research and research protocols. Moreover, the rules oblige researchers to insure that

* The WMA. WMA Declaration of Helsinki – Ethical Principles for Medical Research Involving Human Subjects. <http://www.wma.net/en/30publications/10policies/b3/>

** Suggestions for improvement of the national legislation of Azerbaijan in the sphere of protection of the patients' rights. (materials of the dissertation work by Galandarli N.H. approved and successfully defended at the Institute on Human Rights of the Azerbaijan National Academy of Sciences in 2015 under the supervision of Professor, MD. Mammadov V.G.). Baku, 2015.

*** The Cabinet of Ministers of Azerbaijan Republic. Resolution № 083 of the Cabinet of Ministers of Azerbaijan Republic of 30.04.2010 on approval of rules of «Conduct of scientific research, preclinical studies and clinical trials of medicines». <http://www.cabmin.gov.az> (accessed 01.03.2015).

«all clinical trials must adhere to ethical principles of Helsinki Declaration (1964) Recommendations guiding physicians in biomedical research involving human subjects»*. This illustrates that international norms regarding medical research in general have been reflected in national legislation. Although some of the adopted in the country legal documents that are partially related to medical research is significant, they don't relate to medical research itself, such as the law on Pharmaceutical activity of the Azerbaijan Republic. This law does contain provisions about the rules for clinical trials of drugs.

History of medical ethics development in Azerbaijan

The development of medical science and the emergence of global challenges such as ethical considerations in regard to permissibility of application of certain scientific achievements had its reflection in Azerbaijan. Thus, since ancient times the aspiration of people to protect themselves and improve the quality of life inevitably generated the need for the development of medicine. At an early stage certain skills and supervision of methods of treatment began to emerge.

The evolution of medical ethics has an ancient history. While «...ethics is the study of morality – careful and systematic reflection on and analysis of moral decisions and behaviour, medical ethics is the branch of ethics that deals with moral issues in medical practice»**. «From antiquity to the present, all societies have faced health challenges that prompted the formation of groups of healers and the development of codes of ethics to govern the treatments that they offered»***. Thus, Hippocrates's maxim «do no harm» as part of widely-accepted the Hippocratic Oath, has long been a fundamental principle of medical ethics**** and even today physicians are administered to adhere to the principles stated in it.

The emergence of ethical connected with possible harm to health of the person caused by non-professional treatment and other questions. However, with the development of society, science, namely medicine, law and human rights, ethical aspects of medical activity acquired absolutely different form. While today legal and ethical considerations are accepted as an integral part of medical treatment, in the ancient times ethical codes found expression in oaths that obligated physicians to treat in a proper way, and in religious beliefs and concepts describing notions of good and bad, and what is permissible or forbidden. Moreover, historical research shows that medical ethics reflecting

* The Cabinet of Ministers of Azerbaijan Republic. Resolution № 083 of the Cabinet of Ministers of Azerbaijan Republic of 30.04.2010 on approval of rules of «Conduct of scientific research, preclinical studies and clinical trials of medicines». <http://www.cabmin.gov.az> (accessed 01.03.2015).

** World Medical Association. Medical Ethics Manual. 2nd edition, 2009.

*** Medical Ethics: Past, Present and Future. Heather MacDougall, G. Ross Langley. Royal College of Physicians and Surgeons of Canada. web: http://www.royal-college.ca/portal/page/portal/rc/resources/bioethics/primers/medical_ethics (accessed 11.02.2015).

**** Intervention and Reflection. Basic Issues in Medical Ethics. Eighth edition. Ronald Munson. p. 54.

moral values, defining health, illness, duties of doctors and other terms were influenced also by wide variety of philosophical persuasions and religious views*.

Adherence to and respect for ethical values in medical fields in Azerbaijan society have deep roots. In ancient scientific books and literature ethical aspects and philosophical views of medical activities can be traced in the works of well-known scientists of those times such as Bahmanyar Ibn Mirzaban, Hatib Tabrizi, Mahmud Shabistari, Omar Osmanogli, Seid Yahya Bakuvi and many others** who lived on the territory of ancient Azerbaijan. It is known that concepts related to medical ethics can be traced in early Christianity, Islam and Judaism, Buddhism and other religious views. In different regions of the world – Greece, Egypt, Middle Eastern counties, India and China*** – there have been various approaches to medical practice. In analyzing different sources Loewy conceded while moral views on medical issues have differed in emphasis and detail, but they have not differed substantially****. Recognition of ethical problems related to medical activities and need for their solution gave impulse to the emergence of medical ethics, which was eventually transformed into a scientific discipline and a branch of philosophy.

That ethical issues in medicine and biology captured the attention of scientists of the ancient and Middle Ages in the East, including the Azerbaijani scientists, is confirmed by the results of different scientific researches made by Azeri authors*****. Scientific thoughts of prominent ancient scientists formed the basis for genesis of ethical principles in Azerbaijan science. Reflection on the importance of what are today well-known universal bioethical values can be found in the works of Azerbaijani poets and philosophers of the middle ages, such as Nizami Ganjavi, Mohammed Fizuli, Nasreddin Tusi and others, whose works influenced the development of ethical values in Azerbaijani medicine. These facts illustrated that interest in ethics and scientific activity in medicine has deep roots in Azerbaijan's history.

The development of science in Azerbaijan, and, particularly in medicine, has gone a long way from antiquity to the present day. Nowadays, responding to urgent calls increasing attention is paid to the development of new fields of science in the country, especially those that are directly connected with human rights and promote moral and ethical values. Medical law and bioethics are among the fields actively investigated in the country at

* A Short History of Medical Ethics. By Albert R. Jonsen. OXFORD University Press, 2000.

** Mammadov V.G. Bioethics-Azerbaijan. Chapter in book: R.G. Beran (ed.), Legal and Forensic Medicine. Springer-Verlag Berlin Heidelberg, 2013, P. 1173–1175.

*** Medical Ethics: Past, Present and Future. Heather MacDougall, G. Ross Langley. Royal College of Physicians and Surgeons of Canada. web: http://www.royal-college.ca/portal/page/portal/rc/resources/bioethics/primers/medical_ethics (accessed 11.02.2015).

**** Textbook of Medical Ethics. By Erich H. Loewy. Springer Science & Business Media, 1989. – 252 p.

***** Mammadov V., Bandaliyeva A: Appearance of bioethics in the works of the Medieval Azerbaijan scientists. «Renaissance – XXI Century» (Scientific publication of the Institute of Azerbaijani Statehood and International Relations), no. 160–161/September-October 2011. – Baku – p. 310–315 (in Azerbaijani).

present. The development of medicine, in its broadest meaning, constitutes not only achievements in new technologies and creation of new drugs, but also improvements of health systems, the prevention of diseases, protection of patients' and medical workers' rights, and the implementation and improvement of procedures of research conduct in accordance with ethical standards, including adherence to ethical review procedures. Most of these universal standards had been already applied in Azerbaijan within the years after the restoration of independence since 1991 or have been studied for implementation.

The development of bioethics and medical law in Azerbaijan, which has been a member of UNESCO since 1992, was determined, first of all, by harmonization of national legal system with international legal norms, exploring of international experience and implementation of universal principles in the legislation of the country during the early years of restoration of independence in 90s of XX century. Thus, after independence restoration in 1991, large-scale reforms for the purpose of modernization and improvement of all spheres of the country were carried out in Azerbaijan; essential work on reforming the legislative base of the country was implemented too. First of all, it is important to mention the Constitution of 1995, which fixed basic rights and freedoms.

In regard to medical research, it is important to stress Article 46 (3) of the Constitution, which states: «Nobody must be subject to tortures and torment, treatment or punishment humiliating the dignity of human beings. Medical, scientific and other experiments must not be carried out on any person without his/her consent»*. This article is remarkable, for it emphasizes the notion, which today is known as the principle of «informed consent». It is also significant that Article 41 the «Right to protection of health» of the Constitution declares: «Everyone has the right to protection of health and to receive medical care», moreover, stressing that «The state takes all necessary measures for development of all forms of health services based on various forms of property, guarantees sanitary-epidemiological safety, creates possibilities for various forms of medical insurance» and «Officials concealing facts and cases dangerous for life and health of people will bear legal responsibility». Thus, in Azerbaijan, protection of patients' rights has the validity fixed by the Supreme Law – the Constitution. The adoption of more than 30 laws and numerous decrees and orders has promoted development of medical field, and, this has as the result created the need to improve of education and research in this field.

Today issues of medical ethics in Azerbaijan have gained significance, not only regarding quality of treatment and professionalism of medical staff but also regarding ethical dilemmas, issues that cannot be resolved by existing laws and ethical codes. The constant development of medical ethical principles are now expressed in numerous declarations, charts, acts, and codes on the global level, and legislation, laws, constitutions and other legal documents at the national level. The cooperation of different international organizations and institutions provides the conditions for intercultural dialogue in this field for the exchange of experience, to improve and further develop medical ethics.

* The Ministry of Health. The Constitution of the Republic of Azerbaijan (in Azerbaijani) web: <http://www.sehiyye.gov.az/files/pdf/konst.pdf> (accessed 05.02.2015).

One of such successful steps was the establishment of collaboration with the USA International Fogarty Center/The US National Institutes of Health (NIH) funded program «Research Ethics Initiative». This Program initiated its activity in Azerbaijan since 2013 with the cooperation with the Azerbaijan Unit of UNESCO Chair in Bioethics. The development of bioethics in Azerbaijan allowed establishing basic perception and understanding of this field, which paved the way for this kind of cooperation. In 2013 Azerbaijan* became officially involved to the program. In the same year the first research fellow from Azerbaijan was admitted to participate in Research Ethics Initiative Program in Boston and to study at the Harvard School of Public Health. The following years of cooperation allowed expanding number of fellows from Azerbaijan and broaden cooperation. Research fellows from Azerbaijan also gained the opportunity to have experience, participating at meetings of Ethics Committee at the Boston Children's Hospital. In 2013–2016 already 3 research fellows completed the bioethics program studies and have gained the experience applying it on the national level by doing research and teaching. Considering geographic position Azerbaijan now has the potential to become the hub collaborating country for further expansion of the program activities. One of significant outcomes of this collaboration is showing how adoption and development of ethical research standards are highly important and can be drawn from many resources, including bioethics. Emphasizing its value Fogarty Director Dr. Roger Glass stated that «Bioethics is at the foundation of research involving human subjects**». Currently development of biomedical field in Azerbaijan is closely tied to development of bioethics and medical law and Azerbaijan unit of UNESCO Chair in Bioethics makes its best to bring these standards to Azerbaijan science and research.

Development of Bioethics in Azerbaijan

Medical law is a branch of law in which consideration of medical ethics and bioethical principles required***. The rapid development in recent years of new technologies, including biotechnologies, genetic engineering and medicine is very important. It is also important that the ethical dilemmas arising from these developments be responded to in order to ensure safe evolution of society and protect human rights. «The moral arguments for human rights», such as dignity, natural rights and social justice, which are concepts providing the «the ethical basis of human rights», are all «part of

* NIH. Fogarty International Center. Fogarty International Research Ethics Initiative-Turkey/Central Asia <http://www.fic.nih.gov/Grants/Search/Pages/bioethics-R25TW009248.aspx>(accessed 15.01.2015).

** NIH. Fogarty International Center. Fogarty awards bioethics grants. <http://www.fic.nih.gov/News/GlobalHealthMatters/may-june-2012/Pages/bioethics-grant-awards-2012.aspx> (accessed 15.01.2015).

*** Mammadov V., Mustafayeva A. The role and importance of bioethical issues in medical law lecturing. Program and Materials of the VI All-Ukrainian (V International) Scientific-Practical Conference on Medical Law, Lviv, Ukraine, 26–28 April 2012. – P. 219–224.

ethical discourse»*. For this reason, human rights and ethics can be considered inseparable parts, and the right to health and medical care was one the most important values in society. The protection of human rights in all aspects of public life, particularly medicine, is recognized by all democratic states. Thus, protection and ensuring of these rights occur in harmony with development of science, and specifically fields of ethics and medicine. Legal expression of this issue is fixed in law and the state undertakes activities in order to improve the system of such protection. The other significant point is that adherence to international norms is required in order to ensure the highest standards of care on the national level, therefore, consideration of bioethical principles during decision-making process is expected from medical staff**. So, the interdependence of the development of social, scientific and public health issues means that special attention should be paid to development of Bioethics and Medical Law in Azerbaijan.

Conflicting perceptions of bioethics in Azerbaijan are reflected in an issue that it is often considered as medical ethics. Bioethics is closely connected with medical ethics, but they aren't identical. NIH states that «bioethical analysis helps people make decisions about their behavior and about policy questions that governments, organizations, and communities must face when they consider how best to use new biomedical knowledge and innovations», and bioethics itself is a «subfield of ethics that explores ethical questions related to the life sciences»***. However, issues such as patients' rights and informed consent are considered to be among main maxims of the medical ethics, as well as primary concepts of bioethics.

Adoption of the Bioethics Programme by UNESCO in 1993, and the creation of the International Bioethics Committee (IBC), promoted the development of bioethics in the world that found its reflection at the national level as well as in increased attention to this area. In 2001, UNESCO emphasized the importance of bioethics at the General Conference**** and «since 2003, as part of the ethics of science and technology, it is one of the five priorities of the Organization»*****. Thus, the UNESCO coordinating activities in this field created international dialogue, which is especially important for developing countries.

The most significant international document in the field of bioethics is the Universal Declaration on Bioethics and Human Rights, adopted in

* S.P. Marks «Human Rights: A Brief Introduction». Harvard University. 2013. – P. 3.

** Mammadov V., A. Mustafayeva, I. Ahmadov Bioethical principles – key methodological tools in modern teaching of medical law. Program and Materials of the VI All-Ukrainian (V International) Scientific-Practical Conference on Medical Law, Lviv, Ukraine, 26–28 April 2012. – P. 225–231.

*** National Institutes of Health. Exploring Bioethics. NIH Curriculum. Supplement Series. Grades 9–12. Education Development Center, Inc. 2009.

**** General Conference 31st session, Paris 2001. 31 C. 31 C/55. 17 October 2001. Original: French.

Item 5.11 of the agenda BIOETHICS PROGRAMME: PRIORITIES AND PROSPECTS web: <http://unesdoc.unesco.org/images/0012/001239/123958E.pdf> (accessed 03.01.2015).

***** Bureau of Public Information, Bioethics – UNESCO. web: http://www.unesco.org/bpi/pdf/memobpi52_bioethics_en.pdf

2005 by the UNESCO. The Azerbaijan Republic was among the up to 200 countries participating in UNESCO's General Conference 33 nd session, in Paris, on 19 October 2005, when the Universal Declaration text was adopted by acclamation*. Since then, attention to bioethics as a discipline in Azerbaijan has grown further. Adoption of this document not only radically transformed understanding of bioethics as a field of science, but also broadened the sphere of its coverage. This document also created concept of universal bioethical principles, emphasizing legal aspects of scientific activity in this field and its influence on environment and future generations. In addition, the Declaration is «the first international document in bioethics adopted by all governments»**. Thus, adoption of this document promoted the evolution and «internationalization of bioethics». Azerbaijan as the active member of the UNESCO and world community, in general, did not stay aside of the above mentioned processes. Development of ethical standards and bioethics on the national level also has been implemented in connection to international standards.

It is remarkable that bioethics in the country is considered not simply as a branch of science, as philosophy, but also as active work in the direction of implementation of bioethical education and development of the advanced legislative base reflecting bioethical principles in practice. In this regard, development of bioethics in Azerbaijan has its own unique model. Use of international experience in order to enhance protection of all members of the society gains more significance in medical field, taking into account cultural specifics of Azerbaijan. Moreover, Azerbaijan is one of the countries in which the national unit of the most active UNESCO Chair in Bioethics functions so bioethics has a tendency to be developed according to UNESCO standards. Thus, the Bioethics Core Curriculum developed by UNESCO Advisory Expert Committee for the Teaching of Ethics was translated into Azerbaijani language, along with much other UNESCO literature in this field. Today, this curriculum is used in teaching medical law and bioethics to law students at the Baku State University.

It should be noted that one of the most difficult issues in bioethics – euthanasia considered from a scientific point of view for the first time in the country and region by the First Lady of Azerbaijan, President of the Heydar Aliyev Foundation, Goodwill Ambassador of UNESCO and ISESCO M-me Mehriban Aliyeva. Her monographic works «Euthanasia and humanistic problems in medicine» and «We choose life (Euthanasia in the Mirror of Sociology)» – books published in 2004 and 2005 have created a very good basis for the development of new legal norms towards euthanasia***. The role of the Heydar Aliyev Foundation led by M-me Mehriban Aliyeva in promoting the development and promotion of bioethics in the country should

* UNESCO. UNESCO's General Conference adopts Universal Declaration on Bioethics and Human Rights web: http://portal.unesco.org/en/ev.php-URL_ID=30275&URL_DO=DO_TOPIC&URL_SECTION=201.html (accessed: 03.02.2015).

** Editors: H. ten Have, Michèle Jean, The UNESCO Universal Declaration on Bioethics and Human Rights: Background, Principles and Application. Ethics series. UNESCO, 2009.

*** V. Mammadov «Azerbaijan». – 2012. – 12 June. – No 128. – P. 3 (in Azerbaijani).

be specially emphasized. The Foundation promotes bioethical values such as tolerance, non-discrimination, human rights, human dignity, equality, cultural diversity, pluralism, social responsibility, care of future generations, ecology and sustainable development. One of the most significant events, in the successful development of bioethics in Azerbaijan was the 18th session of UNESCO's International Bioethics Committee, which took place in Baku in May-June 2011, under patronage of M-me Mehriban Aliyeva. At this session, the development of Azerbaijan in the field of bioethics was highly lauded by UNESCO senior officials*. Numerous activities of the Foundation cover different aspects of bioethical principles, especially those regarding medicine and protection of environment.

Emergence of bioethical research in Azerbaijan due to the general development of science, adoption of bioethics as one of the priority directions of development of UNESCO and further creation of UNESCO Bioethics Committees internationally had influenced development of national institutions in Azerbaijan. On the 24th of March 1999, the Azerbaijan National Committee on Bioethics, Ethics of Science, and Technology was founded by UNESCO's National Commission in Azerbaijan Republic and the Presidium of the National Academy of Sciences (Order No 9/1, 24.03.1999) in the status of public, nongovernmental organization. This was the third national UNESCO committee among the CIS (The Commonwealth of Independent States) countries, after Russia and Ukraine was established. According to the Charter of the Committee, its main purpose is advisory and policy-making work. Moreover, the first-priority aims of the National Committee and its commissions according to the Charter are implementation of educational and consulting activities with involvement in the process of resolving ethical problems and conducting ethical studies in different fields of science. The other direction of its work covers improving the content and method of ethical education, as well as supporting legislative bodies of Azerbaijan**. The National Committee consists of Board of the Committee, Sections and Committees. The Sections represent 3 Divisions: Biological Ethics, Professional Ethics and Medical Ethics⁴². The National Committee also includes 30 commissions on ethics and science and technology (total number of members – 141), functioning under the ministries and the educational and scientific centers of Azerbaijan***. Guidelines regulating the work, structure and duties of the Committee in accordance with national legislation were established in 2003.

It can be mentioned that development of ethical standards in Azerbaijan is realized, not only on international level such as cooperation with UNESCO and other international organizations, but also on the regional level, such as in CIS countries. Thus, in 2001, the Forum of Ethical Committees of the countries of the Commonwealth of Independent States (FECCIS) was established

* UNESCO. Eighteenth Session of IBC. <http://www.unesco.org/new/en/social-and-human-sciences/themes/bioethics/international-bioethics-committee/ibc-sessions/eighteenth-session-baku-2011/>

** The Azerbaijan National Committee for Bioethics, Science and Ethics of technology. The charter. Baku-2003 (in Azerbaijani).

*** Bioethics-Azerbaijan. Chapter in book: R.G. Beran (ed.), *Legal and Forensic Medicine*. Springer-Verlag Berlin Heidelberg, 2013. – P. 1080–1081.

as one of five regional associations (Northern America and Canada, Latin America, Africa, Asia and Oceania, the CIS) within the «Strategic Initiative for Developing Capacity in Ethical Review» (SIDCER) under the auspices of WHO*. Among the purposes of FECCIS are «integration of CIS into the world system of biomedical research with regard to safeguarding ethical standards of human rights protection and harmonization of regulative and methodological space to safeguard protection of human rights and dignity of biomedical research participants in CIS»**. Since the creation of the Forum, there have been several conferences held, devoted to different topics, and an international conference on «Health Legislation in Human Rights Protection and Access to Medicines in Health Research in the CIS» took place in Baku on 28–30 October, 2004. During the Conference there was discussed a model law «on the protection of human rights and dignity in biomedical research», consisting of 7 Chapters and 29 articles***, which was approved on 18 November 2005****.

The increase of public interest and the importance of learning from international experience in bioethical issues led to recognition of the need for widening of research activities. In 2010 the first academic structure on bioethics and medical law was established in the county – the Department of Bioethics and Medical Law, under the wings of the scientific-research Institute on Human Rights of the Azerbaijan National Academy of Sciences. On the basis of the Department, the Azerbaijan Bioethics and Medical Law Association (ABMLA) was created, which was registered in Baku on 27 May 2010 by the Ministry of Justice of Azerbaijan Republic*****. This Association represents a forum of experts in bioethics, law and medicine. The main task of the Association is cooperation in questions of research on bioethical problems, the report of bioethical values to the public, work within the country, and cooperation with the international organizations for the purpose of bioethics development in the republic.

The Azerbaijan Unit of UNESCO Chair in Bioethics (Unit) was established in 2010 on the basis of the Department of Bioethics and Medical Law. The main task of the Unit is development of bioethics education, including development of bioethics as a discipline in cooperation with UNESCO. One of the public activities held jointly by the Unit, ABMLA and the Institute on Human Rights was initiation of a TV program – a project called «Bioethics» in May 2011,

* Alexander Stanislavovich Sozinov. A forum of ethical committees of countries of the Commonwealth of Independent States – the international organization on protection of health of participants of biomedical researches. Kazan medical magazine. 2008, volume 89, No. 4.

** Centers of Bioethics. Forum for Ethics Committees in the Commonwealth of Independent States. <http://www.bioethics.ru/eng/allcenters/id/127/> web 01.04.2014.

*** Conference materials «Health Legislation in Human Rights Protection and Access to Medicines in Health Research in the CIS». Organizing Committee of International Conference. Saint-Peterburg, 2004.

**** Development of system of ethical examination of biomedical researches in the State Parties of the CIS <http://www.bioethics.ru/rus/allcenters/id/127/> (in Russian).

***** Azerbaijan Bioethics and Medical Law Association. World Association for Medical Law, Vol. 4, Issue 16, January – Mart 2013, thewaml.com). – P. 11–13.

which was called «the pioneer one in the region»* by the UNESCO officials. The series of TV programs devoted to the discussion (once every 2 weeks in the format of public discussions by 4 invited experts and 20 representatives of different spheres) of bioethical issues was shown on «AzTV,» the official state TV Channel**. This was very important increasing public awareness and interest in the bioethical issues.

During 2010–2011, the Unit has prepared two 2-year special projects called «Rapid development of Bioethics and Medical Law in Azerbaijan» and «Risks assessments and management of free GMO containing food products in Azerbaijan,» which were submitted for grants to the Science Support Foundation of the President of the Azerbaijan Republic***. Other work of the Unit includes translation of UNESCO publications, including UNESCO Bioethics Core Curriculum into the national language, in order to simplify access to the ethical education of international level for national specialists. This was very important step, as the Curriculum was accepted as the basic bioethical educational program for the future. As the result of negotiations between Unit, the Human Rights Institute of NASA, and the Ministry of Education of Azerbaijan Republic, a decision was made to approve the Basic Training Program on Bioethics as the main program on Bioethics and Medical Law in higher education institutions of the country****. The UNESCO books, such as «Informed Consent», «Reproductive health», and «Psychiatric ethics», have also been translated into the Azerbaijani language. UNESCO casebooks on «Human Dignity and Human Rights» and «Benefit and Harm» have also been translated by the Unit. Other published research materials by the Unit, which is now referred to as the Azerbaijan Unit of International Network of UNESCO Chair in Bioethics (Haifa) in collaboration with Human Rights Institute and the Heydar Aliyev Center include text-books on «Legal Medicine», «*GMO and Food Safety*», «*Ecology Management*», books «*Bioethics, Medical Law and New Technologies*», «*Bioethics...documents...terms*», «*Modern bioethical and legal issues*», «*The risk of genetically modified foods to the consumer market of Azerbaijan*», «*Bioethical norms and principles in international law and national legislation*», «*Protection of human rights as part of bioethics*» and others.

Other activities of the Unit include participation in legislative work together with Department of Social Policy Legislation of the MilliMajlis of Azerbaijan Republic (National Parliament). The Unit currently contributes and participates in public discussions on new projects of laws, such as laws on «Reproductive Health», «Patients' Rights», «Food Products», «Gene Engineering», «Social Service and Aid» which are supposed to be expression of medical field development. The activities aimed at promoting adoption of the Law on Patients' rights are currently one main efforts of the Unit. The

* Recent Developments in Bioethics and Medical Law in Azerbaijan Assessed by UNESCO as Pioneer in the Region. World Association for Medical Law Newsletter April-June 2012, vol. 4, issue 2 (13). – P. 4–6.

** Television Projects. IHR <http://ihr-az.org/index.php?lang=1&ind=-main&id=108>

*** Bioethics-Azerbaijan. Chapter in book: R.G.Beran (ed.), *Legal and Forensic Medicine*. Springer-Verlag Berlin Heidelberg, 2013. – P. 1087–88.

**** Institute on Human Rights. <http://www.ihr-az.org/>

draft of the law was prepared by specialists of the Unit, and come from results of two Ph.D. dissertation works (successfully defended) on international legislation experience in this field and informed consent. The draft of the new Law on Patients' Rights has been presented for adoption to the Parliament. So, specialists of the Unit, including Ph.D. students, actively participate in legislative work, giving proposals, participating in the discussions, and researching new international standards for harmonization of national legislation. Improvement of the legislation is a significant factor, as it creates new possibilities and conditions for development of this field.

The creation of the unique model of development of bioethical science in Azerbaijan from local to global levels, and more generally, development of science process and sources of its development, training and teachers educational activities should be emphasized. As the result of collaborative efforts among UNESCO, Department, the Azerbaijan Unit, and the National Commission for UNESCO of Azerbaijan, a UNESCO Ethics Teacher Training Course was held by a team of national and international experts with extensive international experience in ethics education, including Professor Amnon Carmi (University of Haifa, Israel) in Baku on August 20–24, 2012*. This was a significant step in the training of future specialists, mainly bioethics teachers. One of the other initiatives recently implemented in the country in the direction of learning of international experience and training of qualified personnel was the organization of educational groups for participation at «Research Methodology in Health Sciences» Course held annually at Koc University School of Medicine, under the supervision of the Unit with the support from the Heydar Aliyev Center on national level and Fogarty International Center/NIH. Participants from Azerbaijan have joined the Course in 2013, 2014 and 2015. Those selected from the large number of applicants who are directly involved in medical practice and research in this area. Specialists with different backgrounds, including psychologists, psychiatrists, medical lawyers, social workers and specialists of public health of the delegation from Azerbaijan, successfully participated at the 2 levels of the Course and completed it obtaining certificates. In 2014 one of the participants also has made an oral presentation at the Course, reporting about important facts of biomedical education in the country. In 2015 one of the Azerbaijan participants made the presentation on patients' rights. Participation of national experts and teachers at such international courses, which were conducted by the specialists from Harvard Medical School and Koc University, as well as other medical institutions, can be considered as an initial step for further exchange of national and foreign experience. Moreover, such trained personnel will be able to much more effectively implement gained knowledge and skills, and even take part in future training in the country by teaching students and other specialists.

The development of science, the existence of a modern legal base, and the general favorable conditions in the country mentioned earlier have created a peculiar model of a national approach to bioethical issues. The «Bioethics and medical law» (BML) discipline was included in the list of scientific disciplines

* International Network of the UNESCO Chair in Bioethics. Republic of Azerbaijan unit: UNESCO Ethics Teacher Training Course <http://www.unesco-chair-bioethics.org/UI/B02.aspx?uid=B8CF3C78DB975780>

in 2011, and the first three PhD students were accepted. Later this discipline was modified into «Bioethics», with the opportunity to defend for legal, medical, biology, policy and many other fields' students. Currently, their total number is 13, and four of them have successfully defended: 1 postdoctoral dissertation for Doctor of Sciences and 3 Ph.D dissertations.

As mentioned above, three Ph.D. students have passed 5 months internship training at Harvard Medical School and Boston Children's Hospital in the field of bioethics research under patronage of Prof. Dr. Kerim Munir. Prof. Vugar Mammadov, head of the Unit was invited to Harvard Medical School as visiting professor twice to give lectures and participate at seminars on certain bioethical issues. By the initiative of the Unit with the support of NASA in 2014 different courses and seminars were held* in the country on a very high level. Thus, seminars were given for the Ministry of Labour and Social Protection, the Ministry of Health, Justice Academy, the Ministry of Culture and Tourism, the Ministry of Youth and Sports Affairs, the Ministry of Agriculture, the Ministry of Ecology and Natural Resources, and the State Committee on Work with Religious Organizations. The lectures and seminars covered different topics, first of all, covering ethical (bioethical) issues and the importance of adherence to universal bioethical values. It is also important that workers of the above mentioned state bodies were told about universal bioethical norms in practice and legislation. Participants had the opportunity to discuss challenging issues and international standards in the field. Scientific researchers, medical workers, lawyers and other specialists were engaged in those lectures and seminars.

As was mentioned earlier, one of the most successful initiatives of the Unit supported by UNESCO Headquarters in Paris was introduction of the course on BML to the curriculum of the law students of the Baku State University (Course). This course has been taught since January 2014 to the Law faculty students of the 3rd year education. The Program of the Course was prepared by the Unit based on the UNESCO Bioethics Core Curriculum, which was used as the manual of the course. This ethical-legal education initially is implemented in order to familiarize students with universal bioethical values, including 15 bioethical principles declared by the Universal Declaration on Bioethics and Human Rights. The Course was taught in two languages, Azerbaijani and English. Accordingly, students represented 2 groups: the group learning in Azerbaijani consisted of 31 students, in English, 18. Both groups were supplied with necessary materials, including the UNESCO Bioethics Core Curriculum in both Azerbaijani and English. During the Course, which consisted of 30 hours of lectures, 15 hours of seminars, and 10 hours of individual work, different approaches to teaching were explored and different models were used in order to determine which was the best for students. This course was implemented for the first time in the country and in the region within special Memorandum signed between UNESCO Headquarters, the Unit and Baku State University, so that it was quite a challenging task for both lecturers and students being pioneer project in the region.

One of models elaborated by the Unit and applied during the Course was «*mini courts*» (as performance) in the classroom that is practical discussions on

* Report of Azerbaijan Unit of International Network of UNESCO Chair in Bioethics. Activities of the Unit: Annual Report 2013–2014.

bioethical issues. Thus, students were given topics as examples and the task was to investigate the issues giving arguments based on a condition of national legislation, international documents and from the perspective of medical law and bioethics. Students also discussed real lawsuits related to bioethical issues. The two UNESCO case books (Human Dignity and Human Rights/Benefit and Harm) were used as subsidiary textbooks. Students discussed cases described in the case books while analyzing national legislation and determining concrete legal norms that would be used in national legal practice in the same case. Thus, students were learning not only medical law but also had the opportunity to revise a wide range of legal norms in the national legislation. As those practical lessons were held in the classroom students had also the opportunity even to select the roles they would like to «act out» such as being the judge or an advocate. This was very useful for their practice as future lawyers. Moreover, at the end of the course, in their feedback that students indicated mini courts were the most interesting and challenging part of the Course. The challenge was deciding among different ethical views, universal values, and rights of individual reflected in numerous laws.

The other method used in the teaching of the BML was «individual work». This method of combination of «mini-courts» with «individual work» is nowadays largely applied at the Law faculty of Baku State University. Students are asked to make presentations on self-selected topics about issues related to bioethics. This method was also very successful. Every student was given 15 minutes to give an oral presentation. After the presentation, other students gave feedback to one another according to different criteria such as relevance of the issue.

At the end of the course, as well as in the beginning, students are asked to fill in special questionnaire about most challenging aspects of the Course. At the beginning, only 2 out of 49 students could provide relevant answers on bioethics. Before the BML course, a major part of the students expressed the opinion that the subject BML is *difficult, unclear, not related to the lawyers, however* at the end most of them found it *very interesting, important, has universal value* and therefore *meaning for education*. Among positive feedbacks to the Course in the end of first year, the students noted that: 1) BML should be the part of modern and relevant education; 2) they enjoyed individual discussions of universally important issues within national and international legal framework; 3) they stressed importance of ethical education; 4) they concluded that implementation of bioethical norms will improve social level of population and ensure protection, specifically of patients' rights. In 2012–2015 academic years, the BML course was continued at the Baku State University. This can be emphasized as a successful step towards formation of modern standards of education in medical and legal sphere. Implementation of the BML Course for law students fulfilled by specialists with bioethical background is an indicator of successful development of bioethical science in the country. However, this is still not a case in medical higher education institutes. As mentioned above, despite bioethical education was launched, first of all, at AMU in early 2000s as an interdepartmental course*, this education was related mainly with medical ethics and ethical principles in

* The current state of bioethics education in the system of medical education in the CIS member countries. Saint-Petersburg. 2010 ed. O.I. Kubar.

medicine. It is taught to the second year medical students at the Philosophy Department by the teachers who did not have special training in bioethics and whose courses/trainings were focused mainly on medical aspects of issues*, however, legal aspects, including international norms and reflection of universal principles in national legislation, were not covered in those courses**.

Conclusion

It is obvious that scientific progress and new technologies create new challenges, on both international and national levels. In previous centuries it was difficult to imagine the progress in medicine and new achievements available today, which have promoted increases in life expectancy and health care including elimination of many diseases that were incurable in the past. These all would have been impossible without advances in science and medicine. Nevertheless, protection of human rights, ethical values and bioethical principles cannot be ensured simply by the scientific development, or new achievements. New regulations, on both national and international levels, such as declarations, conventions and laws have been created and continue to be created, address new global issues. Bioethics, as one of the relatively new emerging disciplines now can be considered as providing some ethical guideline in science, life and medicine. More specifically, protection of human rights and the development of public health cannot be implemented without adherence to ethical values and law. In this regard, the institutional reviews, the ethical committees can be considered as a «guardians» of lawful and ethical development of society. Universality of bioethical principles in this regard is the foundation that should be learned by future specialists in different fields, including medicine and law.

Today it is possible to conclude that the level of development of medical education and research is on quite modern level in Azerbaijan. The international standards in the sphere of medical research and education are being actively implemented in the country. The most important indicator of this is that the modern processes occurring at the global level find immediate reflection at the national level. One of the most progressive spheres of modern science – bioethics – is finding its expression in the national legislation regarding implementation of bioethical principles, as well as in the contexts of research conduct and standards of education. It should be noted that the introduction of bioethics and the medical law today as the subject matter in education, especially for law students, is a rather progressive and innovative factor characterizing improvement of the medical education in the country. At the same time, BML education in the medical universities and institutions is still not fully developed and

* Vugar Mammadov. «Content of bioethics education in medical schools of Azerbaijan». Program and Book of Abstracts. UNESCO Chair in Bioethics. International Conference on Bioethics Education: Contents, Methods, Trends. May 2–5, 2010; Canaan Spa Zefat, Israel.

** Ayten Mustafayeva, Vugar Mammadov. «Teaching legal aspects of bioethical norms in high education system of Azerbaijan». Program and Book of Abstracts. UNESCO Chair in Bioethics. International Conference on Bioethics Education: Contents, Methods, Trends. May 2–5, 2010; Canaan Spa Zefat, Israel.

does not completely correspond to international standards. This creates new challenges for activities of local specialists.

The development of medical ethics, biomedical research, bioethics, and medical law are the reflections of the development of the society. In Azerbaijan, as in many other countries, issues of public health are a priority in health care strategy. Overall, goals noted earlier that have already been achieved in the country indicate a high level of development of science, social protection and human rights. In addition, achieving these goals will ensure future development of the country that is indicated on the state level in the «Azerbaijan 2020: Look into the future» concept of development, adopted in 2012. In this strategy «The development of human capital and the establishment of an effective social security system» is one of the main goals, and health of the population and the health care system are specified as one of the fields of the highest priority*.

This article has reviewed the long development of Azerbaijan science in the medical ethical field, which started on the local level with local values, but has absorbed the best advances in biomedical norms accepted globally. Thus, this development has ensured the creation in Azerbaijan of educational, medical, and scientific practices that are incorporating the best bioethical values and principles that are internationally recognized.

The goal of this presentation to emphasize the objectives of research ethics training by a Fogarty International Center/NIH, funded program, in collaboration with CIS countries, particularly Azerbaijan.

Мамедов В., Мунір К., Джафарова Л.

Медична наука, дослідження та вища освіта в Азербайджані крізь призму розвитку біоетики

Проаналізовано особливості розвитку медичної науки, наукових досліджень у галузі медицини та функціонування системи вищої медичної освіти в Азербайджані. Висвітлено особливості державної політики та національних стандартів у сферах науки та медичної освіти Азербайджану. Зазначається, що освіта та наука Азербайджану протягом останнього століття базувались на російсько-німецькій освітній моделі, однак упродовж останніх років галузі науки, медицини та освіти більше базуються на американській, британській, французькій і турецькій моделях. Охарактеризовано державні програми та стратегії, спрямовані на підтримку освіти та розвиток науки і підготовку кваліфікованого персоналу. На сучасному етапі орієнтиром для державної політики і стратегії розвитку Азербайджану, в тому числі у галузях науки і медицини, вищої медичної освіти, на національному рівні стали міжнародні етичні цінності.

Висвітлено інформацію про функціонування основних наукових та освітніх медичних установ і деякі аспекти здобуття вищої медичної освіти в країні. Охарактеризовано найбільшу державну наукову установу в медичній галузі – Азербайджанський медичний університет, зокрема науково-педагогічний склад, кількісний склад студентів, особливості діяльності факультетів. Проаналізовано особливості викладання медичного права в

* Official web page of President of Azerbaijan Republic. «Azerbaijan 2020: Look into the future» concept of development http://www.president.az/files/future_en.pdf

Азербайджанському медичному університеті, зокрема, зроблено наголос на тому, що викладання медичного права на кафедрі політичної економії здійснюється лише формально: передбачені програмою лише кілька годин лекцій свідчать про «застарілість» підходів до викладання цієї дисципліни у вищих медичних навчальних закладах. Також висвітлено деякі аспекти функціонування Центральної науково-дослідної лабораторії (CSRL) та Азербайджанського інституту підвищення кваліфікації лікарів (ASATID)

Проаналізовано особливості наукових досліджень з метою здобуття наукового ступеня. Висвітлено нормативно-правову базу, яка визначає порядок цих наукових досліджень та отримання наукових ступенів.

Охарактеризовано історичні аспекти розвитку та етапи становлення медичної етики в Азербайджані, а також нові напрями науки, насамперед пов'язані з правами людини, в тому числі медичне право та біоетику. Розвиток біоетики та медичного права в Азербайджані супроводжується насамперед гармонізацією національної правової системи з міжнародними стандартами.

Проаналізовано історичні етапи розвитку науки біоетики в Азербайджані. Зазначено, що проблемні питання біоетики в країні дуже часто розглядаються під кутом зору медичної етики, у зв'язку з чим автори розмежували поняття «медична етика» та «біоетика», які, хоч і тісно пов'язані, проте не тотожні. Висвітлено вплив ЮНЕСКО та міжнародних стандартів на становлення біоетики в Азербайджані і активну роботу у напрямі імплементації біоетичної освіти та розвитку законодавства, які втілюють біоетичні принципи на практиці, використання міжнародного досвіду з метою захисту усіх членів суспільства з урахуванням культурних особливостей Азербайджану.

На основі сучасної нормативно-правової бази та за сприятливих умов у державі створено особливу модель вивчення біоетики. Дисципліна «Біоетика та медичне право» включена до переліку наукових спеціальностей у 2011 р. Пізніше ця спеціальність стала називатись «Біоетика» і було надано можливість захисту дисертацій здобувачами, які отримували освіту з правових, медичних, біологічних і багатьох інших галузей. На сьогодні 4 із 13 здобувачів успішно захистили свої дисертаційні дослідження.

Висвітлено успіхи з реалізації ініціативи щодо запровадження курсу з біоетики та медичного права до навчальної програми студентів-юристів, які навчаються у Бакинському державному університеті, де цей курс почали викладати з 2014 р. для студентів третього року навчання. Проаналізовано методику викладання біоетики та медичного права студентам-юристам. Водночас автори наголошують на тому, що викладання біоетики та медичного права в медичних вищих навчальних закладах та установах все ще не повною мірою відповідає міжнародним стандартам, що ставить нові завдання перед фахівцями.

Ключові слова: медична етика, біоетика, медичне право, ЮНЕСКО, Азербайджан.

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Медицинская наука, исследования и высшее образование в Азербайджане сквозь призму развития биоэтики

В статье проанализированы особенности развития медицинской науки, научных исследований в области медицины и функционирования системы высшего медицинского образования в Азербайджане. Освещены особенности государственной политики и национальных стандартов в сферах науки и медицинского образования Азербайджана. Отмечается, что образование и наука Азербайджана в течение последнего столетия базировались на российско-немецкой образовательной модели, однако в последние годы отрасли науки, медицины и образования все больше базируются на американской, британской, французской и турецкой моделях. Охарактеризованы государственные программы и стратегии, направленные на поддержку образования и развитие науки, подготовку квалифицированного персонала. На современном этапе государственная политика и стратегия развития Азербайджана, в том числе в области науки и медицины, высшего медицинского образования на национальном уровне стали ориентироваться на международные этические ценности.

Освещена информация о функционировании основных научных и образовательных медицинских учреждений страны и некоторые аспекты получения высшего медицинского образования. Охарактеризовано крупнейшее государственное научное учреждение в области медицины – Азербайджанский медицинский университет, в частности его научно-педагогический состав, количественный состав студентов, особенности функционирования факультетов. Проанализированы особенности преподавания медицинского права в Азербайджанском медицинском университете. Отмечено, что преподавание медицинского права на кафедре политической экономики осуществляется только формально: предусмотренные программой несколько часов лекций свидетельствуют о существовании «старого» подхода к преподаванию этой дисциплины. Также освещены некоторые аспекты функционирования Центральной научно-исследовательской лаборатории (CSRL) и Азербайджанского института повышения квалификации врачей (ASATID).

Проанализированы особенности научных исследований с целью получения ученой степени. Освещена нормативно-правовая база, определяющая порядок таких научных исследований и получения научных степеней.

Охарактеризованы исторические аспекты развития и этапы становления медицинской этики в Азербайджане, а также новые направления науки, связанные с правами человека, в том числе медицинское право и биоэтика. Развитие биоэтики и медицинского права в Азербайджане сопровождается гармонизацией национальной правовой системы с международными стандартами.

Проанализированы исторические этапы развития науки биоэтики в Азербайджане. Отмечается, что проблемные вопросы биоэтики очень часто рассматриваются с точки зрения медицинской этики, в связи с чем авторы четко разграничивают понятия «медицинская этика» и «биоэтика», которые, хотя и тесно связаны, но не тождественны. Освещены влияние ЮНЕСКО и его международных стандартов на становление биоэтики в Азербайджане, активная работа в направлении имплементации биоэти-

ческого образования и развития законодательства, воплощающих биоэтические принципы на практике, использование международного опыта в целях защиты всех членов общества с учетом культурных особенностей Азербайджана.

На основании современной нормативно-правовой базы и благодаря благоприятным условиям в государстве создана особая модель изучения биоэтики. Дисциплина «Биоэтика и медицинское право» включена в перечень научных специальностей в 2011 г. Позже эта специальность стала называться «Биоэтика» с возможностью защиты диссертаций соискателями, которые получали образование по правовым, медицинским, биологическим и многим другим отраслям. Сегодня 4 из 13 соискателей успешно защитили свои диссертационные исследования.

Освещены успехи в реализации инициативы о введении курса по биоэтике и медицинскому праву в учебную программу студентов-юристов, обучающихся в Бакинском государственном университете, где этот курс начали преподавать с 2014 г. для студентов третьего года обучения. Проанализирована методика преподавания биоэтики и медицинского права студентам-юристам. В то же время авторы подчеркивают, что преподавание биоэтики и медицинского права в медицинских высших учебных заведениях и учреждениях все еще недостаточно развито и не в полной мере соответствует международным стандартам, что выдвигает новые задачи для специалистов.

Ключевые слова: медицинская этика, биоэтика, медицинское право, ЮНЕСКО, Азербайджан.

Стаття надійшла до редакції 26.02.2016

Прийнята до друку 28.03.2016