

# Ethics, Intellectual Property and Medical Research

**Keywords:** Intellectual property; Ethics; Plagiarism; Law

## Abstract

The protection of intellectual property is one of the most harmonized legal areas. The regulations that regulate in most countries of the world follow the same principles, and differ only in shades. Intellectual property marks a number of rights created as a result of intellectual activities in industry, science, literature and art fields. Intellectual property is protected by providing legal protection to its authors, but also due to a series of activities related to participation in economic and social development. Medical workers can be recognized as authors of certain ideas, but also products that are legally protected by regulations in the field of intellectual property.

## Introduction

Intellectual property is a collective name for ownership of the results of man's creative mind, referring to inventions, literary and artistic works, as well as different signs of distinction, i.e., product design and titles that serve for commercial purposes [1]. Although it relates to immaterial property, intellectual property entitles the copyright holder or patent, trademark, industrial image and the other to have this right as material property and thereby gains the benefit of their intellectual work and investment. The state by administrative act recognizes only the right (a kind of monopoly) to use and disposition of intellectual creation creatures protected by special laws for every form of industrial property.

Intellectual property has a huge impact on society as a whole. Intellectual property exploitation helps open new jobs, protects those who put new products on the market and generally affects the welfare of society, making the state more attractive to domestic and foreign investors.

On the other hand, disrespect of intellectual property rights leaves behind a series of damaging consequences such as deterring investors from potential investments, the development of crime, the loss of certain tax revenues and the stagnation of international trade. If it is a medical product, the consequences may be even harder because as such can have a harmful influences on people's health.

### Intellectual property

Intellectual property rights have implications for employment strategies when intellectual property owners are faced with technological and political developments [2]. The goals have changed successfully and they range from the realization of intellectual property rights which may be limited to the creation of property and its protection. This creates the physical boundaries of the protection of material goods in search of intangible boundaries that would include information and knowledge, the immaterial ownership of the digital age.

Illegal products represent a major threat to the implementation of intellectual property rights globally [3]. Thanks to technology, the



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industry achieves success in removing illegal content, but there are still challenges with which to be faced.

Industrial property is a subjective right of protection which is of great importance, for the owner, for example, for new ideas, but also for every country as it is a significant component of national wealth and national culture [4]. This is reason why industrial property enjoys multiple legal protection. In the event of any violation of any industrial property right, its owner may enforce his or her rights protection through administrative, civil, misdemeanor and ultimately through criminal proceedings by applying criminal law as a fragmentary and subsidiary right based on the principles of relativity and proportionality.

The reason for the intensified EU engagement on the issue of the enforcement of intellectual property rights in criminal proceedings is identical to the reasons why it calls on the international level to apply effective measures and means in criminal proceedings [5]. Namely, it is about violations of such intensity that threaten the equilibrium of the global market, but in a significant part, health and consumer safety. These are mass-scale injuries most frequently used for piracy and counterfeiting. Pirate products today are predominantly about objects that infringe copyright and related rights, while counterfeiting violates industrial property rights. One of the major characteristic of criminal acts related to counterfeiting practice in the form of organized criminal activity in which regularly participate organized in more states. The intensity of the injury, as well as the characteristics of these criminal acts, imposed the need for further alignment of industrial property rights in the EU. If today's analysis of the existing legislative framework in EU law, it can be concluded that the substantive rules of industrial property rights in the EU member states are harmonized.

Should not be ignored the fact that the abilities of avoiding respect for intellectual property rights are simple and it will become even simpler. Technology is a moving target that, on the one hand, allows the spread of advanced ideas and, on the other, is trying to limit and stop their unauthorized use. Pirates are enterprising, smart, difficult to find, and sometimes even genius [6].

### Social importance of intellectual property

In today's global economy, economic progress does not come so much from natural sources, or the production of industrial goods as much from the "production" of new ideas and consequently - new products [7]. Knowledge and innovation play a crucial role in the growth of the world economy. Differences between rich and poor countries in terms of development of science, technology and knowledge are more important than differences in income. Although the development of the information society has been a change in the forms of production and products against industrial society, refers to the production remained on the same basis/principles of ownership. Information and knowledge are becoming important market goods with the appropriate price. Ownership based on knowledge and information as well as products of the human intellect is the intellectual property to which the patent is one of the foundations.

Patents, copyrights, trademarks and other products of the human mind, very often they are the objects of business relationships, but at the same time as a special form of property entered into traders or companies. The use of these rights can enable economic growth, but also affect the national wealth of a country. Their placement often means the degree of success of their respective holders and owners. It should be pointed out that all products of the human mind formed in this way, very often factors unfair fight its competitors. Intellectual property rights (of course, and patents), its real significance given at the time when they are in traffic and become available to a larger number of subjects.

The US government defines "intellectual property" at the same time as it describes how to claim it through trademarks, patents, and copyrights [8]. Trademarks "protect words, names, symbols, sounds, or colors that distinguish goods and services from those manufactured or sold by others and to indicate the source of the goods." A patent is a property right granted by the government to an inventor "to exclude others from making, using, offering for sale, or selling the invention throughout the United States or importing the invention into the United States" for a limited time in exchange for public disclosure of the invention when the patent is granted. A copyright "protects works of authorship, such as writings, music, and works of art that have been tangibly expressed." Further explication states that, "Copyright is a form of protection provided to the authors of 'original works of authorship' including literary, dramatic, musical, artistic, and certain other intellectual works, both published and unpublished".

### Medicine, Intellectual property, Ethics

Ethics in medical sciences research may not always translate into ethical publications [9]. Unfortunately due to lack of regulatory bodies, publication misconduct is now a global menace for the scientific community. Publication misconducts are not only restricted to research fraud or data manipulations alone but also seriously include plagiarism, duplicate publications especially on figures and tables, authorship disputes and conflict of interests. As global scientific research is expanding particularly in the field of health sciences hence possibilities of more rise of unethical practices from research to publications are very high, authors suggest a strong peer-reviewing system, use latest technological support, strong

publication ethics policies, active monitoring, protection of whistle blowers and more liaisons between journals and research institutions or universities possibly to prevent publication misconduct effectively.

Since all forms of intellectual property can often be characterized as scientific papers, it is important to outline the attitude of Lidija Bilić-Zulle, who says that honesty in science makes the very foundation of her existence [10]. Scientific ethics is difficult to describe and summarize. All that is done in science shall be doing fairly, be objective, it should not be aspire for personal benefit and self-promotion, to be honest in conclusions, just to associates, to be persistent in accuracy and never to modify or invent data, not to catch hold someone else's intellectual property, but how that seemed harmless. Even the smallest shadow of a violation of scientific integrity in scientific work completely undermines work and leads to irreversible loss of reputation. And the smallest scientific contribution is a valuable part of the magnificent mosaic of human science, but only if it is frank and honest. Every scientist, and even the one whose scientific work is a minor part of his daily routine work, must have access to pure heart and an open mind. This needs to be particularly prominent because they are at the beginning of XXI. Century in the Republic of Croatia filed charges relating to the plagiarism of scientific papers, i.e., to the plagiarism of intellectual property, especially in the field of medicine, but no other scientific disciplines in that sense not were excluded. It should be added here that it has been publicly proven that some of these allegations are grounded, but there are also those that are not. Unfortunately, there is such awareness among individuals in the academic community that if one wants to be publicly embarrassed for the purpose of some ground-level goals, it's enough to say that he/she has transcribed some of scientific papers and released that rumor to the public. If there is evidence of the appropriation of another scholarly work, or, in this case, of another intellectual property, and there is evidence for this, then such controversial situations are resolved in the institutions responsible for resolving them, which are certainly not mass media. Since public affairs are justified in such situations, it is necessary to inform the public through the media about the conclusions or verdicts of the relevant institutions, but it should not be possible for the media to take over the powers to make such decisions.

Medicine is science, rational human activity, with all its strengths and weaknesses, but with clear achievements, laws and possibilities [11]. Medicine can only be understood as a science and through science, and all beyond that is something else, no matter what it is called experiential, alternative, traditional or border medicine. The medical practitioner must apply scientific methods - or she/he is not medical professional.

It should be added here that healthcare is a rational human activity with all its strengths and weaknesses. It should not be neglected the fact that healthcare and protection are the reflection of social relations, economic status and political planning of the country on the one hand (social factors) and scientific knowledge and achievements of medical practice on the other hand (technical and professional factors) [12]. The contribution of health to development and social community progress is not only seen as a contribution to the overall prosperity and well-being of the community, but is considered to be a participant in direct production. When considering the role of the community in

the pursuit of health care, it is important to emphasize that health care includes a system of social, collective and individual measures, services and activities for the preservation and improvement of health, disease prevention, early detection of diseases, timely treatment and health care and rehabilitation. Such risky events are linked to the biological function of the organism and the life of an individual and family (birth, death, illness), family life (upbringing and raising children, care for the old and the disabled), professional activity (job accidents, disability, unemployment) natural disasters (earthquakes, floods) and social crises (wars, economic stagnation, migration) [13]. Part of such risk-related, health-related events are solved, alleviated or prevented by the social community, most commonly on the principles of solidarity and mutuality of community members, with the measures, activities and actions we call health care. These mentioned regulations represent a foundation of modern medicine as a science, but also some other scientific disciplines that all together aim to preserve the life and health of peoples. New scientific discoveries in every science discipline can also be seen from the aspect of intellectual property, and this fact should not be neglected.

When discussing ethics in science, and in particular biomedical ethics, it should be noted that Steven S. Coughlin, Colin L. Soskolne, and Kenneth W. Goodman in book *Cases Studies in Public Health Ethics* think that the following questions were the subject of analysis in ethics of public health [14]:

1. Consent of an informed patient to public health research
2. Privacy protection
3. Randomized controlled trials in public health
4. Incorrect behavior of scientists
5. Conflict of interest and sponsorship
6. Intellectual property and data exchange
7. Public communications
8. Genetic testing and research
9. Prevention and research of HIV/AIDS
10. Allocation of resources
11. Cross-cultural studies
12. Research on vulnerable groups
13. Ethical analysis practice in public health

Although this is a subject of public health research, all of the above elements could be applied, with minor modifications, in other branches of biomedicine.

### Clinical research and plagiarism

Although the definition of clinical research may seem intuitive to most clinicians, it is still important to specifically define the broad spectrum of activities that make up this important discipline [15]. In response to this need, an American Medical Association Clinical Research Summit and subsequent ongoing Clinical Research Roundtable (established by the Institute of Medicine) endeavored to define the broad spectrum of activities that make up clinical research. Although by no means a succinct definition, its important aspects are that (1) clinical research is but one component of medical and health

research aimed at producing new knowledge, (2) knowledge gained should aid in understanding the nature of disease, its treatment, and prevention, and (3) clinical research embraces a wide spectrum of categories of research.

Publish the results of scientific work in the form of a report - a scientific article represents the crown of scientific research work for every scientist [16]. Often, long-lasting and hard work will only be added to human knowledge by publishing, and will continue to inflate the scientific community into critical judgment. The public, scientific and general, expects sincerity, fairness and honesty; because they are precisely the features that science gives meaning and are at its core.

The importance of biomedical research and their possible direct impact on people's lives and health emphasizes the need for honest scientists in the work and full respect for all the beginnings of scientific-research integrity. The total science is cumulative and belongs to all mankind, every scientific invention is supplemented and built, science is "a source of real knowledge (discovery) for mankind" and "contributes to general well-being and security in life-time". Any dishonesty in science, regardless of the reasons for which it is committed, diminishes and undermines, thus contributing to the authors of undeservedly profits.

When considering intellectual property issues through the aspects of law science, it should be noted that at the beginning of XXI. The century saw the emergence of something unacceptable: plagiarism of scientific works or to various forms of unethical behavior in science. Regrettably, individuals thought that such actions would not be disclosed and they went into unlawful activities that, as a rule, are sanctioned in two dimensions: legislative and ethical. Such unlawful conduct (of course, if proved) sanctions the national legislation of every state in the world, and there is no harder sanction for a perpetrator when the profession in it detects the perpetrator of this act. When this act be discovered, the perpetrator is first calls out from the profession because of the unethical behavior, and after calls out from the profession, follows the calls out from not only the life ambience but also the wider social community. The perpetrator, as a rule, is sanctioned with a punishment on the one hand, and on the other hand, excommunication from the community because of unethicality is not at all pleasant. Every science discipline has its own "game rules" that only need to be respected and nothing more. At this point, the biggest "problem" arises around the source of quotation, because what quotes individuals publish as their owns, and that is not ethical at all. In other words, citation is allowed and even desirable, but a source must be mentioned. Ethics at the stage of collecting and using literary sources implies appropriate behavior towards another intellectual property and copyright [17]. Every other part of the work, regardless of whether it is presented in an administrative or inappropriate speech or has been recounted, should be correctly marked. Taking other theoretical insights or empirical results without referring to the source is considered plagiarism and is an undesirable practice among researchers. From this it follows that a person with regard to consciousness must know good, have knowledge of good and she/he must know to differentiate good from evil [18]. Then she/he must only intend to do good, never evil. Therefore, in moral judgment, very important intent or intention of the factor is important. Evil intent immediately destroys the morality of the act. Good intent is the inner goodness of the act.

## Evidence-based medicine

The EBM (evidence-based medicine) movement is clearly an important one which nobody should or could resist [19]. However, EBM is to a large degree only a computerised application of what good doctors have always done: compiling medical knowledge to the benefit of the patient. The EBM movement should adapt itself to the world of clinical realities. It should look upon itself as one of many ways of achieving a lifelong, self-directed learning in medicine. There is no doubt that, conducted in this manner, EBM works. The potential side effects of the EBM method should, however, be closely observed. Clinical decision making will always be full of errors and should therefore be conducted with humility. This will remain so despite some marginal improvements in the factual basis on which the decisions are made.

The practice of evidence-based medicine requires high quality evidence [20]. A primary source of such evidence is from scientifically based clinical research. To be able to use this evidence, one must be able to believe what one reads. For this reason it is absolutely necessary that the research be trustworthy. Research must be proposed, conducted, reported, and reviewed responsibly and with integrity. Research and the entire scientific enterprise, are based upon trust. In order for that trust to exist, the consumer of the biomedical literature must be able to assume that the researcher has acted responsibly and conducted the research honestly and objectively.

The importance of new scientific knowledge in medicine, but not just in it, is constantly being written and spoken in intellectual circles. Health care based on scientific evidence in contemporary medical practice is considered by a very important method [21]. The purpose of this method is to contribute to the more effective inclusion of published scientific evidence in everyday clinical practice. The traditional paradigm of clinical practice relies on scientific authorities, standard approaches to patient care, and responses obtained through direct contact with local experts or in standard referent manuals of external experts. In a new paradigm based on scientific evidence, quality scientific evidence occupies a central place in clinical decision-making, less importance is attached to authority (which is does not mean rejecting what can be learned from colleagues and their experience), and it is the duty of a physicians regularly monitoring scientific publications in which is objectively and confidentially recorded clinical observations and they must know how to critically evaluate them. This quote is perhaps the best example of the importance of scientific evidence in contemporary medical practice, and its particular weight is that it has been written by two non-medical ladies but is indirectly related to it. Here is a logical question: What are the connections with scientific evidence, clinical practice and the legal protection of intellectual property? Scientific evidence is the foundation of modern medicine, which final result has been finding in performing of clinical practice, and if protected legally, enjoys national legal protection. If legal protection doing internationally, it enjoys international legal protection.

## Conclusion

In every national economy, the exercise of intellectual property rights implies a better starting position in negotiating processes of buying and selling brands. That is reason why it is important to know at least the basics of intellectual property rights because so allows the disposal of the rights that arise from it. This is important to know because medical professionals sometimes can participate in the creation of some medical products that legally protect through intellectual property rights. In order to some medical product be legally protected, it should pass a clinical research and be based

on modern scientific knowledge. Unfortunately, there are those who appropriate the work of others, and when it is discovered, the consequences are terrible.

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