

ACTIVITY REPORT 2016 - 2021

FACULTY: Science **DEPARTMENT/ COMMITTEE :** Botany **IQAC ACTIVITY No:**SVC/2019-20/BOT/AKC/2

NAME OF THE ACTIVITY: Student Training in IPR			
DATE	FACULTY	DEPARTMENT/COMMITTEE	COORDINATORS NAME
September-November 2019	Science/Life Science	Botany	Dr. Aditi Kothari Chhajer Dr. Neeti Mehla
TIME	VENUE	NUMBER OF PARTICIPANTS	NATURE: Outdoor/Indoor
		5	Indoor
SUPPORT/ASSISTANCE:			

BRIEF INFORMATION ABOUT THE ACTIVITY (CRITERION NO. -):

TOPIC/SUBJECT OF THE ACTIVITY	Student training in Intellectual Property Rights with special focus on Gene Patenting
OBJECTIVES	<ul style="list-style-type: none"> The objective of this training was to impart basic knowledge about Intellectual Property Rights with special reference to Patenting How to know if THE invention is patentable Patentability requirements Procedure for obtaining patents
METHODOLOGY	The students were first given theoretical knowledge about IPR. Patenting was then understood in details through case studies, discussions and brain storming sessions.
OUTCOMES	Intellectual property protection is critical to fostering innovation. Without protection of ideas, businesses and individuals would not reap the full benefits of their inventions. A knowledge of this area gives an impetus to innovators. Through this project students understood the various aspects of patenting and its importance. The students also presented a poster on "Gene Patenting and Bioethics" at a National Conference on IPR

PROOFS & DOCUMENTS ATTACHED (Tick mark the proofs attached):

Notice & Letters	Student list of participation	Activity report	Photos v	Feedback form
Feedback analysis	News clip with details	Certificate	Any other	

IQAC Document No:	Criterion No:	Metric No:
Departmental file no	IQAC file No;	

NAME OF TEACHER & SIGNATURE	NAME OF HEAD/ COMMITTEE INCHARGE & SIGNATURE	IQAC COORDINATOR (SEAL & SIGNATURE)
Dr. Aditi Kothari Chhajjer Dr. NEeti MEhla		

For Reference

Criterion I	Curricular Aspects (planning & Implementation)	Criterion V	Student Support & Progression
Criterion II	Teaching Learning & Evaluation	Criterion VI	Governance
Criterion III	Research, Innovations & Extension	Criterion VII	Institutional Values & Best Practices
Criterion IV	Learning Resources and Infrastructure		

ACTIVITY REPORT

The main objective of intellectual property rights is to encourage innovation and to provide incentives for innovation by granting protection to inventors that will allow them to recover research and development investments and reap the benefits of their inventions for a limited period of time. Intellectual Property Rights is an SEC paper that is taught to the third year students of B.Sc.(P.) Life Sciences at Sri Venkateswara College. This area of study attracts a lot of attention of the students and they want to delve deeper into the subject. Thus 5 students of Life Sciences were trained to understand one aspect of IPR i.e patenting, The training was designed to provide comprehensive knowledge to the students regarding the general principles of IPR, Patenting, Concept and Theories, Criticisms, Ethical issues and International Regime Relating to patenting.

Intellectual property law exists to encourage economic compensation for innovations. When people and organizations are fairly compensated, that spurs continual innovation and creative expression. Through this project students understood the various aspects of patenting and its importance. The students also presented a poster on "Gene Patenting and Bioethics" at an Interdisciplinary National Conference on IPR held at Maitreyi college on 22-23 October, 2019.

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Patenting of a gene or a DNA sequence has been a controversial topic in many countries, having different bioethical norms. A gene or a nucleotide sequence is basically a string of single double stranded molecule with a series of paired bases (A,T,C and G). According to the section 3(c) of the Patent Act, 1970 specifies that "Discovery, invention or creation of a scientific principle or the formulation or the discovery of any living or non-living substance in nature" is not patentable. Further, section 3(j) states, "plants and animals in whole or part thereof other than micro organisms" is not patentable. This leads to the much debated controversy on the patentability of genes in the recent years. The European Union, under India and the USA, permits gene patenting if the function is known and useful. A gene is patent eligible if it constitutes an innovative step. Industrial application and non-obviousness, states the Patent Act India. Also, modification of a gene makes it patent eligible as it is an invention and not a mere discovery. Patent Laws are an approach to balance innovation amongst public, that craves for transparency, and the patent owner. The Myriad Case, in the USA, impeached the Legacy of gene patenting due to many bioethical norms. Gene patenting can thus hamper research as well as generate a restricted age of research. Simultaneously, it allows research to take place without any tummy. Therefore, this is a contentious topic which has its pros and cons.

PROS AND CONS

INNOVATIVE STEP	INDUSTRIAL APPLICATION	SIGNIFICANCE
NOT A PRODUCT OF NATURE	NON – OBVIOUSNESS	

- PREVENTS DIRECT RESEARCH
- UNINTENDED MONOPOLIZATION
- INCREASED HEALTHCARE COSTS

INTRODUCTION:

Introduction: Association for molecular pathology v. Myriad genetics, inc. was a case challenging the validity of gene patents in the United States, specifically challenging certain claims in issued patents owned or controlled by Myriad Genetics that cover isolated DNA sequences, methods to diagnose propensity to cancer by looking for mutated DNA sequences, and methods to identify drugs using isolated DNA sequences. Prior to the case, the U.S. Patent Office accepted patents on mutated DNA sequences as a composition of matter.

Proponents: They argued that recognizing such patents would encourage investment in biotechnology and promote innovation in genetic research by not keeping technology shrouded in secrecy.

Opponents: argued that these patents would stifle innovation by preventing others from conducting cancer research, would limit options for cancer patients in seeking genetic testing, and that the patents are not valid because they relate to genetic information that is not inventive, but is rather produced by nature.

The **District court** ruled that none of the challenged claims were patent eligible.

The **Federal circuit** ruled that isolated DNA that does not exist alone in nature can be patented and that the drug screening claims were valid but that Myriad's diagnostic claims were unpatentable.

The **Supreme Court** held that merely isolating genes that are found in nature does not make them patentable.

USA

After the myriad case in 2013, gene patenting of simply isolated genes and DNA sequences was **PROHIBITED**, while patenting of artificial genes was **ALLOWED**.

EUROPE

• In Europe there is no absolute bar on patenting genes which have been isolated from the human body, even if identical in sequence to natural elements, obtaining patents that claim only isolated gene sequences is not plain sailing.

◆ Just like any other invention, gene patents have to satisfy the normal patent requirements of novelty, inventive step and industrial applicability.

INDIA

*As per 5.3(c) of Patents Act, 1970 precludes patenting of discovery of any living thing or non-living substance occurring in nature.

* As per 5.3 (j), plants and animals in "whole" or "any part thereof" is not patentable. Therefore, an isolated naturally occurring gene is not patentable but where it is a genetically modified gene would be considered as new, inventive having industrial application and hence, it is patentable.

REFERENCES

We are thankful to our Principal, Dr. Hemalatha Reddy and faculty members for providing constant support, guidance and motivation.

Books:

Websites: <http://www.bids.10th.sch.gov.uk/cybernet/2007/24/2407/>
http://www.wash.net/learn_messiah/jan/2008/01/article_0008.html



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This is to certify that the Activity report (Teacher/Department /Society/Association) has been submitted for documentation to IQAC, Sri Venkateswara College, University of Delhi.

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