## A Project Report On

"Phytoconstituents as Immunomodulators"

Submitted for Partial fulfillment of the requirement for the degree of **Bachelor of Pharmacy**Session 2021-22



Department of Pharmacy

Guru Ghasidas Viswavidyalay Bilaspur (C.G.), India

Guided By

Dr. S. K. Bharti

Assistant Professor, GGV

(M.Pharm, Ph.D)

Submitted By

Roshani Diwakar

B.Pharm (8th Semester)

Roll No.- 18006039

# Department of Pharmacy Guru Ghasidas Viswavidyalay Bilaspur



#### CERTIFICATE

This is to certify that the report entitled "Phytoconstituents as Immunomodulators" is the bona-fide work done by Roshani Diwakar (18006039) under our guidance and supervision. This report is submitted following the completion of project report during the academic session of 2021-22.

ii

Head of the Department

Dr. Bharti Ahirwar

Head of Department

Department of Pharmacy

GGV Bilaspur

HEAD

S.L.T. Institute of Pharm. Sciences
Guru Ghasidas Vishwavidyalaya,
Bilaspur (C.G.)

Project Guide

Dr. S. K. Bharti

**Assistant Professor** 

Department of Pharmacy

GGV Bilaspur

## Department of Pharmacy Guru Ghasidas Viswavidyalay Bilaspur



### **CERTIFICATE**

This is to certify that the report entitled "Phytoconstituents as Immunomodulators" is the bona-fide work done by Roshani Diwakar (18006039) under our guidance and supervision. This report is submitted following the completion of project report during the academic session of 2021-22.

I hereby forward this project.

Forwarded By

Dr. S. K. Bharti

**Assistant Professor** 

### Acknowledgements

I would like to express my special thanks of gratitude to my teacher Dr. S. K. Bharti sir as well as HOD Dr. Bharti Ahirwar mam who gave me the golden opportunity to do this wonderful project on the topic Phytoconstituents as Immunomodulators present in India. Which also helped me in doing a lot of research and I come to know about so many new things. I am really thankful to them.

Secondly, I would also like to thank my parents, seniors and friends who have helped me with their valuable suggestions and guidance.

Roshani Diwakar
18006039

B.Pharm
8th Semester

### **Table of Contents**

Certi	ficateii
Certi	ficate of the Examineriii
	owledgementiv
	e of contentsv
1.	INTRODUCTION1
2.	MECHANISM OF IMMUNOMODULATORS 2
	2.1 IMMUNITY
	2.2 IMMUNE SYSTEM
	2.3 IMMUNOMODULATORS
3.	CLASSIFICATION OF IMMUNOMODULATORS 4
	3.1 Clinical Immunomodulators
4.	CORRELATION OF IMMUNOMODULATORS
	WITH AYURVEDA 6
	4.1 Concept of Rasayana
	4.2 Plants as immunomodulators
5.	IMMUNOMODULATORY AGENTS
	5.1 Alkaloids as Immunomodulatory Agents
	5.2 Polysaccharides as Immunomodulatory Agents
	5.3 Flavonoids as Immunomodulatory Agents
	5.4 Glycosides as Immunomodulatory Agents9
	5.5 Phenolic as Immunomodulatory Agents10
	5.6 Withania Somnifera 10
	5.7 Panax Ginseng
	5.8 Garlic (Allium Sativum)

	5.9 Curcuma Longa
	5.10 Picrorhiza Scrophulariiflora
	5.11 Dioscorea Japonica
	5.12 Terminalia Arjuna
6.	CONCLUSION10
REF	FERENCES

remark response to capable of discriminance among bonds every programme and