Table of Contents

Contents		Page	
		No.	
Abst	i-iv		
Decla	aration by Candidate	v	
Certi	vi		
Ackn	owledgement	vii-viii	
Table	ix-xii		
List	xiii		
List	xiv-xvi		
List	xvii-xxi		
Chap	1-19		
Intro	duction		
1.1.	Female Reproductive System	1-2	
1.2.	Menstrual Cycle	2-4	
1.3.	Physio-biochemical Changes in the Vaginal Canal	4-5	
1.4.	Role of Sex Hormones in the Vaginal Canal	5-7	
1.5.	Pathogenic Microbes in the Vaginal Canal	7-11	
1.6.	Medications for Vaginal Infection	11-13	
1.7.	Beneficial Microbes in the Vaginal Canal	13-14	
1.13	Use of Probiotics in Vaginal Health	14-16	
Chap	17-39		
Revie	ew of Literature		
2.1.	The Vaginal Microflora	17-19	

Microbial Infections in Reproductive Organs of Women and the Potential Role of Lactobacillus.

2.2.	Effect o	f Hormones on Vaginal Microflora	19-21			
2.3.	Other Factors Influencing Vaginal Microflora					
2.4.	Role of Lactic Acid Bacteria in Vaginal Microenvironment					
2.5.	Effect of Pathogens on Vaginal Health					
2.6.	Probiotics Against Vaginal Pathogen					
2.7.	Alternative Medications Against Vaginal Pathogens					
2.8.	Prospects in Improvement of Probiotics for use in Vaginal Health					
2.9.	Vaginitis/ Vaginal Infection in India					
2.10.	Rationale Behind the Study					
2.11.	Objectiv	ves of the Study	39			
Chapt	Chapter 3 40-53					
To assess the microbial flora from vaginal swabs of healthy reproductive-aged women (21-45 y)						
3.1.	Introduc	etion	40-41			
3.2.	Materials and Methods		41-45			
	3.2.1.	Chemicals used	41-42			
	3.2.2.	Instruments used	42			
	3.2.3.	Collection of vaginal swabs	42			
	3.2.4.	Isolation of aerobic microbes	42			
	3.2.5.	Selection of potential aerobic microbes	42-43			
	3.2.6.	Isolation of genomic DNA from aerobic microbes	43			
	3.2.7.	PCR for amplification of universal gene	43			
	3.2.8.	Collection of vaginal swabs	43-44			
	3.2.9.	Isolation of LAB	44			
	3.2.10.	Selection of LAB	44			
	3.2.11.	PCR for amplification of universal gene	44			

	3.2.12.	Sequencing and identification	45			
3.3.	Results		46-51			
3.4.	Discussion					
Chap	Chapter 4					
		te the isolated microbes and study the interaction bacillus sp. and potential pathogens				
4.1.	Introduction		54-55			
4.2.	Materia	55-66				
	4.2.1.	Chemicals used	55-56			
	4.2.2.	Instruments used	56			
	4.2.3.	Characterization of potential aerobic pathogens	56-58			
	4.2.4.	Characterization of lactic acid bacteria	58-60			
	4.2.5.	4.2.5. Effect of LAB on pathogens	60-61			
	4.2.6.	Inhibitory effect of Culture Free Supernatant (CFS) on potential bacterial pathogens	61-62			
	4.2.7.	Inhibitory effect of Culture Free Supernatant (CFS) on C. albicans	62-66			
	4.2.8.	LC-MS/MS of CFS for identification of antimicrobial compounds	66			
4.3.	Results		66-114			
4.4.	Discuss	ion	114-120			
Chap		121-143				
	ploit Lac e industri	tobacillus sp. and their culture free supernatant for ial usage				
5.1.	Introduc	etion	121-122			
5.2.	Materia	122-125				
	5.2.1.	Chemicals used	122			

Microbial Infections in Reproductive Organs of Women and the Potential Role of Lactobacillus.

	5.2.2.	Instruments used	122			
	5.2.3.	Lyophilization of <i>L. crispatus</i>	122-123			
	5.2.4.	Encapsulation of L. crispatus	123-124			
	5.2.5.	CFS as an antibacterial spray	124			
	5.2.6.	CFS as an additive on nonwoven fabric	124-125			
5.3.	Results		125-141			
5.4.	Discuss	141-143				
Chap	144-145					
Conclusion and Future Prospects						
	6.1.	Conclusion	144-145			
	6.2.	Future prospects	145			
Biblio	146-185					
List o	xxii					
Apper	xxiii-xxvii					