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Introduction: Scientific interest in the endometrial microbiota is still a relatively new area compared to the vaginal and intestinal microbiota. Studies on endometrial microbiota show that *Lactobacillus* spp. present in the endometrium, especially in healthy or asymptomatic women.

Many *Lactobacillus* strains demonstrate in vitro ability to inhibit the growth of some yeast and filamentous fungi, such as *Candida* spp. and others. The mechanisms include the production of microbial metabolites such as milky acid, hydrogen peroxide, etc. Previous studies have mainly involved *Lactobacillus* strains isolated from vaginal microflora, not from endometrial samples.

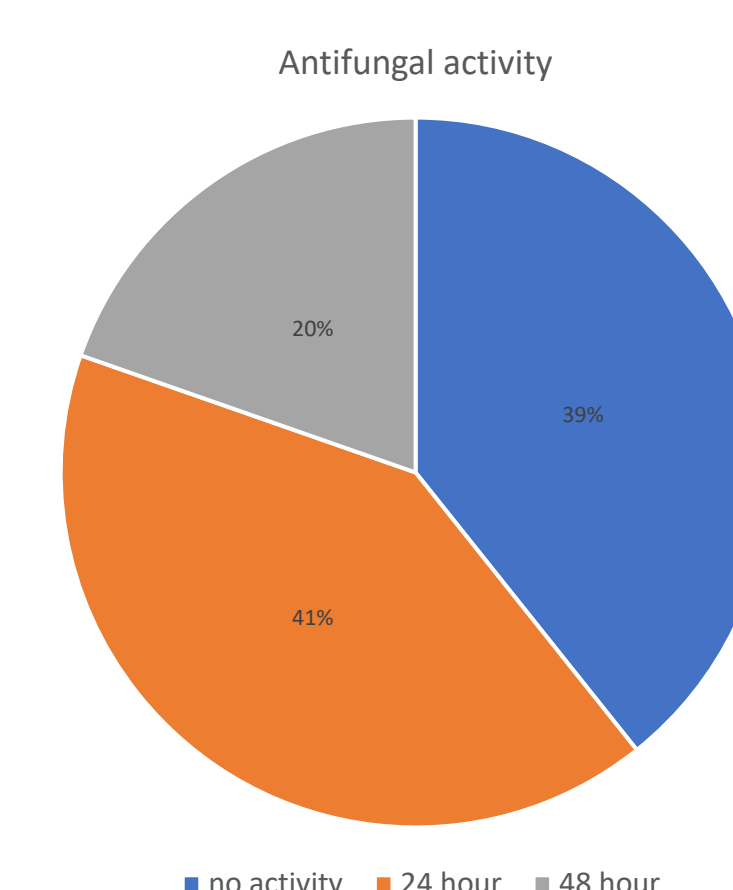
Aim: The aim of the present study is to investigate the potential of *Lactobacillus* isolates from endometrial biopsies for antifungal activity and their ability to produce substances with radical-scavenging activity.

Materials and methods The antifungal activity of 63 *Lactobacillus* spp isolates against *Candida albicans* ($OD_{600} = 0.317$) was investigated. The experiment was carried out according to the well diffusion method on petri dishes with potato dextrose agar and the microdilution resazurin method in 96-well plates. The DPPH radical scavenging activity of 39 *Lactobacillus* spp. supernatants was determined.

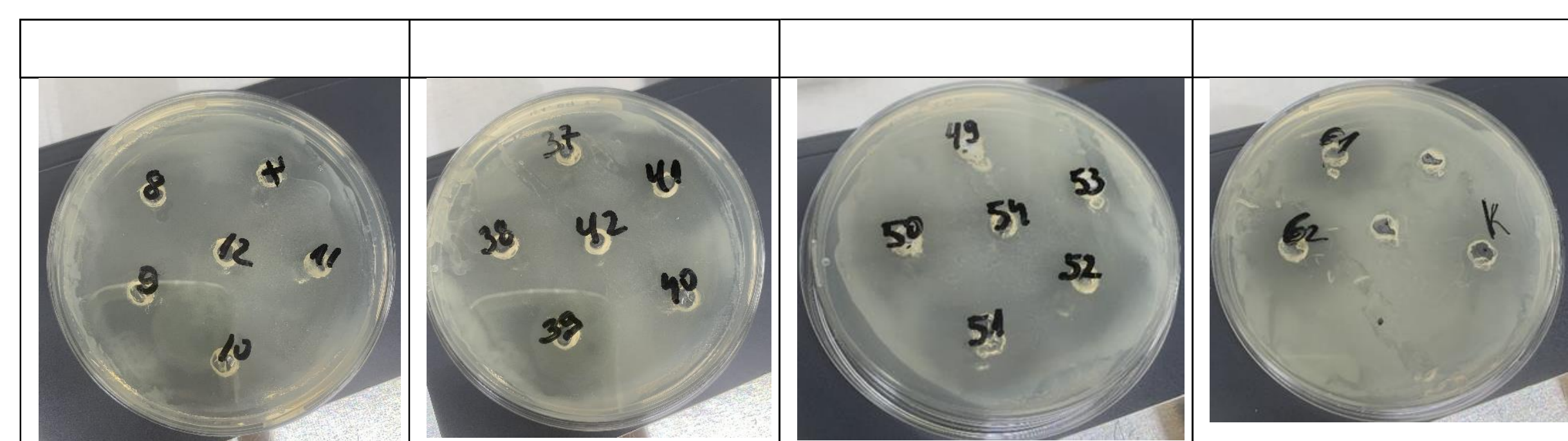
Results Antifungal activity refers to the ability of strains or substances to inhibit fungal pathogen growth. A significant part of *Lactobacillus* isolates demonstrate an ability to produce substances with antifungal activity. Forty-one percent of the isolates showed antifungal activity against *Candida albicans* 24 hours after inoculation. After 48 hours of cultivation, 20 % of isolates inhibit fungal growth.

strain	24 hour	48 hour	strain	24 hour	48 hour	strain	24 hour	48 hour
2			24			43	100	55
3	96		25	98		44	100	
4	94		26	100	88	45		
5	93		27			46	96	
6			28	98	53	47	99	84
7			29			48	99	
8			30	88		51		
9	71		31	97		52		
10			32	67		53		
11			33	98	98	54	100	58
12	57		34			55		
15			35			56		
16			36			57	91	83
17			37			58		
19			38			59		
20			39	100	41	60	100	65
21	87		40	99	98	61		
22			41	97	53	63	99	45
23	94	93	42	98	65			

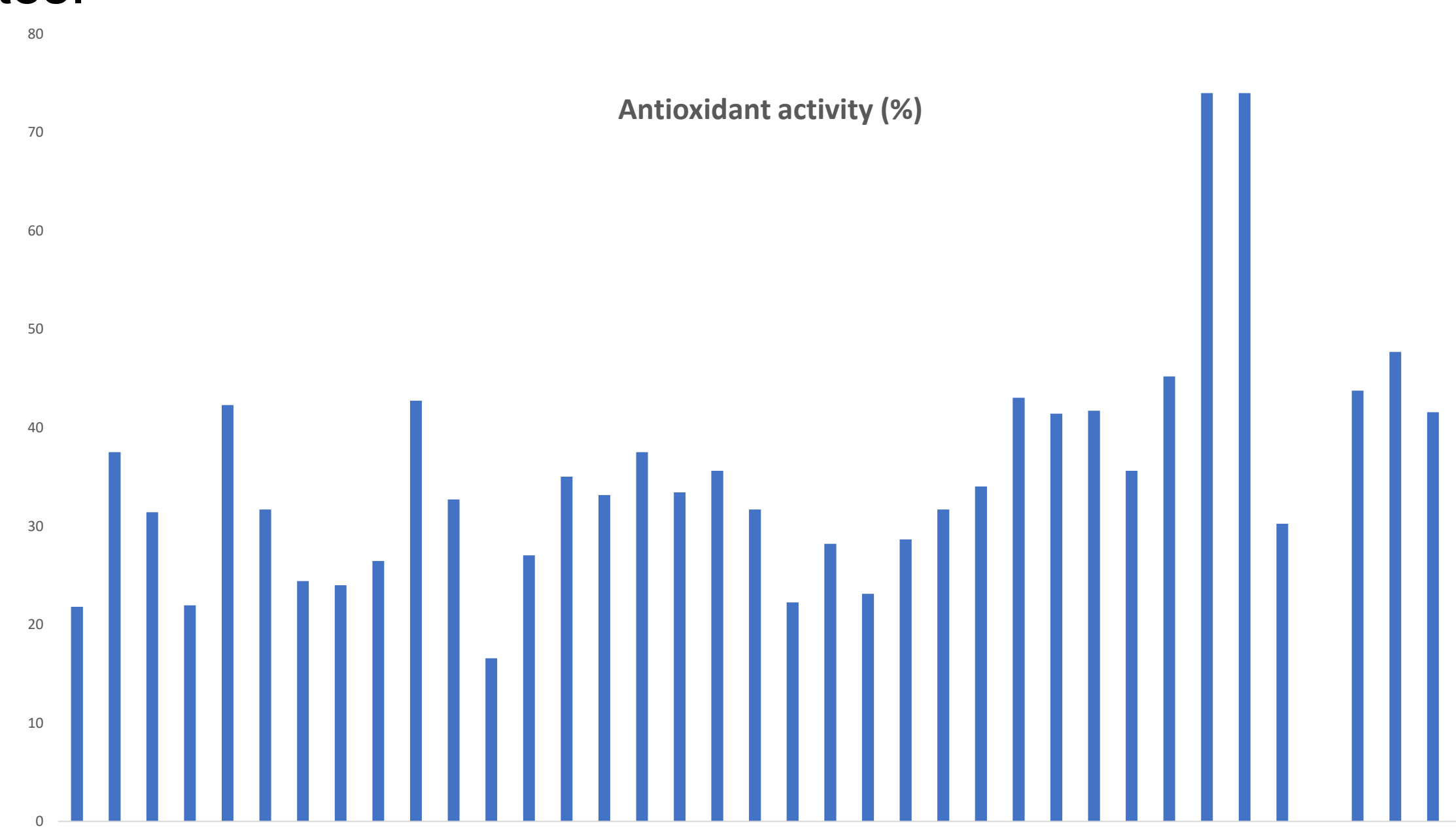
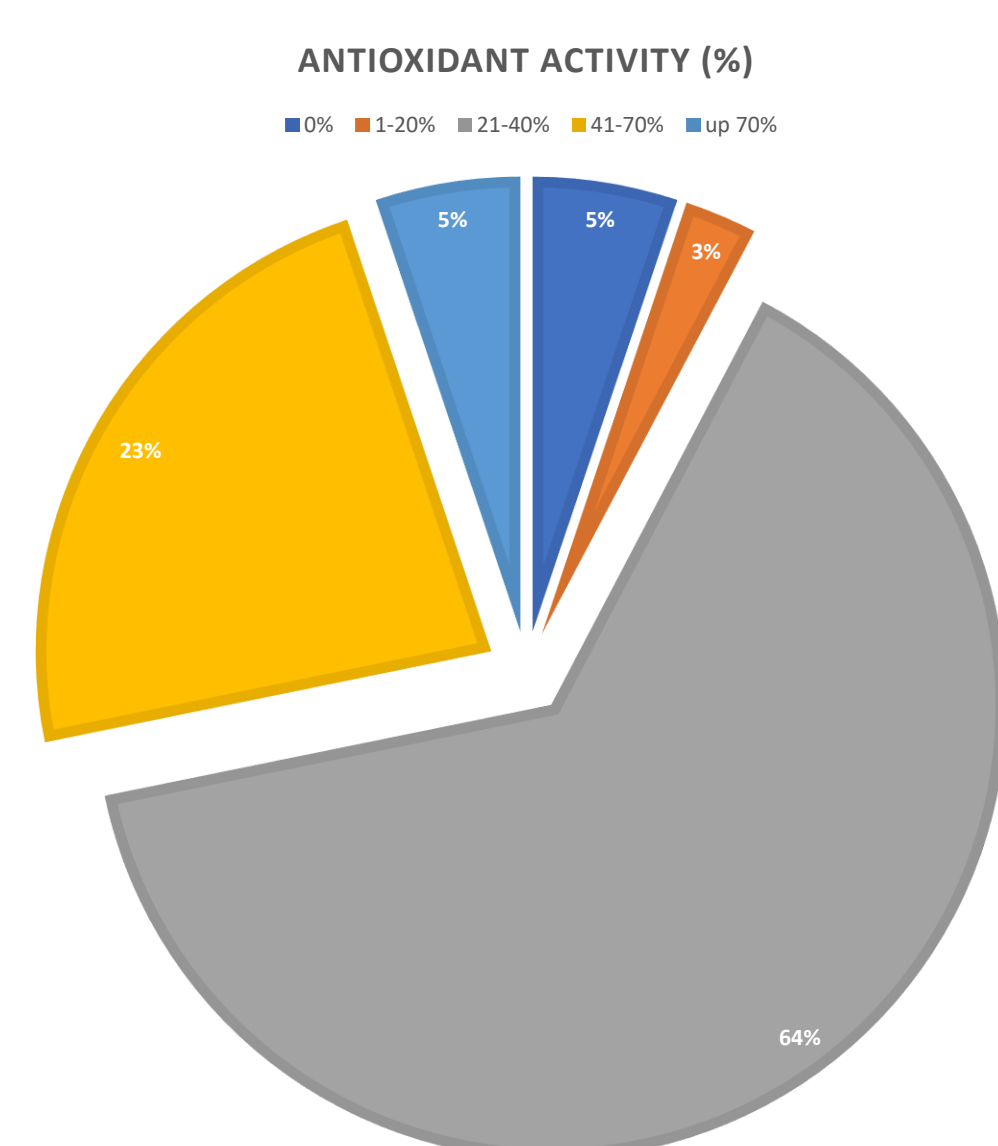
no activity
antifungal activity



After 24 hours of cultivation on petri dishes the average zone size was about 10-15 mm.



Radical scavenging activity of the isolates was investigated. About 5% of the investigated *Lactobacillus* strains don't have antioxidant activity. The highest ability to scavenge DPPH radical showed 5 % of isolates.



Conclusion *Lactobacillus* isolates from endometrial biopsies possess high antifungal activity against *Candida albicans*. They demonstrate the ability to produce substances with radical scavenging activity. The obtained results contribute to a better understanding of the role of *Lactobacillus* species in the endometrial microbiome.

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