ABORATORY



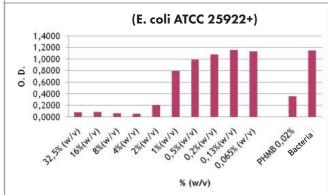
of Campania • Luigi Vanvitelli

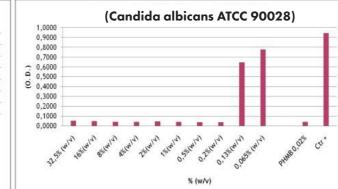
Dr. Francesca Martora

Medicine and Surgery Experimental Medicine

Section of Microbiology and Clinical Microbiology Prof. Maria Rosaria lovene

**Purpose:** Using ATCC producing and non-biofilm producing strains, the antibacterial and antifungal activity of INFECTVAGIN of its active principle polyhexamethylene biguanide (PHMB) was evaluated, through the evaluation of the minimum inhibitory concentration (MIC).





ATCC STRAINS NOT PRODUCING BIOFILM Staphylococcus epidermidis ATCC 12228

-Pseudomonas aeruginosa ATCC 13388 -Staphylococcus aereus ATCC 6538

ATCC STRAINS PRODUCING BIOFILM

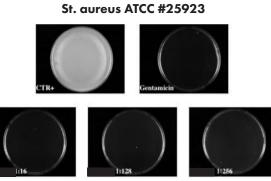
Staphylococcus aereus ATCC 25923 -Staphylococcus epidermidis ATCC 35984

-Enterococcus faecalis ATCC 29212 -Candida albicans ATCC 90028

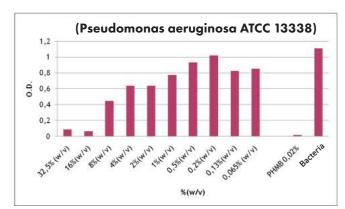
Enterococcus faecalis ATCC 29312

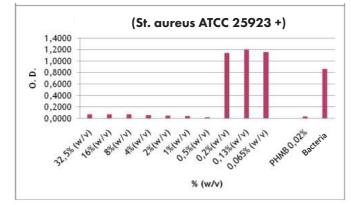
-Escherichia coli ATCC 11229

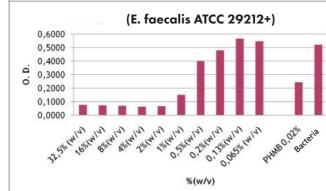
-Escherichia coli ATCC 25922



Comparison after dilution up to 256 times vs pure Gentamicin









# S.O.S. Therapy

DAY 1 → Vaginal solution in the morning

DAY 2 → Ovule 1 in the evening for 10 evenings

12<sup>TH</sup> DAY → Vaginal solution in the morning

## **INFECTVAGIN®** ovules

- Polyhexamethylenebiguanide (PHMB)
- Lactic acid

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- Equisetum arvense
- Glycerin
- Collagen



## **PLURIGIN®** solution

- Polyhexamethylenebiguanide (PHMB)
- E.D.T.A.
- Thymol
- Melaleuca
- Equisetum arvense
- Calendula









10 VAGINAL OVULES





The onset of a vaginal infection is often the consequence of a qualitative and / or quantitative alteration of the normal vaginal microflora. Vaginal infections can have fungal or bacterial origins or viral.

# **9 MILLION WOMEN EVERY YEAR** are diagnosed with **VAGINITIS** and/ or **VAGINOSIS**

" the pathogens associated with these pathologies all have a tendency to form BIOFILM due to CHRONICIZATION and RECURRENCE

### MAIN PATHOGENS INVOLVED

Gardnerella vaginalis, Candida albicans and Candida non- albicans (glabrata, krusei, tropicalis), Trichomonas vaginalis, Escherichia coli, staphylococci and streptococci.

\*According to the CDC (Center for Disease Control and Prevention in Atlanta USA, up to 80% of bacterial infections affecting people in Western countries are caused by polymicrobial BIOFILMS. The bacteria in a biofilm have increased resistance to both detergents and antibiotics for the dense extracellular matrix and the outer layer of cells, antibiotic resistance can increase up to 1000-fold.



THE INCREASE OF RESISTANCE OF BACTERIA TO ANTIBIOTICS COMPLICATES THE TREATMENT OF INFECTIONS, THE IMPROPER USE OF ANTIBIOTIC THERAPY CONSTITUTES THE MOST WIDESPREAD CAUSE FOR THE APPEARANCE AND DEVELOPMENT OF RESISTANT STRAINS

Pathogens associated with bacterial cystitis, vaginitis and vaginosis, they all have there tendency to form BIOFILM.

This explains the cases of absent or incomplete responses to antibiotic and antifungal therapies (Metronidazole/ Clindamycin), responsible for resistance, relapses and chronicity.

#### MANAGEMENT of a «VAGINITIS>>

- 1) IDENTIFICATION OF THE CAUSE AGENT
- 2) CHOICE OF AN EFFECTIVE THERAPY

SILIS

ANAGEMEN

3) RESTORATION OF THE VAGINAL ECOSYSTEM

## MODERN ANTISEPTIC MAY BE A VALID ALTERNATIVE TO TOPICAL **ANTIBIOTIC TREATMENT**

Today it is possible to leave behind the << THERAPEUTIC MINIMALISM» based on topical ANTIBIOTICS and adopt innovative strategies such as...



INFECTVAGIN OBSERVATIONAL STUDY MANAGEMENT OF A VAGINITIS Class III device able to eradicate pathogenic microorganisms also organized in BIOFILM, but not aggressive towards lactobacilli.



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# INFECTVAGIN ovules | VS | ANTIBIOTIC THERAPY

**OBJECTIVE:** To evaluate the therapeutic efficacy and tolerability of INFECTVAGIN in the treatment of bacterial vaginosis.

MATERIAL AND METHODS: 90 women with symptoms typical for vaginosis were enrolled, divided into two groups (A and B) of 45 women aged between 18 and 45 years.

Group A was treated with local antibiotics (clindamycin, nifuratel, meclocycline) in the form of ovules or creams, one application in the evening for 10 days.

Group B was treated with INFECTVAGIN, a 2.9 g ovule. the evening for 10 days.

#### **RESULTS**

Group <<A>> treated with antibiotics showed: a reduction of discomfort in 75%, the vaginal swab was sterile in 60%, the pH was always greater than 5, the concentration of lactobacilli was low or absent in all cases, the women complained of vaginal dryness and dyspareunia in 15% of cases, a recurrence occurred after one month in 16%

Group <<B>> treated with INFECTVAGIN ovules showed: absence of symptoms in 96%, the vaginal swab was free of contaminating germs in 90%, the pH showed values between 4-4.5 in all cases; the vaginal swab showed a high concentration of lactobacilli in 80%. The women studied did not complain of side effects and in this group there were no recurrences one month after the start of treatment.

#### CONCLUSION

The use of a device with a disinfectant action and therefore with a broad antimicrobial action should be preferred to antibiotic therapy. Antibiotic therapy has been shown to destroy the lactobacillus. Therapy with **INFECTVAGIN ovules** allows a multiplication of the lactobacillus.

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