COMPOSITION FOR IMPROVING UROGENITAL HEALTH

CROSS-REFERENCE TO RELATED APPLICATION

[0001] This application claims priority of Taiwan patent application No. 108114789, filed on April 26, 2019, the content of which is incorporated herein in its entirety by reference.

BACKGROUND OF THE INVENTION

1. Field of the Invention

[0002] The present invention relates to a method for health care by using a probiotic bacterial strain. Particularly, the present invention relates to a method of improving urogenital health by using a novel *Lactobacillus johnsonii* strain.

2. The Prior Art

[0003] Previous studies have shown that the rectum, vagina, and bladder in females are in close proximity anatomically so that microorganisms in the gut can enter the genitourinary tract via bacterial adhesion. This process is considered natural that provides the vagina and outer urethra with the microflora required to maintain health condition. Under normal circumstances, various *Lactobacilli* such as *Lactobacillus crispatus* and *Lactobacillus jenesenii*, colonize the vagina and form the dominant populations, which exclude pathogens from the vagina, produce lactic acid and maintain a pH value of 3.8 to 4.5 in the vagina to inhibit the propagation of pathogens,

WHAT IS CLAIMED IS:

1. A composition for improving urogenital health, comprising an effective amount of a culture supernatant of *Lactobacillus johnsonii* strain or a combination of the *Lactobacillus johnsonii* strain and the culture supernatant, and a pharmaceutically acceptable carrier, wherein the *Lactobacillus johnsonii* strain is deposited under the accession number of DSM 33288, and wherein the culture supernatant is obtained by the following steps: culturing the *Lactobacillus johnsonii* strain in a culture medium to obtain a bacteria culture, and centrifugating the bacteria culture to obtain the culture supernatant.
2. The composition of claim 1, wherein the culture supernatant of *Lactobacillus johnsonii* strain or the combination of the *Lactobacillus johnsonii* strain and the culture supernatant inhibits growth of a bacterial or fungal pathogen causing a urinary tract infection.
3. The composition of claim 2, wherein the bacterial or fungal pathogen causing the urinary tract infection is *Escherichia coli*.
4. The composition of claim 1, wherein the culture supernatant of *Lactobacillus johnsonii* strain or the combination of the *Lactobacillus johnsonii* strain and the culture supernatant inhibits growth of a bacterial pathogen causing a bacterial vaginal infection.
5. The composition of claim 4, wherein the bacterial pathogen causing the bacterial vaginal infection is *Gardnerella vaginalis*.
6. The composition of claim 1, wherein the culture supernatant of *Lactobacillus johnsonii* strain or the combination of the *Lactobacillus johnsonii* strain and the

culture supernatant inhibits growth of a fungal pathogen causing a fungal vaginal infection.

7. The composition of claim 6, wherein the fungal pathogen causing the fungal vaginal infection is *Candida* spp.

8. The composition of claim 1, wherein the culture supernatant of *Lactobacillus johnsonii* strain or the combination of the *Lactobacillus johnsonii* strain and the culture supernatant is to be administered orally.

9. An oral or topical composition for inhibiting the growth of pathogenic bacteria and fungi in the urogenital tract, comprising an effective amount of a culture supernatant of *Lactobacillus johnsonii* strain or a combination of the *Lactobacillus johnsonii* strain and the culture supernatant, and a pharmaceutically acceptable carrier, wherein the *Lactobacillus johnsonii* strain is deposited under the accession number of DSM 33288, and wherein the culture supernatant is obtained by the following steps: culturing the *Lactobacillus johnsonii* strain in a culture medium to obtain a bacteria culture, and centrifugating the bacteria culture to obtain the culture supernatant.

10. The composition of claim 1, being in the form of a powder, a granule, a liquid, or a paste.

11. The composition of claim 9, wherein the pathogenic bacteria in the urinary tract is *Escherichia coli*.

12. The composition of claim 9, wherein the pathogenic bacteria in the urinary tract is *Gardnerella vaginalis*.

13. The composition of claim 9, wherein the fungi in the urogenital tract is *Candida spp*.