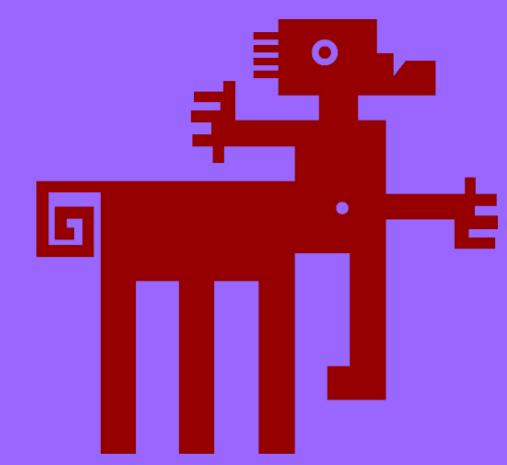


ALTERNATIVES TO THE USE OF ANTIBIOTICS IN LIVESTOCK

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1. INTRODUCTION

- Antibiotics are essential drugs for the treatment of most bacterial infectious processes
- There is an association between the use of antibiotics and the development of the antibiotic resistance
- The demand and consumption of antibiotics have not stopped increasing worldwide

2. OBJECTIVES

To emphasize the importance of an appropriate and responsible use of antibiotics to stop resistance and to make known the possible alternatives

4. ALTERNATIVES TO ANTIBIOTICS

Feed additives

- Prebiotics → oligosaccharides and polysaccharides
- Probiotics → *Bacillus*, *Enterococcus* and *Lactobacillus*
- Organic acids → acetic and lactic acids

Bacteriophage therapy

Preventive effects against some pathogens such as *E. coli* O157:H7, *Salmonella* and *Campylobacter*

- Endolysins → glucosidase and amidase

Immunomodulatory agents

- Vaccines
- Others → minerals, vitamins, aa and hormones

Antimicrobial peptides

Small amphipathic peptides that have direct and indirect antimicrobial activity against bacteria, fungi and viruses

- Gramicidin and polymyxin

Phytochemicals

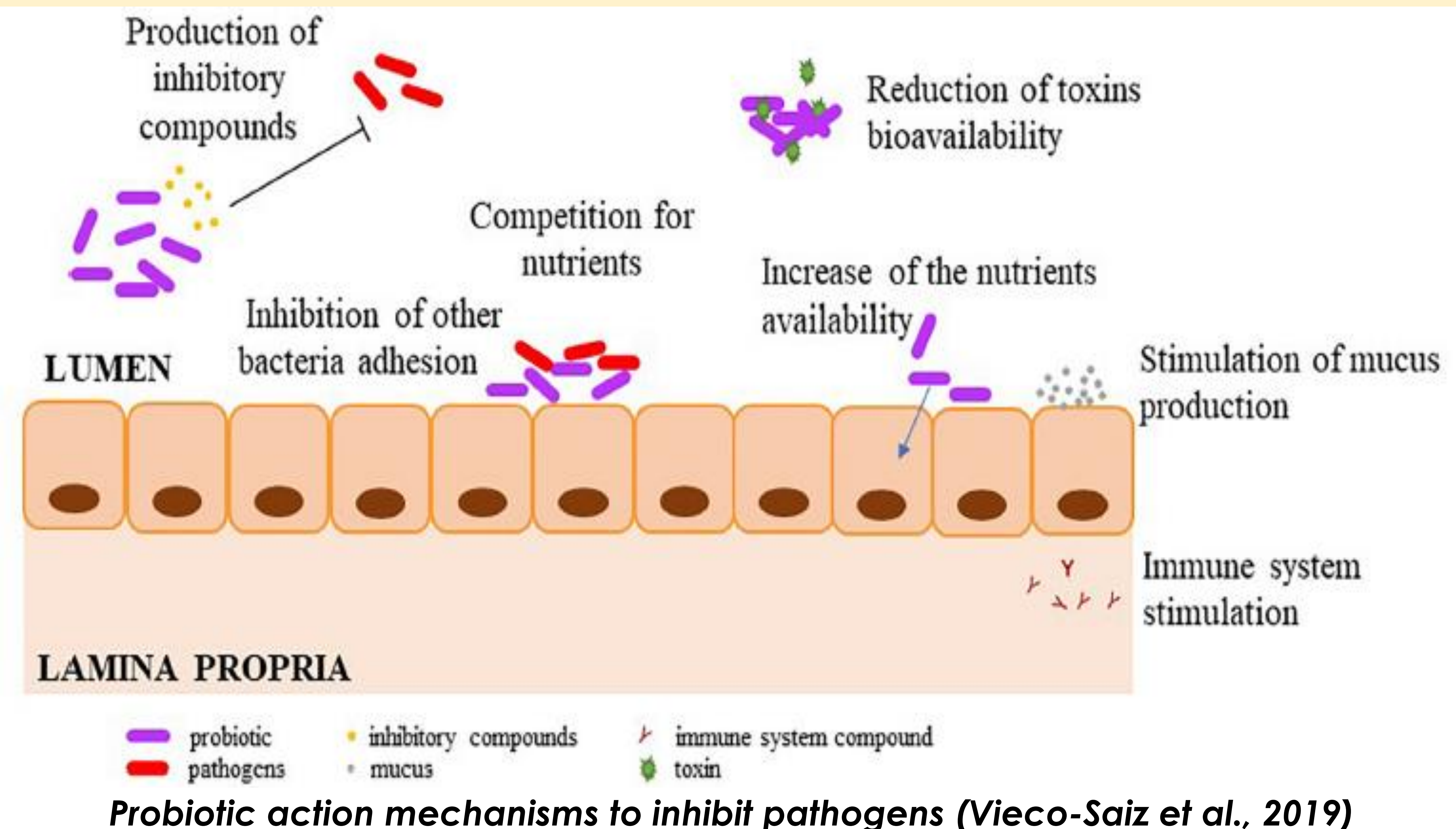
Natural bioactive compounds derived from plants

- Tannins, saponins and essential oils

3. USE AND ABUSE OF ANTIBIOTICS

Non-therapeutic uses of antibiotics are linked to the spread of multidrug resistance. Between 2000 and 2010 human global consumption of antibiotics has grown by more than 30%, and the consumption in livestock is also abusive

REGULATIONS, PLANS AND STRATEGIES



5. CONCLUSIONS

There is a need to develop efficient alternatives, but they still cannot replace existing antibiotics. It is necessary to continue promoting the alternatives and to ensure enough economical resources. This is an issue that affects many sectors worldwide and therefore it requires global and multidisciplinary actions