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INFOINVENT

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Influence of streptomycete biomass on the physiological indicators of homeothermic animals

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Aim:

It consist in obtaining biomass of streptomycetes during cultivation on nutrient media and using it as an additive in a standard diet to increase the body weight of homeothermic animals (laboratory rats Wistar).



Solution:

Using a 4-aminobenzoic acid as a stimulator of productivity, lipids, phospholipids and sterols biosynthesis by the *Streptomyces massasporeus* CNMN-Ac-06 strain.

Advantages:

- ✓ increase the absolutely dry biomass by 212.76%, synthesis of lipids by 32.28%, phospholipids by 111.5% and sterols by 366.66%;
- ✓ increase in the resistance of the experimental animals and a more intensive restoration of the body's physiological capabilities after exposure to adverse environmental conditions.

Stage of implementation:

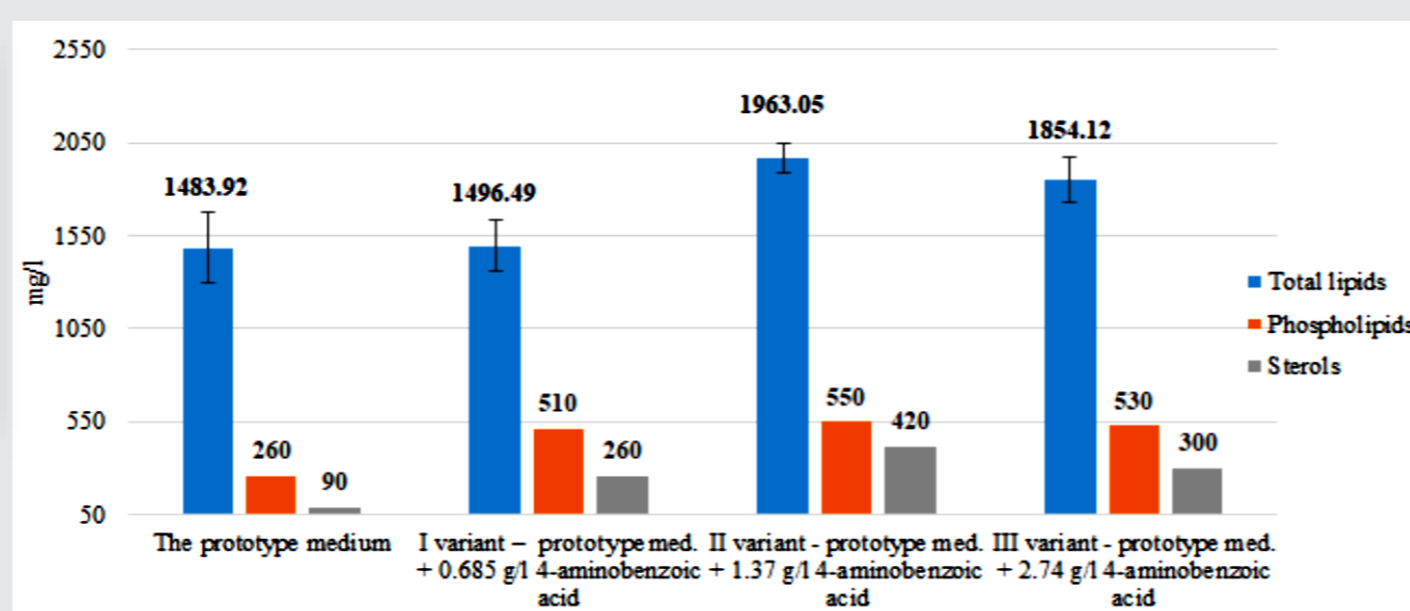
Laboratory prototype.

Essence:

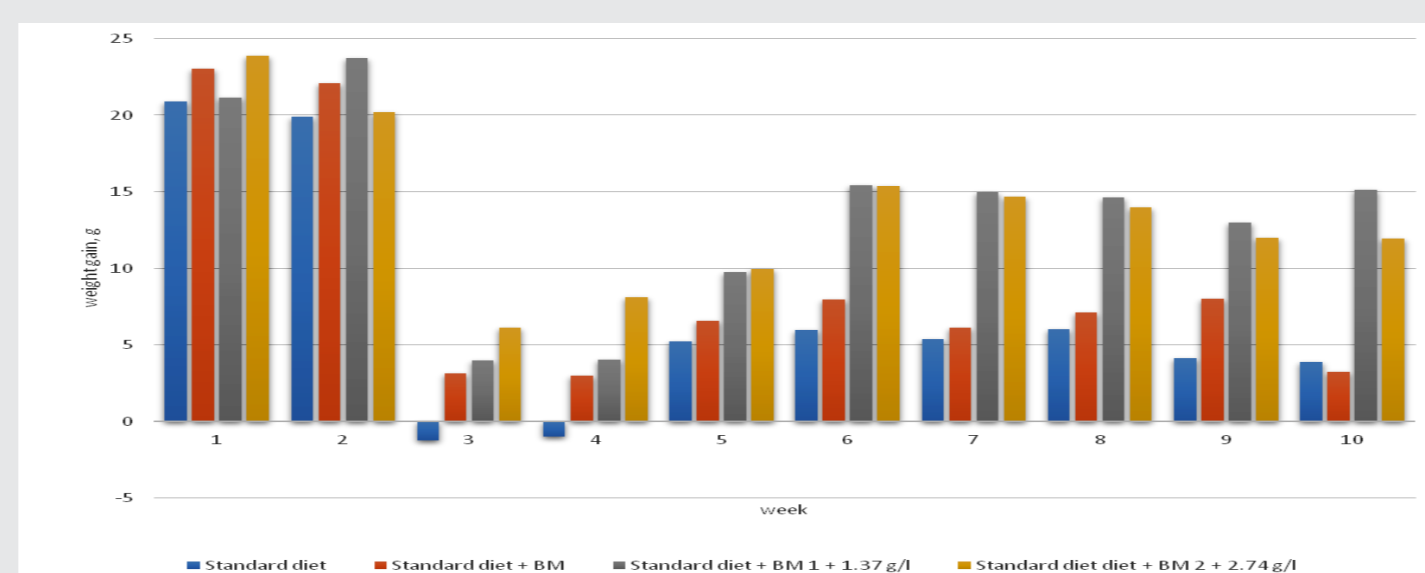


An optimized nutrient medium is proposed for submerged cultivation of *Streptomyces massasporeus* CNMN-Ac-06 strain, which contains 1.37 g/L 4-aminobenzoic acid. The proposed medium increases the amount of biomass by 212.7%, lipids by 32.28%, phospholipids by 111.5% and sterols by 366.66%.

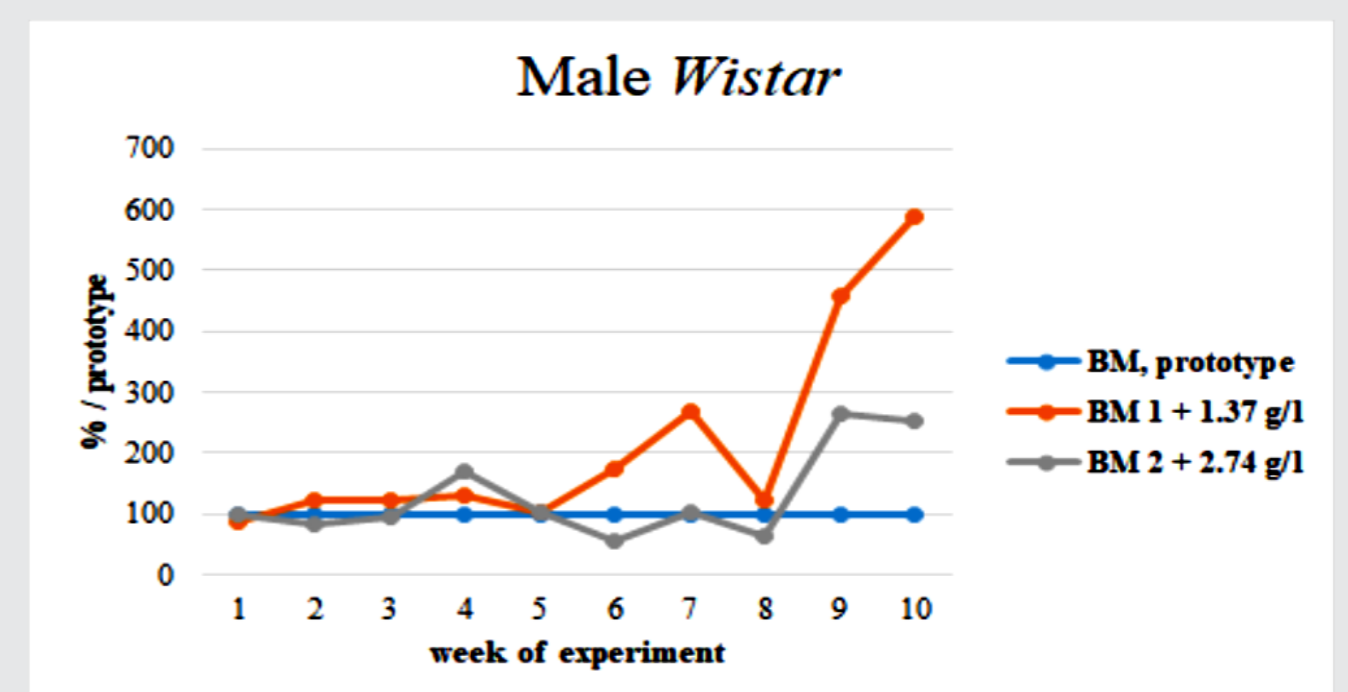
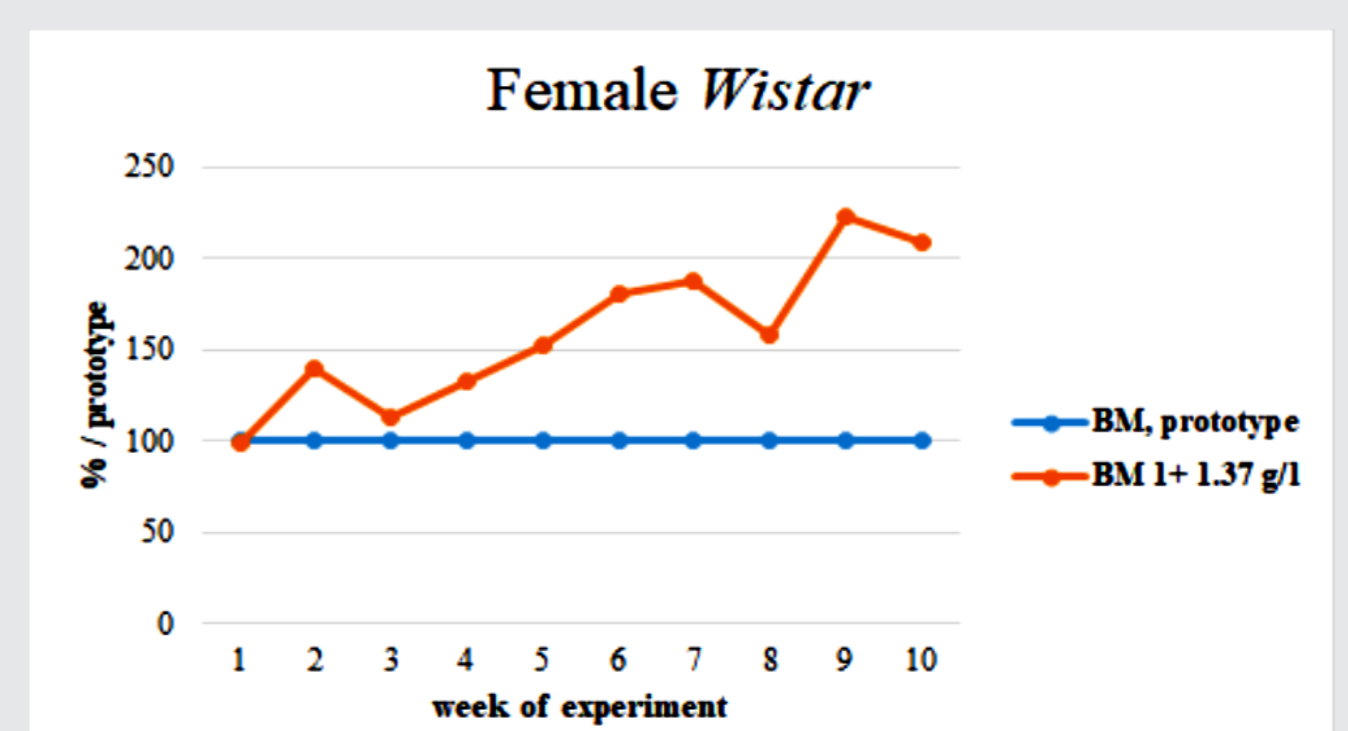
Supplementing the diet of white Wistar rats with biomass of *Streptomyces massasporeus* CNMN-Ac-06, in a quantity of 250 mg/kg body weight per day for 5-10 weeks, provides an increase in the resistance of the experimental animals and a more intensive restoration of the body's physiological capabilities after exposure to adverse environmental conditions.



The dependence of the productivity of *S. massasporeus* CNMN-Ac-06 on the concentration of 4-aminobenzoic acid in the nutrient medium



Dynamics of weight gain in male white rats *Wistar* with a standard diet supplemented with biomass of *Streptomyces massasporeus* CNMN-Ac-06 cultivated on a nutrient medium with 4-aminobenzoic acid under after stress conditions.



Dynamics of weekly weight gain of male and female white rats *Wistar* following the consumption of the diet containing the biomass of *S. massasporeus* CNMN-Ac-06 strain cultivated on medium with 4-aminobenzoic acid in comparison with the prototype, g / %.

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