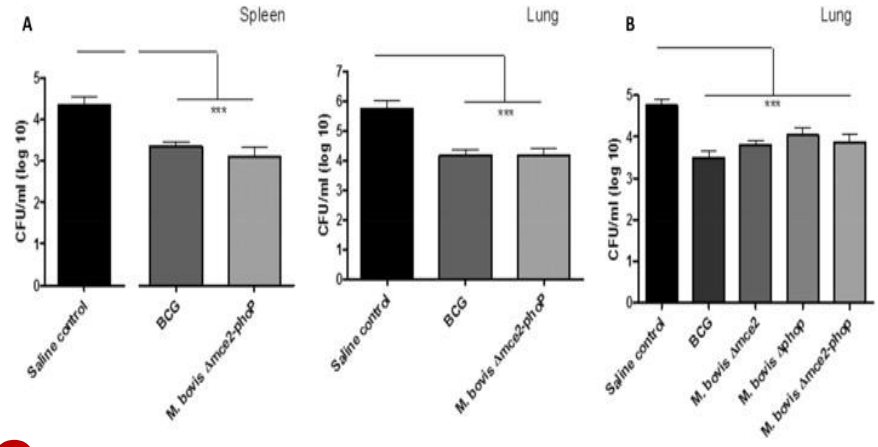
#30B-18 Recombinant vaccine against Bovine Tuberculosis



Colony-forming units count in spleen and lung of mice vaccinated with BCG vaccine or *M.bovis* Δmce2-pop, challenged with *M.bovis.*

Mycobacterium bovis is the bacterium that causes bovine tuberculosis (BTB), but also infects humans. BCG vaccine does not provide complete protection for bovine cattle and there are no approved vaccines against this disease at present.

Out of the 374 million heads in America and the Caribbean, 70% stand in high-prevalence areas and 17% in areas that are almost disease-free. Brazil and Argentina feature an estimated BTB prevalence of 3% and 6% respectively.

The Biotechnology Institute developed a vaccine formulation by deleting virulence genes (mce2 and phoP-phoR) from an *M .bovis* strain to obtain an attenuated mutant. This vaccine candidate was evaluated in a murine model with promising results for the potential field test.

ADVANTAGES:

- Induces protection against the *M. bovis* challenge in a murine model.
- Easy production from live cultured organisms.
- Safety in industrial-scale production.

TECHNOLOGY READINESS LEVEL: Experimental proof-of-concept completed. Product prototype validated in the laboratory.

INTELLECTUAL PROPERTY RIGHTS STATUS: Vaccine formulation and recombinant structure qualify for invention patent protection.

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