MG4617 | BACTERIOPHAGE ANATOMY

Anatomical model of Bacteriophage T4, a virus that infects the *Escherichia coli* bacterium, presented in enlarged size. This detailed model allows visualization of its main structures, numbered and hand-painted, facilitating the study and understanding of this important bacteriophage.

Applications:

Ideal for the study and teaching of virology, microbiology, and molecular biology. Used in schools, universities, and laboratories for demonstration and training. Allows comparative analysis of viral structures.

Technical Features:

* Resin with approval in toxicological tests;

* High-precision molding;
* Manufactured in stable synthetic material;
* Numbered and hand-painted;
* Includes an information card with related structures;
* Mounted on a polymer base;
* References and markings to facilitate the identification of structures.

3D Technology and Augmented Reality:

Our anatomical models offer a visual complement through information cards that activate 3D models viewable in augmented reality (AR). This interactive platform assists learning, allowing comparative analysis of anatomical structures and offering resources for continuing education in anatomy, physiology, and pathophysiology.

Technical Specifications:

* Scale: Enlarged compared to natural size
* Material: Resin

Main Structures:

Head: The head of bacteriophage T4 is icosahedral, containing the double-stranded DNA viral genome. It is composed of several structural proteins that self-assemble to form the protective capsid of the genetic material.

DNA inside the head: The double-stranded DNA inside the head of bacteriophage T4 carries all the genetic information necessary for viral replication. It is compacted inside the capsid.

Neck: The neck connects the head to the tail of the bacteriophage, acting as an important structural link for infection.

Central tail cavity: The central tail cavity is an internal channel that runs through the bacteriophage tail, playing an important role in the injection of genetic material into the host cell.

Contractile tail sheath: The contractile tail sheath is a protein structure that surrounds the tail and contracts during the infection process, assisting in penetration into the bacterial cell.

Tail fiber: The tail fibers are long, thin appendages that project from the end of the tail and

act as receptors, recognizing and binding to the surface of the *Escherichia coli* bacterium.

Tail spike: The tail spikes are small structures that project from the end of the tail, contributing to binding and penetration into the bacterial cell.

Baseplate: The baseplate is the terminal structure of the tail, which serves as an anchoring point for the tail fibers and spikes, as well as assisting in the penetration of the viral DNA into the host cell.

Other structures can be verified directly on the physical piece or on the interactive 3D model.

About the Anatomical Models:

They are developed with resin replication technology, offering an alternative for teaching and research. They present the main morphological characteristics with good cost-benefit, resistance, hand painting, and numbering for identification of the structures.

List of all visible structures:

- Head
- Head DNA
- Neck
- Central Tail Cavity
- Tail Sheath
- Tail Fiber
- Tail Spike
- Baseplate