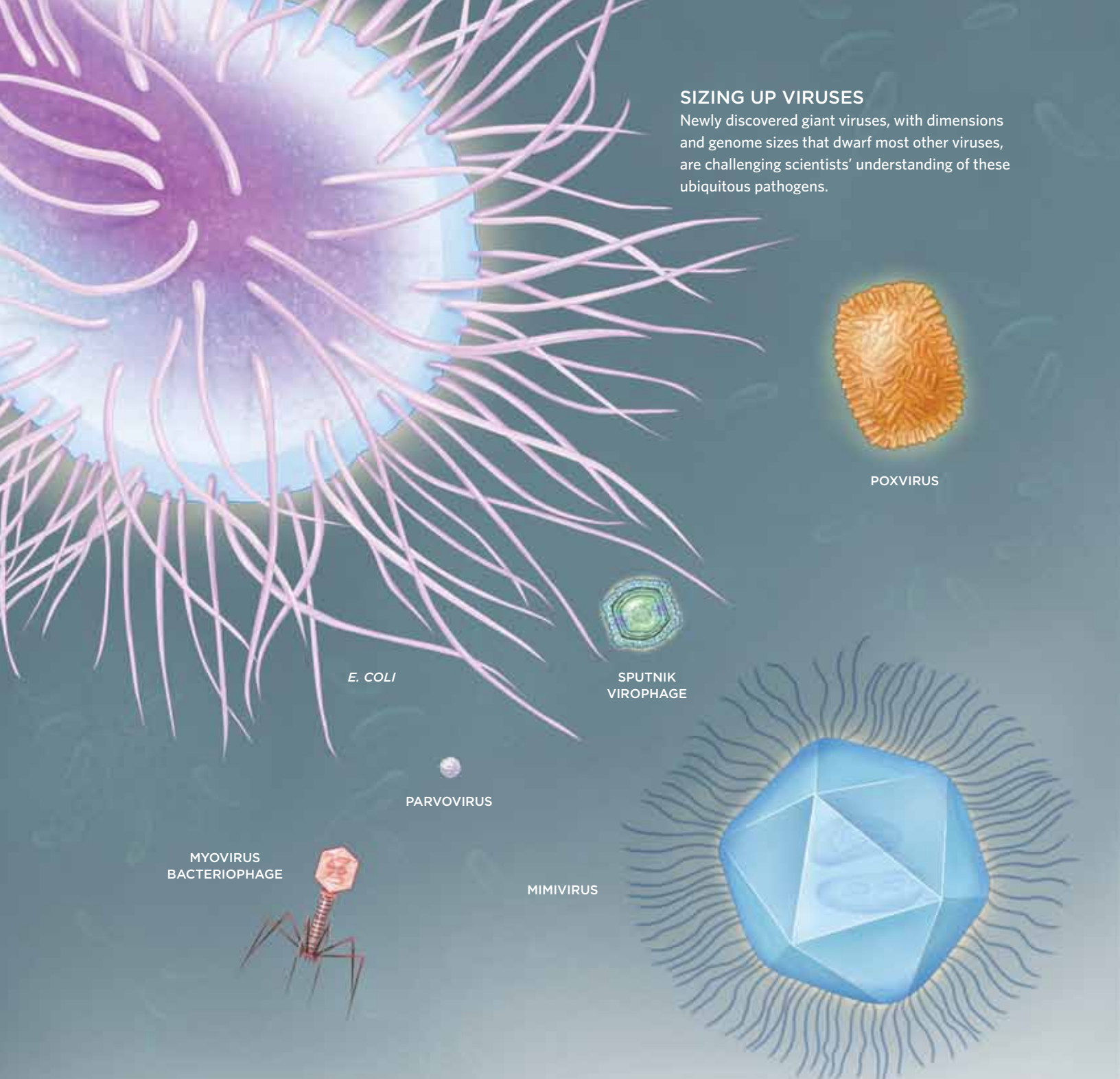


## SIZING UP VIRUSES

Newly discovered giant viruses, with dimensions and genome sizes that dwarf most other viruses, are challenging scientists' understanding of these ubiquitous pathogens.



*E. COLI*

SPUTNIK  
VIROPHAGE

POXVIRUS

PARVOVIRUS

MYOVIRUS  
BACTERIOPHAGE

MIMIVIRUS

### PARVOVIRUS

- At just 18–26 nm in diameter, these are some of the smallest viruses on Earth.
- Linear, single-stranded DNA; averaging 5,000 base pairs

### SPUTNIK VIROPHAGE

- 74 nm in diameter
- Circular double-stranded DNA; 18,343 base pairs

### MYOVIRUS BACTERIOPHAGE

- Head diameter of 50–110 nm
- Linear, double-stranded DNA; 33,600 to 170,000 base pairs

### POXVIRUS

- Around 200 nm in diameter and 300 nm in length
- Linear, double-stranded DNA; 130,000 to 375,000 base pairs

### MIMIVIRUS

- Approximately 400 nm (0.4  $\mu\text{m}$ ) in diameter
- Linear, double-stranded DNA; 1.2 million base pairs

### *E. COLI*

- About 2.0  $\mu\text{m}$  long and 0.25–1.0  $\mu\text{m}$  in diameter
- Circular DNA molecule; 4.6 million base pairs

### *ACANTHAMOEBA POLYPHAGA (NOT PICTURED)*

- 15 to 35  $\mu\text{m}$  in length
- Host in which Mimivirus was first discovered