



A breath of fresh Science



1. You are a clinician-scientist and you have an urgent job at hand. A patient is suffering from a chronic cough and weight loss. You have to figure out what is troubling her. Since she has a cough, you take her sputum samples. The smear is stained and viewed under a microscope. It's clear — the sample contains microorganisms, single-celled and rod-shaped.

These organisms are the first piece of the puzzle.

Unscramble the letters to identify them:

T A I R B C E A

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2. You can't work with these organisms in a regular lab. The risk of airborne infection is too high. So, you move into a secure, high-containment facility. It has sealed rooms, pressure controls, and trained staff. Every movement is recorded. Every step follows protocol.

Only facilities like this can safely handle pathogens of this level. Unjumble the letters and find out which lab you will need to go to:

E F A Y B I O S T

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L A B

3. It is not enough to just see the pathogens. You have to know what they're doing. You collect samples and send them to another facility, where proteins are isolated, analysed, and identified. These proteins are the working parts of the pathogen, revealing how it survives, resists drugs, and affects the host.

This facility on your campus specializes in large-scale protein analysis.

What facility can be used for this? Unjumble the letters and find out:

R C T O E P M S I O

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4. You've progressed step-by-step:

- a. You isolated the pathogen from the patient's sputum.
- b. You worked in a high-containment lab designed for pathogens.
- c. You studied the pathogen's protein machinery.

Taken together, these investigations point to a slow-growing lung pathogen that evades immunity, requires months of treatment, and is commonly referred to by a three-letter abbreviation. Pick the circled letters in the previous questions and unjumble them.

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