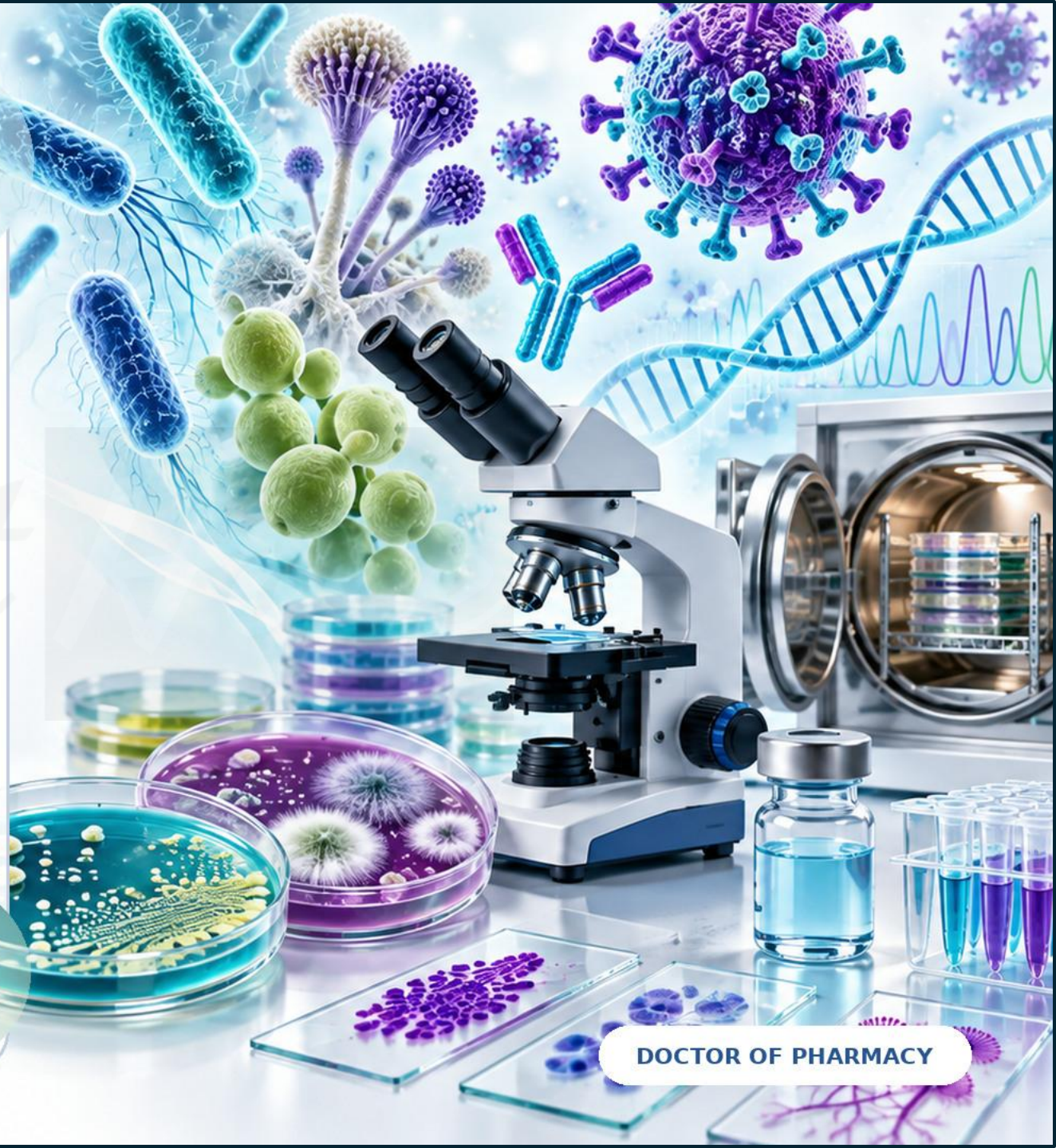
PHARM.D • YEAR 2

Pharmaceutical Microbiology

CHAPTER 10

Study of Infectious Diseases: Typhoid, Tuberculosis, Malaria and Cholera

PPT CHAPTER COVER



DOCTOR OF PHARMACY

Infection: Agent, Route and Evidence

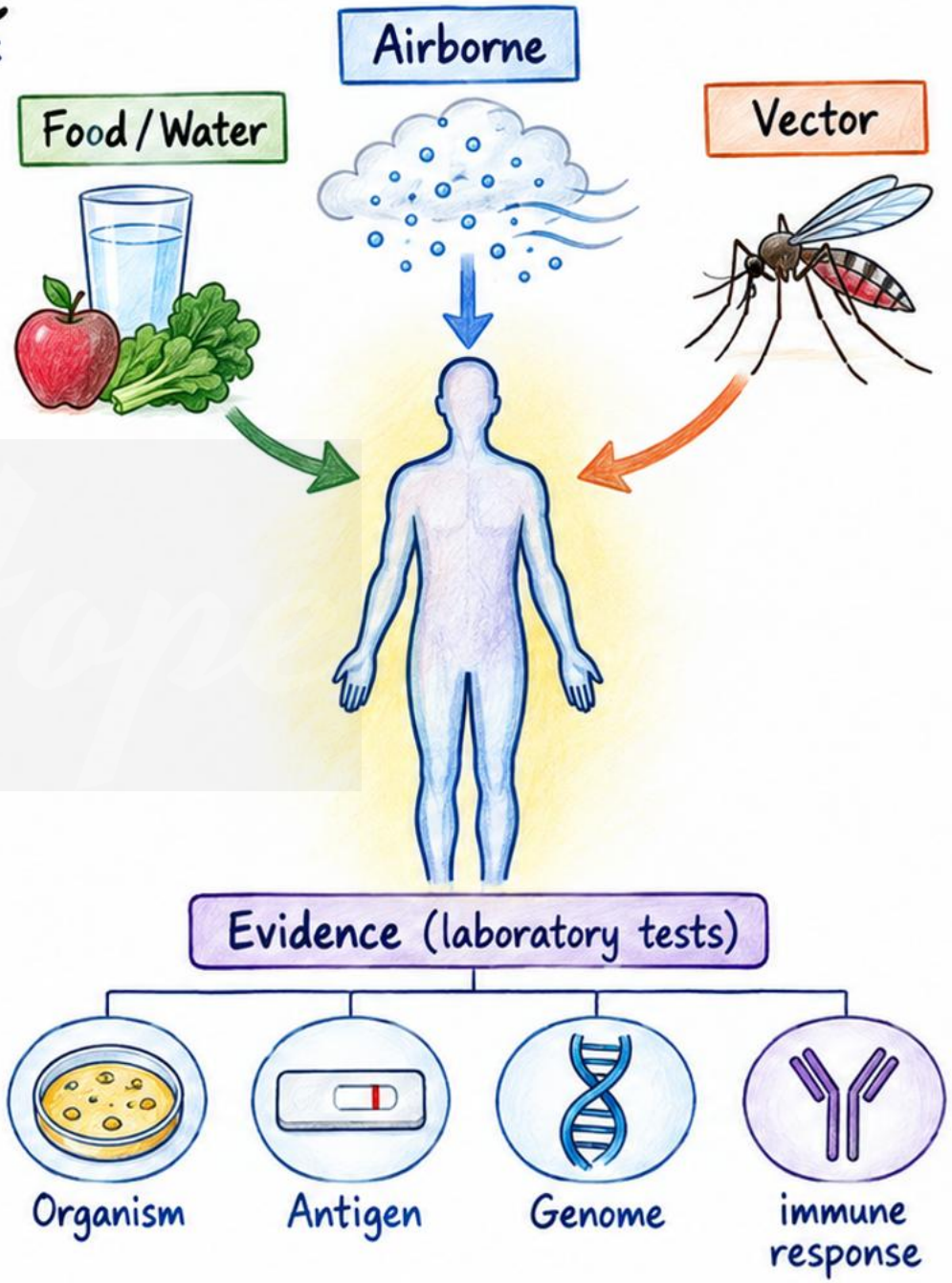
Infectious disease links an agent, route of exposure, host response and clinical syndrome.

Laboratory tests differ in whether they detect an organism, antigen, genome or immune response.

A treatment plan also depends on severity, comorbidity and local resistance patterns.

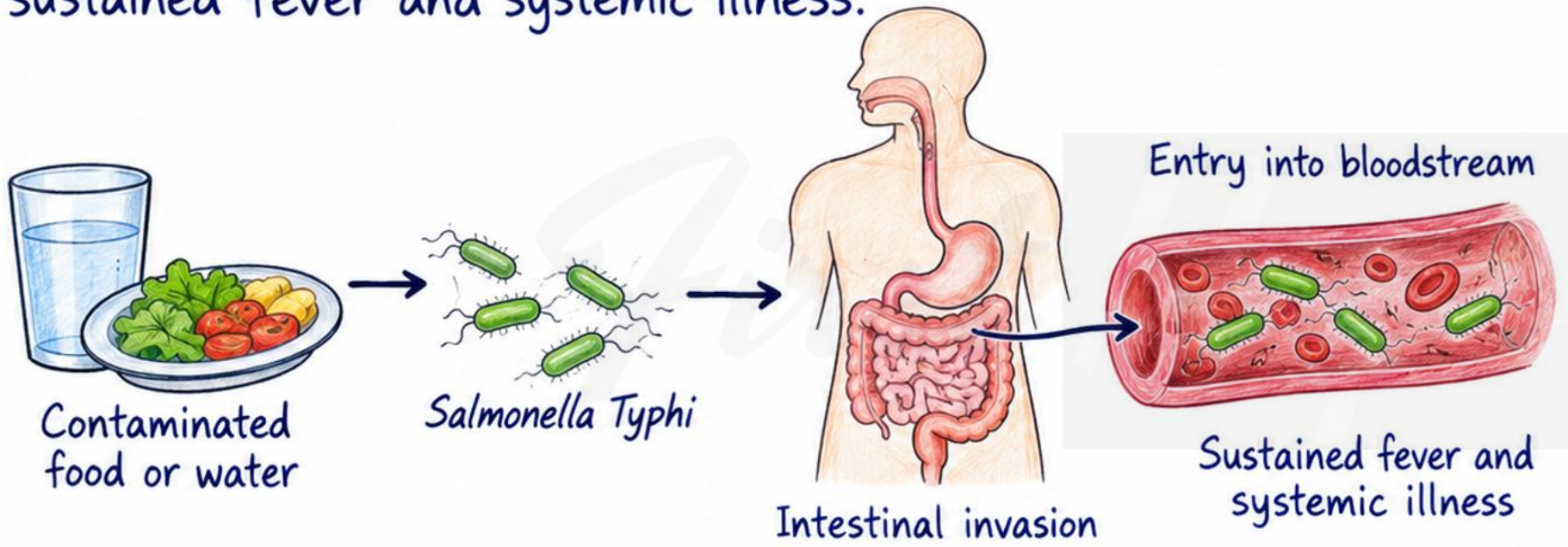
The disease summaries in this chapter are revision notes, not patient-specific treatment instructions.

Keep the diagnostic and prevention questions separate: a route explains exposure, a test measures evidence, and disease severity shapes management.



Typhoid: Enteric Fever

Typhoid fever is caused by *Salmonella Typhi* and spreads mainly through contaminated food or water. After intestinal invasion, organisms may enter the bloodstream and cause sustained fever and systemic illness.



Blood culture



Blood culture is the diagnostic mainstay when available.

Widal serology



Widal serology is unreliable and not recommended by CDC for diagnosis.

Treatment selection should follow susceptibility and local guidance; prevention includes safe water, sanitation and vaccination for appropriate risk.

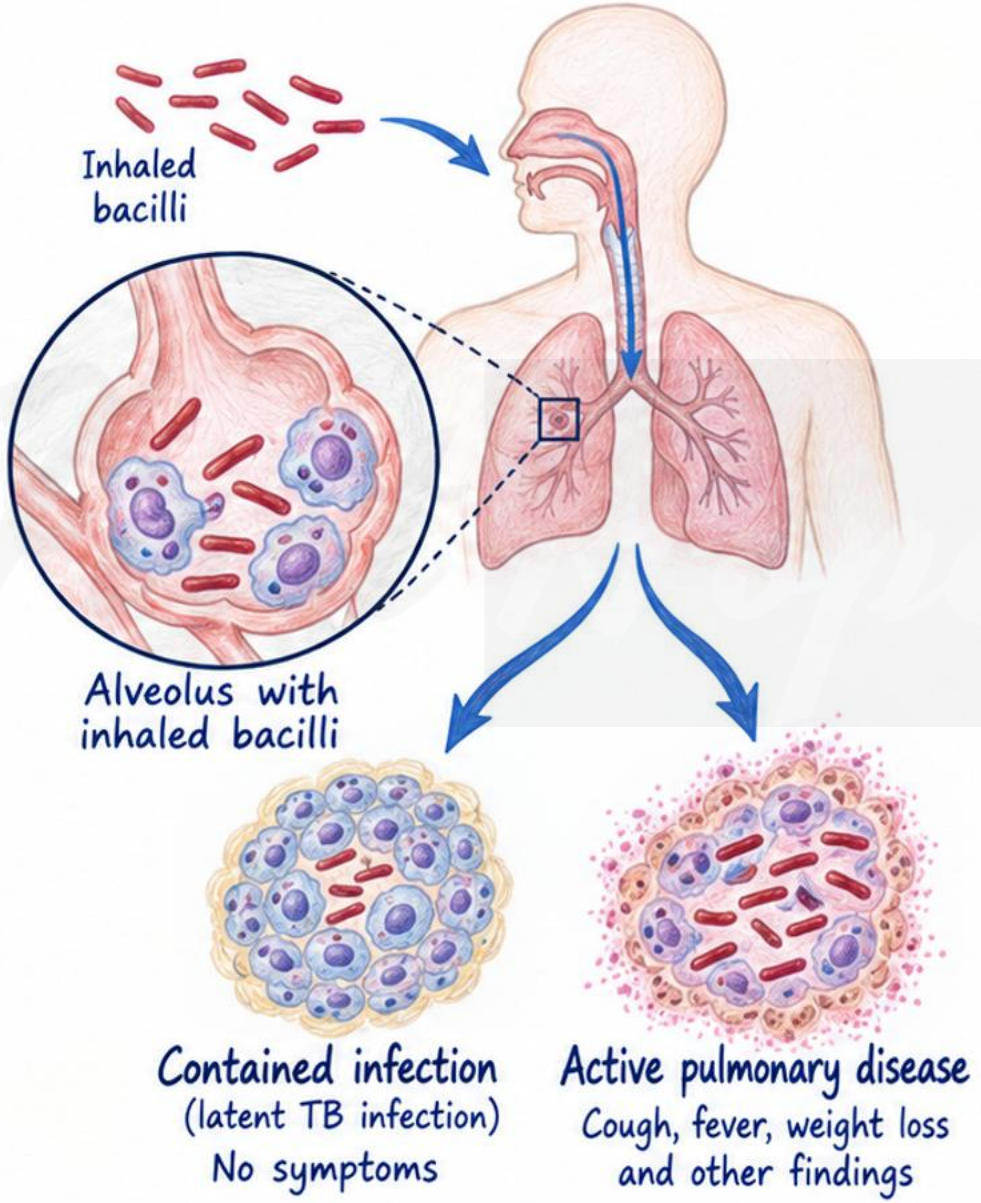
Human carriers can continue transmission even after acute illness. Public-health measures address the fecal–oral route while laboratory work confirms disease.

Tuberculosis: Infection and Disease

Mycobacterium tuberculosis spreads through inhaled airborne particles.

Bacilli may persist in a contained infection without symptoms or cause active disease with cough, fever, weight loss and other findings.

Latent TB infection and active TB disease require different evaluations.



A positive tuberculin test does not prove active disease; microbiological testing and imaging are used when active TB is suspected.

An immune test reflects prior sensitization, not bacilli in the lung. Evaluate symptoms, imaging and microbiology when active pulmonary TB is possible.

Tuberculosis: Diagnosis and Control

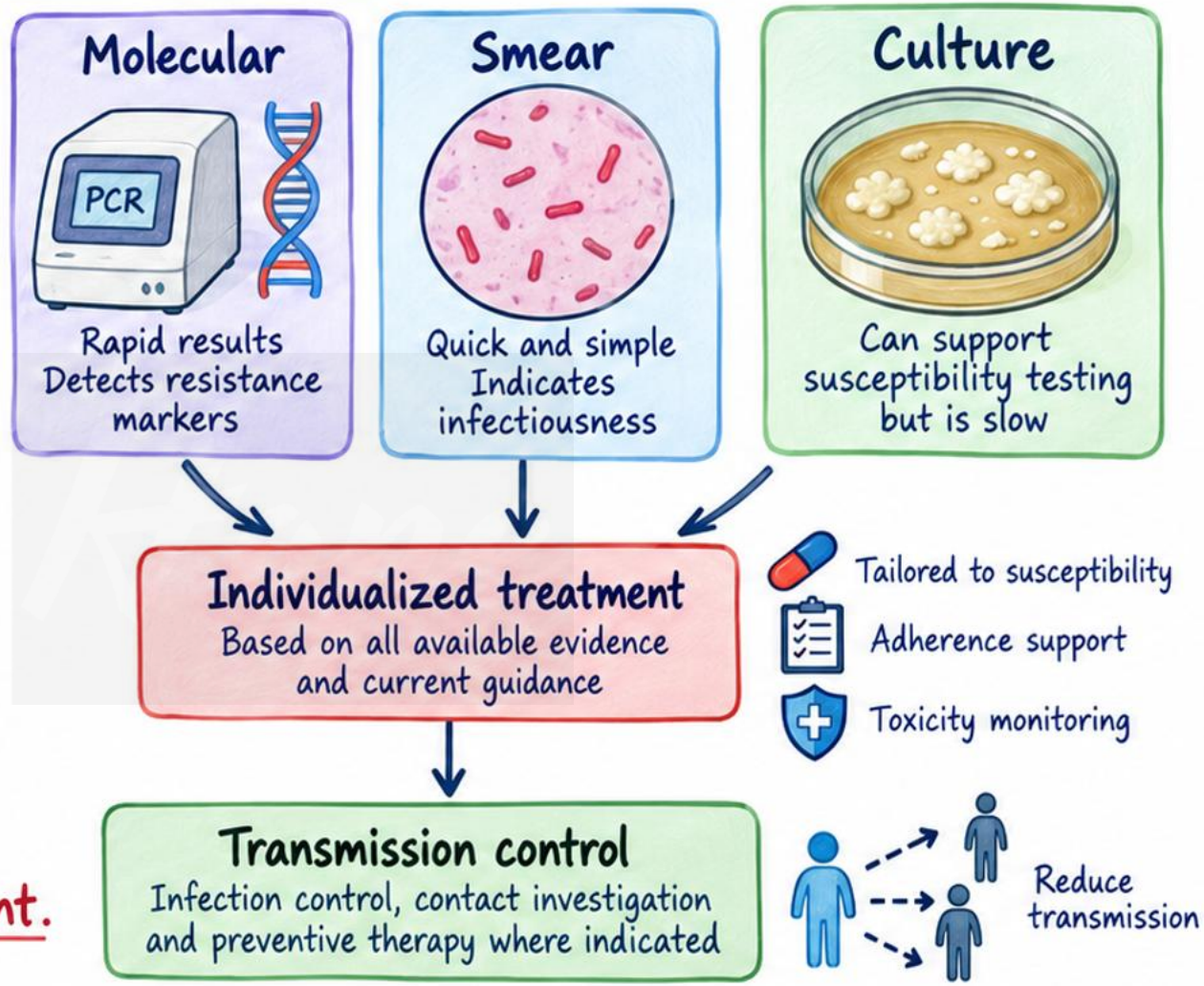
Rapid molecular tests, smear and culture have complementary roles in TB diagnosis and drug-resistance assessment.

Active disease requires a multidrug regimen tailored to susceptibility and current guidance, with adherence support and toxicity monitoring.

Drug-resistant TB needs specialist-directed treatment.

Infection control, contact investigation and preventive therapy where indicated reduce transmission.

Do not use a single fixed regimen for every patient.



Culture can support susceptibility testing but is slow; **molecular** results arrive faster yet may not answer every resistance question. Use **complementary evidence**.

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