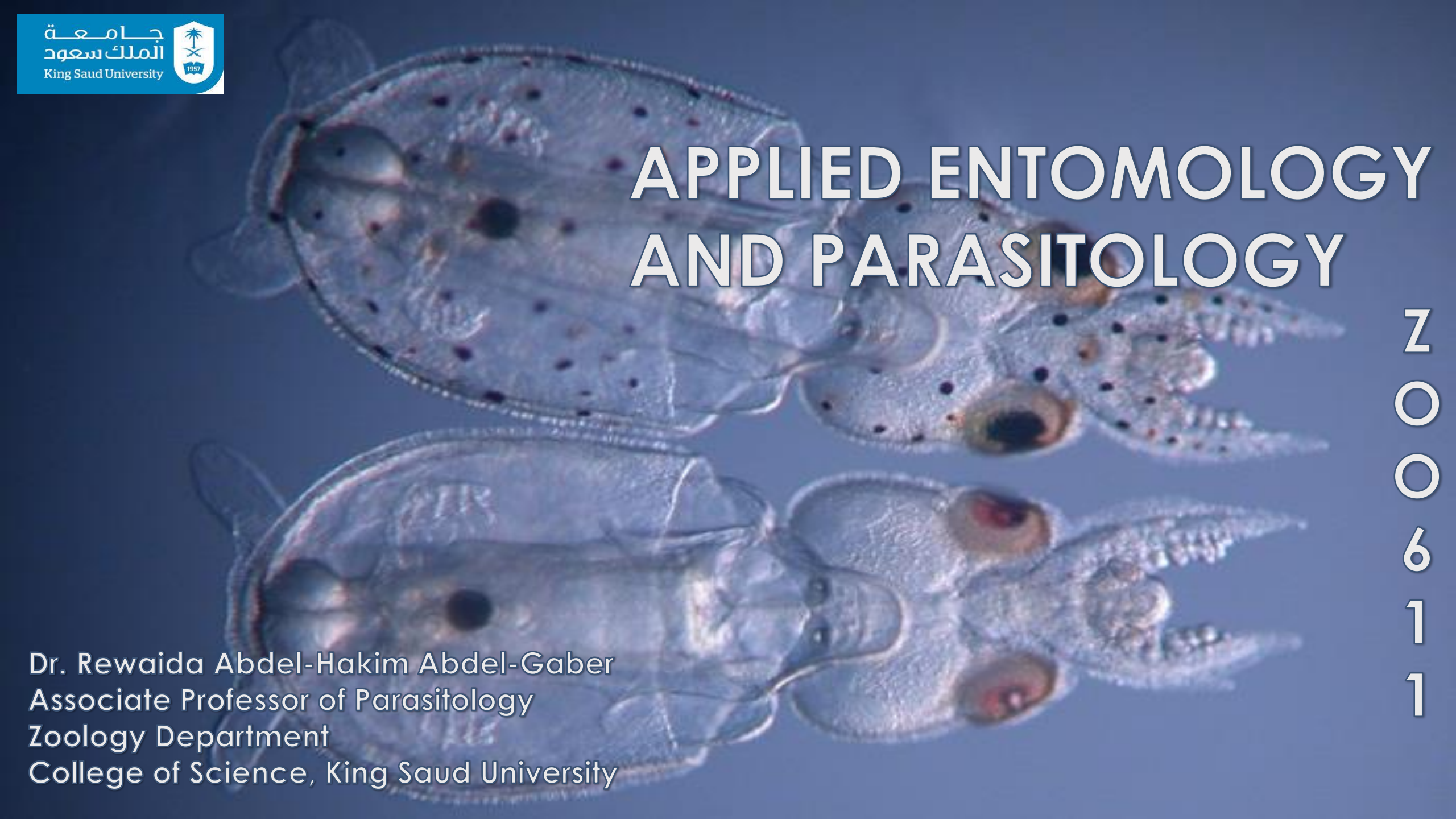


# APPLIED ENTOMOLOGY AND PARASITOLOGY

ZOO611

Dr. Rewaida Abdel-Hakim Abdel-Gaber
Associate Professor of Parasitology
Zoology Department
College of Science, King Saud University

## Course details

**Course title:** Applied Entomology and Parasitology (ZOO 611)
**Credit hours:** 2 (2+0)
**Teacher name:** Dr Rewaida Abdel-Hakim
**Office:** 105 (3rd Floor)
**E-mail:** rabdelgaber.c@ksu.edu.sa

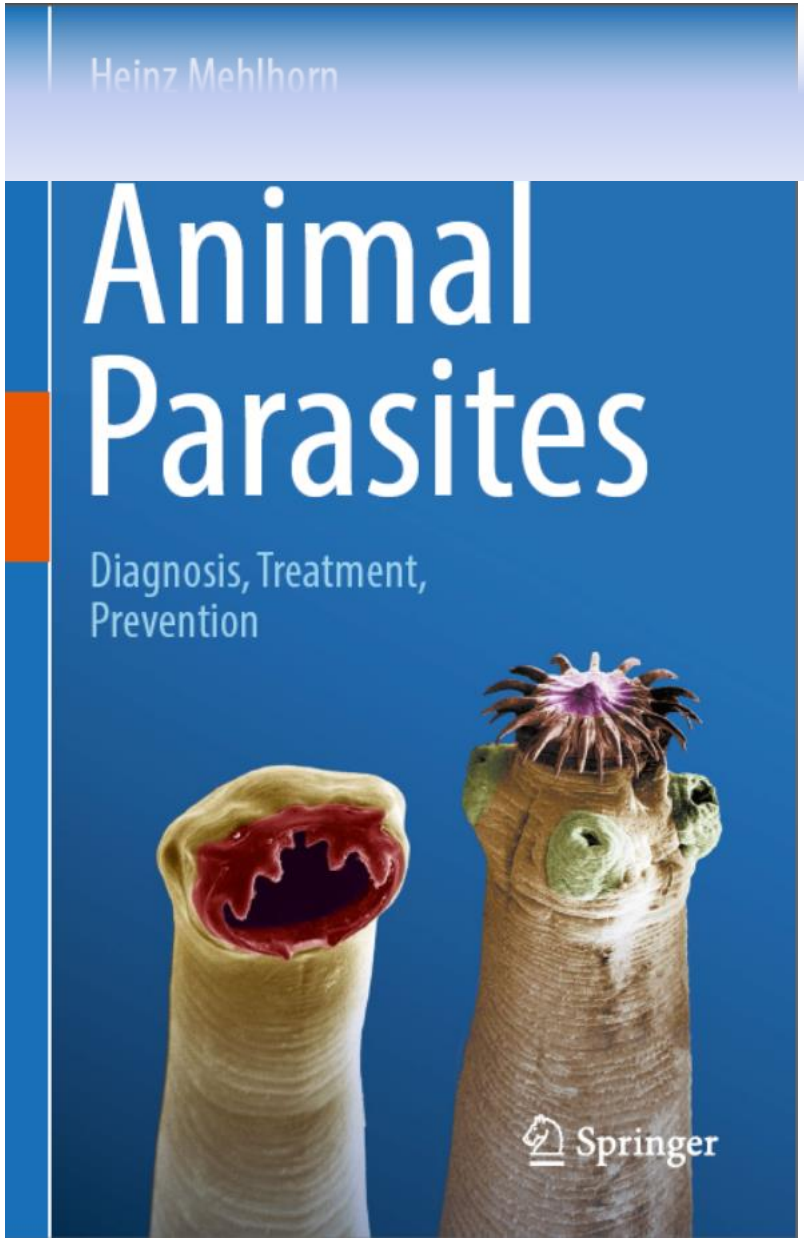
## Evaluation and assessment

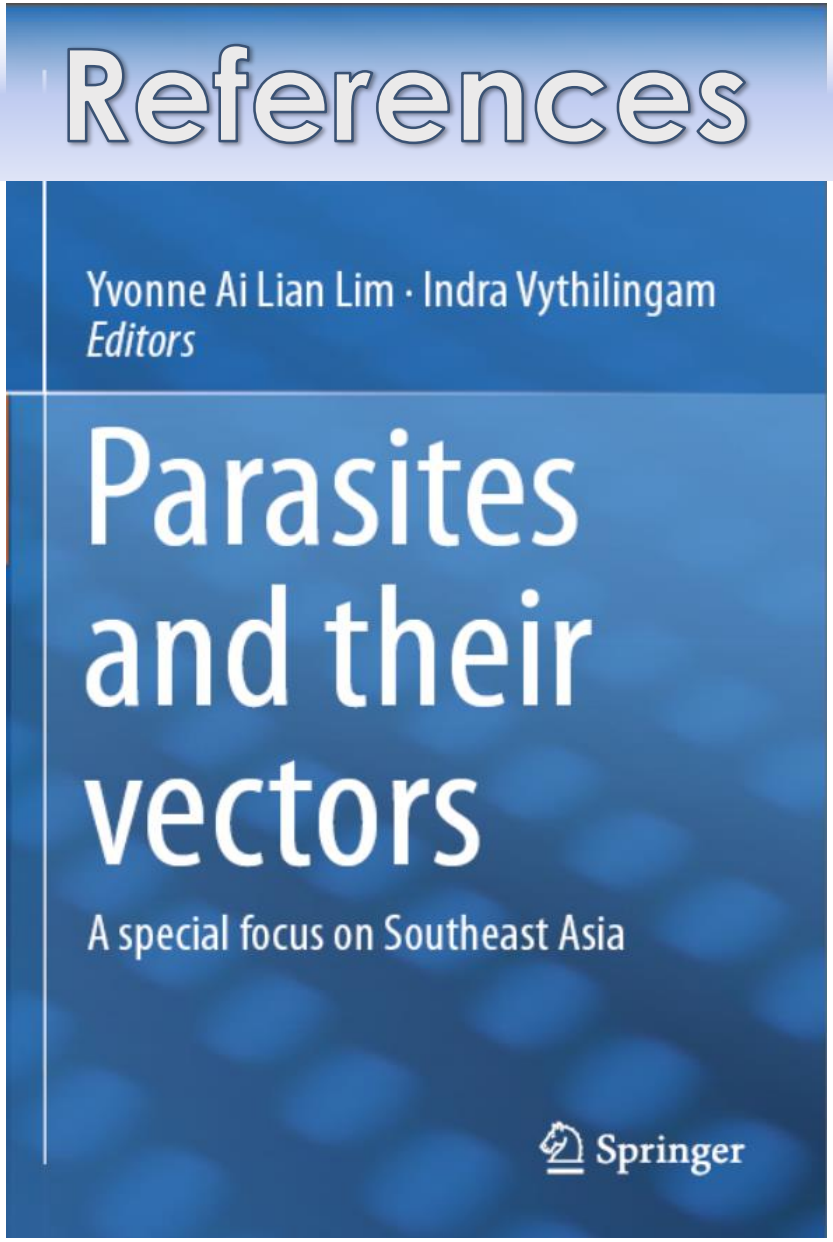
| | Activities | % |
|---|---|---|
| 1 | First midterm exam | 30% |
| 2 | Assignments | 20% |
| 3 | Presentation (project) | 10% |
| 4 | Final Exam | 40% |
| | Total | 100% |

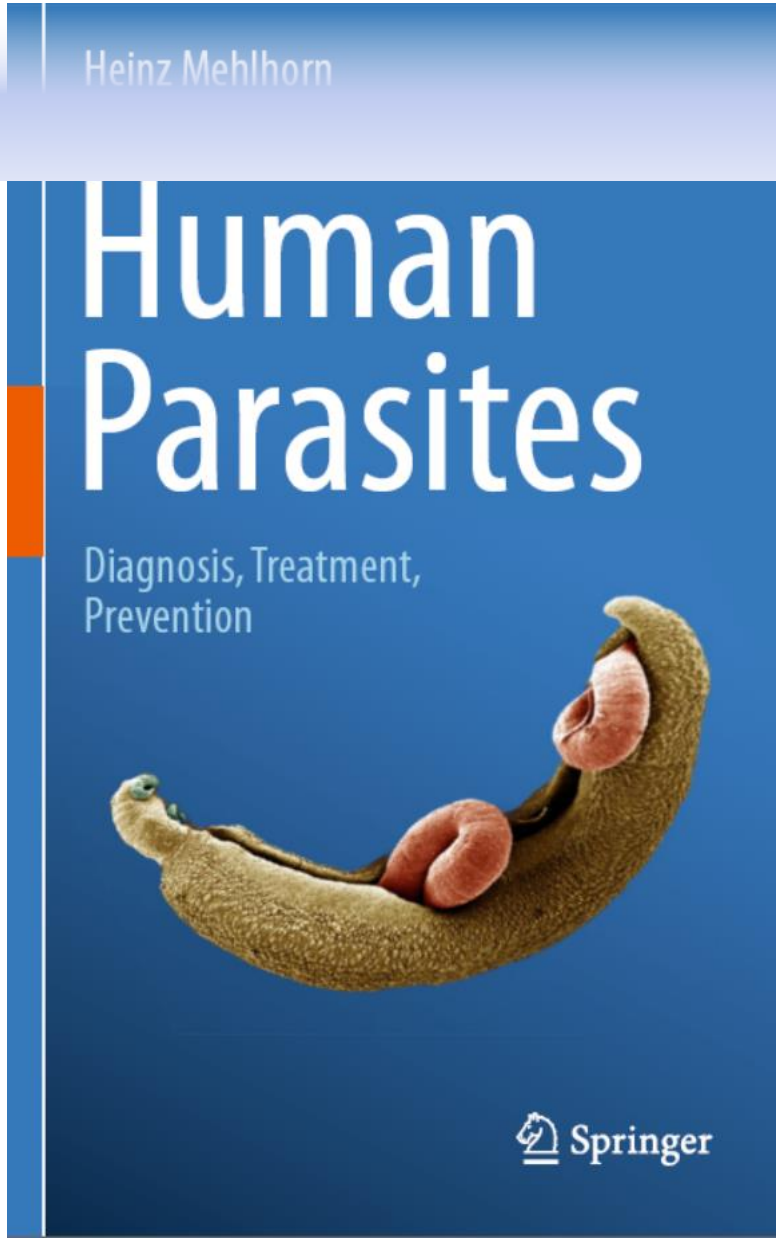
**25% absence from lectures (approximately 10 hrs.), student will be deprived from the course**


Advanced economical and pathological survey of arthropods and other parasites. In addition, studies on: the arthropods of their economic importance, the pathogenesis of some diseases caused by or transmitted by arthropods, and the pathogenesis of some parasitic diseases of man and his domesticated animals.

# References


Heinz Mehlhorn
Animal Parasites
Diagnosis, Treatment, Prevention
Springer


Yvonne Ai Lian Lim · Indra Vythilingam
Editors
Parasites and their vectors
A special focus on Southeast Asia
Springer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Human Parasites
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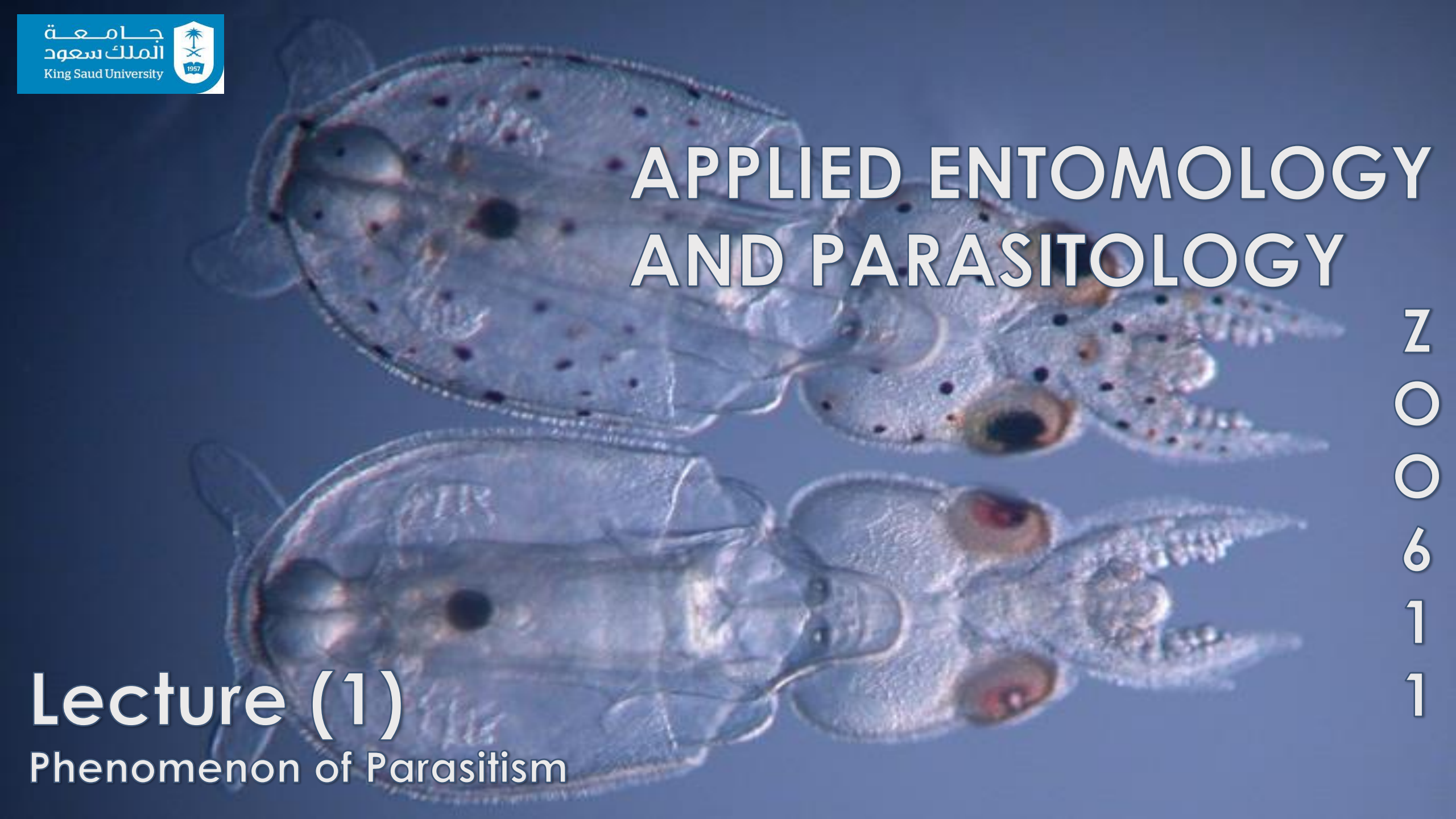


# APPLIED ENTOMOLOGY AND PARASITOLOGY

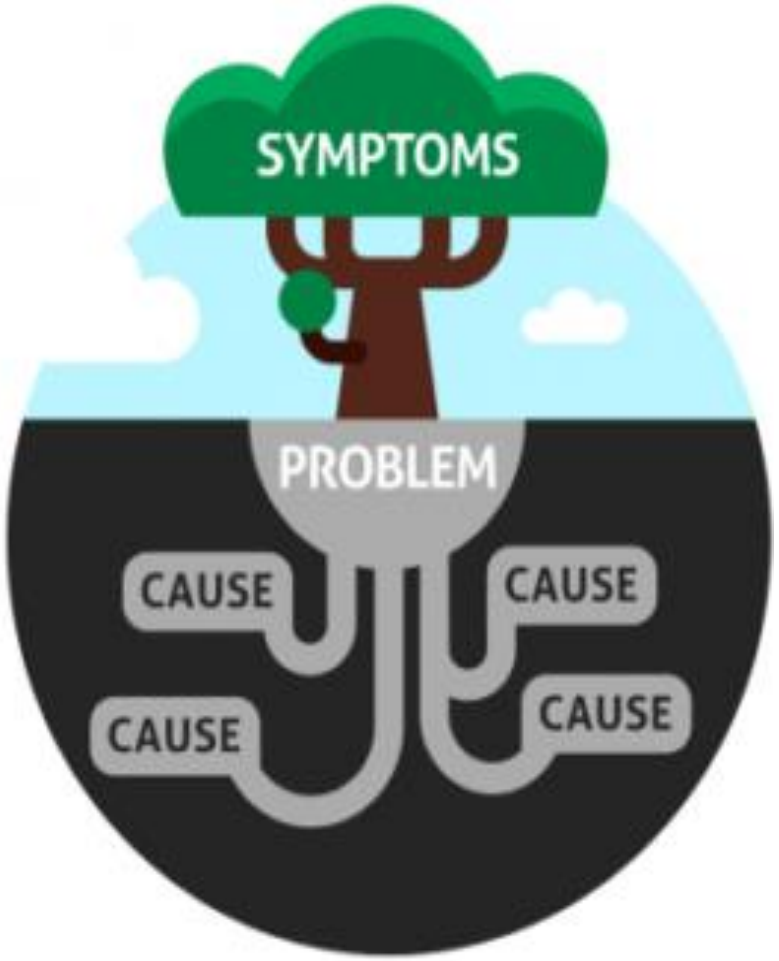
ZOO611

## Lecture (1)

Phenomenon of Parasitism

# DISEASE

It is a disorder of structure or function in a human, animal, or plant, especially one that produces specific symptoms or that affects a specific location and is not simply a direct result of physical injury.




## Causes of Disease

### Immediate

They are the primary causes for a disease and can be identified after first check-up. These can be internal causes or external causes (e.g., microorganisms).

#### Infectious

These are caused by external agents like viruses, bacteria and other microorganisms.

e.g., diarrhoea, cholera, etc.

#### Non-Infectious

Internal causes like genetic abnormalities, excessive weight, etc. give rise to non-infectious diseases.

e.g., high blood pressure, cancer, etc.

### Contributory

These causes contribute to the occurrence of a disease.

#### Unhealthy conditions

Consumption of contaminated food or water can be another cause of disease.

#### Improper public facilities

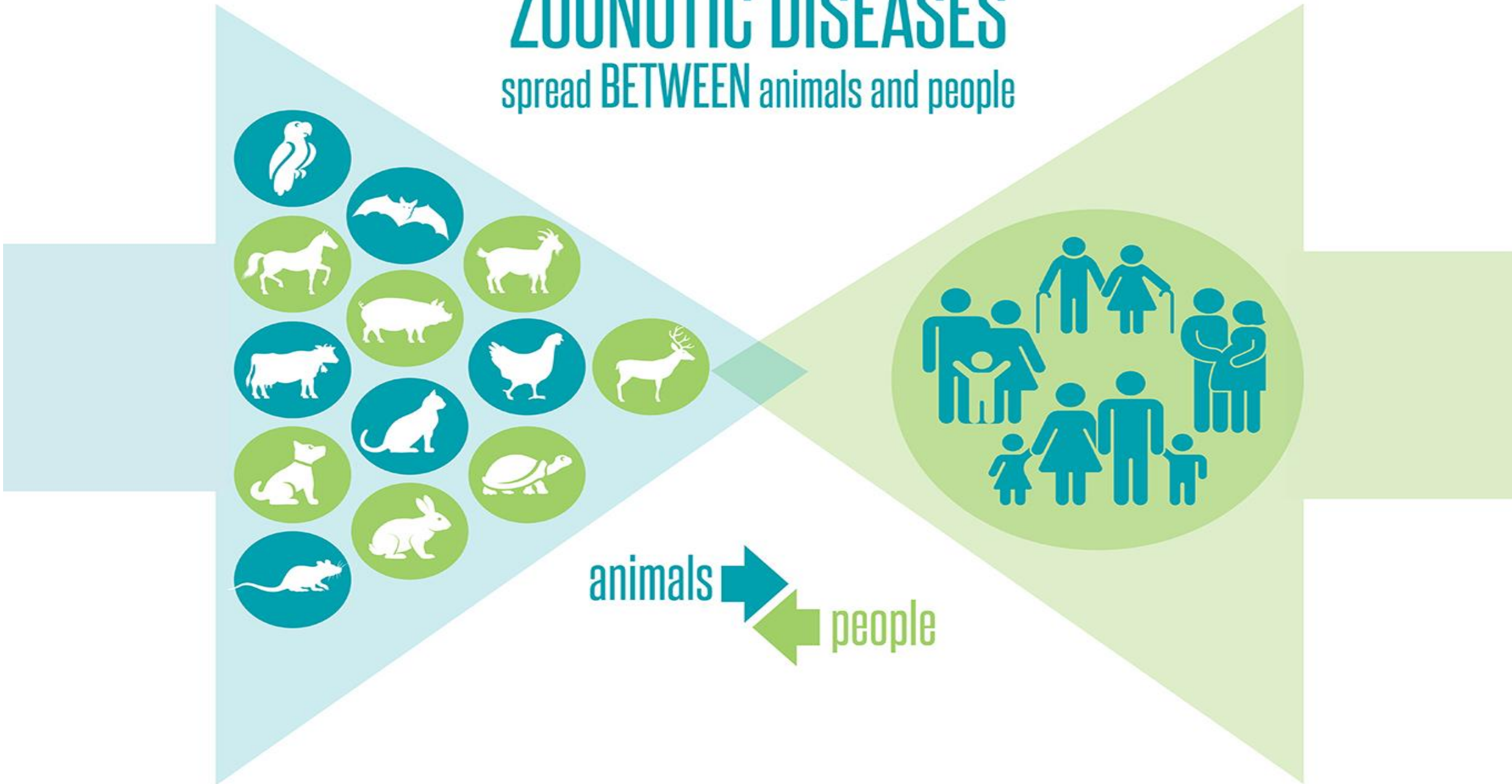
Lack of proper public facilities such as clean drinking water and food lead to diseases.

#### Poverty

Lack of nourishment can also lead to the occurrence of diseases in a person.

# ZOONOTIC DISEASES

## spread BETWEEN animals and people



# How zoonotic diseases are transmitted

LONDON SCHOOL of HYGIENE & TROPICAL MEDICINE

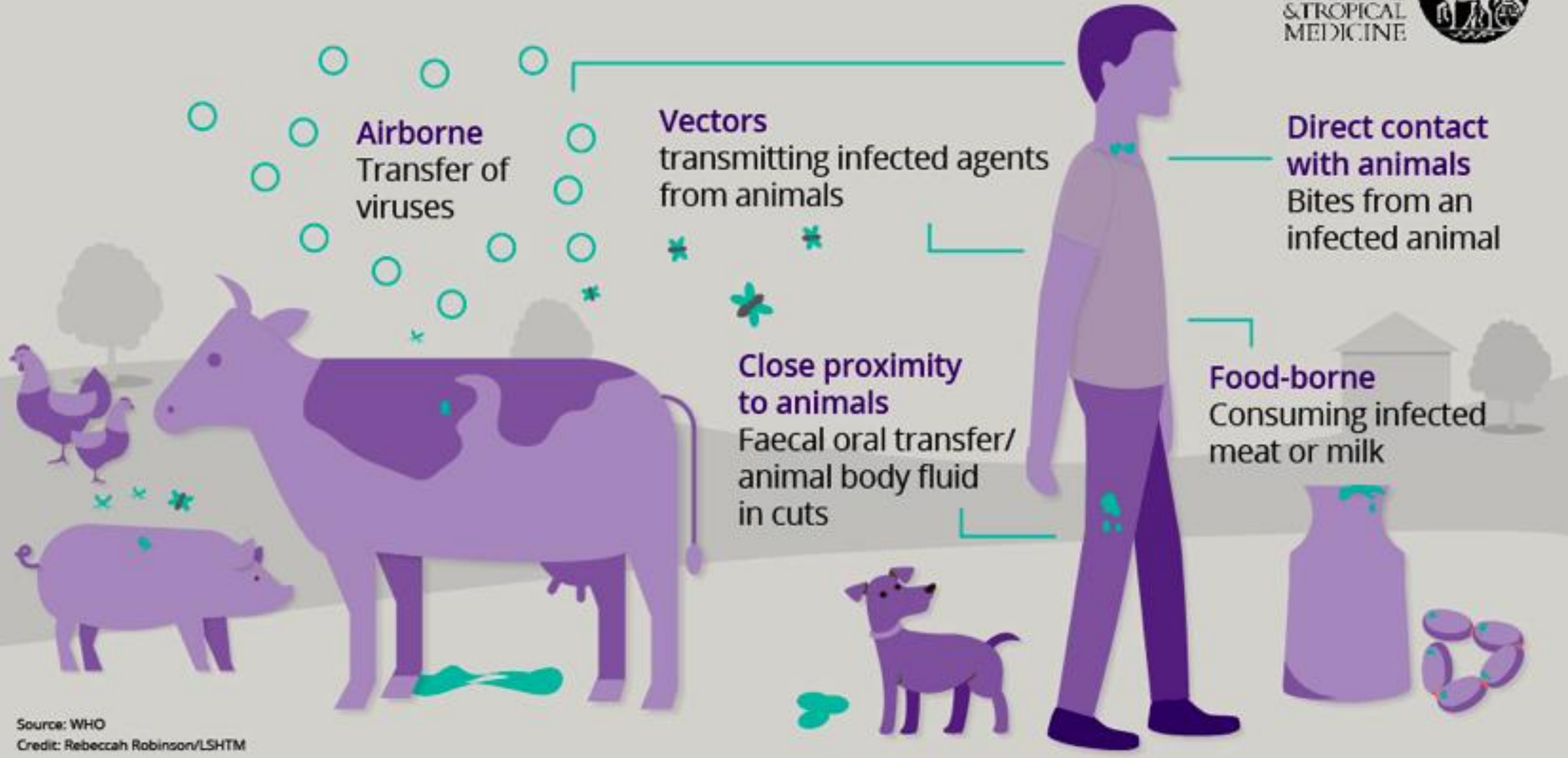
**Airborne**
Transfer of viruses

**Vectors**
transmitting infected agents from animals

**Direct contact with animals**
Bites from an infected animal

**Close proximity to animals**
Faecal oral transfer/ animal body fluid in cuts

**Food-borne**
Consuming infected meat or milk

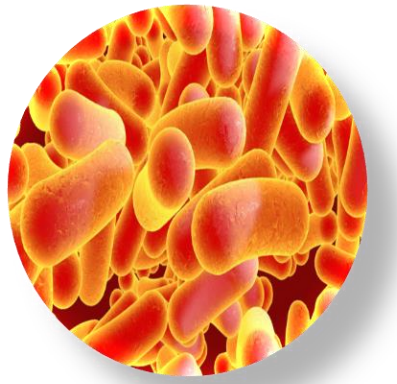


Source: WHO
Credit: Rebeccah Robinson/LSHTM

# Endemic Infections in Saudi Arabia

*"One Health provides a new synthesis for public health and veterinary communities, and is a platform on which to build partnerships with a broader range of disciplines to develop solutions for preventing and responding to zoonotic disease threats"*

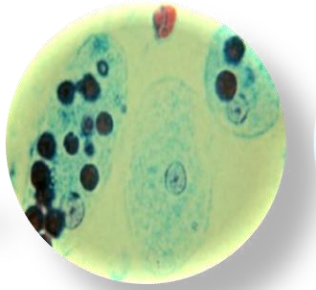
## Bacterial infections



Typhoid fever

Brucellosis

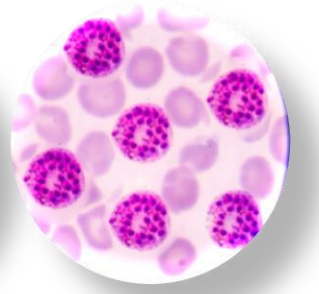
## Parasitic infections



Amebiasis

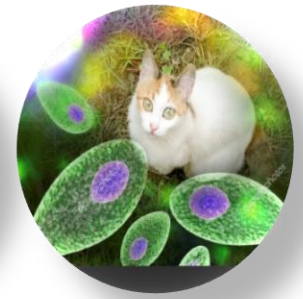
Giardiasis

Leishmaniasis



Malaria

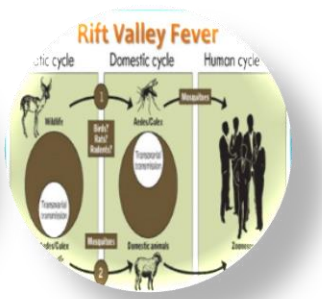
Scabies



Toxoplasmosis

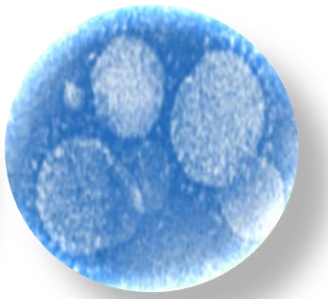
## Viral infections

Dengue

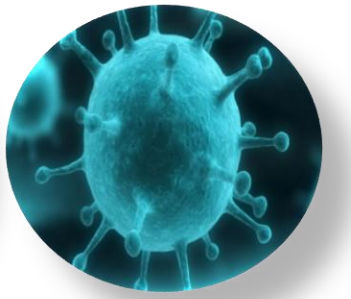



Rift Valley Fever

Rabies



MERS-CoV



Influenza

Alkhurma Hemorrhagic Fever


Any
questions