Infection & Defence

The second module of the year introduces you to the body's immune system, all its components with clinical relevance and how it fights specific types of pathogens. You also study pathogens such as viruses, bacteria & fungi with regards to how they cause disease and avoid the immune system. This module consists of roughly 47 sessions.

Topics Covered

- **Immunology** – cells and tissues, innate and adaptive immunity, cellular and antibody immunity, tolerance, autoimmune disease, healing, hypersensitivity, transplantation, cancer, vaccination, immunodeficiency and ageing.
- **Bacteriology** – structure and properties, ecology, diagnosis, pathogenesis, antibiotics.
- **Virology** – structure and properties, ecology, diagnosis, pathogenesis, antiviral drugs.
- **Other** – fungal infections, case studies, microbiological diagnosis.

Learning Methods

- Lectures – usually a one-hour teaching session.
- PBL – problem-based learning, with a tutor in a small group.
- CAL – computer-assisted learning, in dry lab rooms with a tutor.
- SPL – self paced learning, homework tasks that you can tackle at your own pace.
- Tutorials – small group tackling a subject and clinical cases with a tutor.
- Case studies – weekly clinical case regarding a certain illness e.g. HIV.

Resources

- Case Studies in Infectious Disease. 2009. Lydyard PM, Cole MF, Holton J, Irving WL, Porakishvili N, Venkatesan P & Ward KN. Garland Science.
- https://www.youtube.com/watch?v=Xc_Ljc5ycfM
- https://www.youtube.com/watch?v=zQGOcOUBi6s

Tips

- The number of cells and responses from the immune system may seem overwhelming but try to focus on the main concepts and think of the immune system working together in sync.
- Case studies are very important, use the "Case Studies in Infectious Disease" book to help you tackle them.
- Make use of the Moodle forum for any questions you are unsure of.
- Attend summary sessions.
- Details counts, like which cytokines are released, specific cell receptors etc.
- Allergy and hypersensitivity is an important concept to grasp fully.

For more details, visit the module Moodle page.