

The Special Topics – MBI0 591

- 1- Origin and evolution of viruses.
- 2- Gene expression systems.
- 3- Molecular-based viral vaccines.
- 4- Phage display.
- 5- Modern techniques used for virus diagnosis:
 - a. Real-time PCR
 - b. NASBA
 - c. LAMP
 - d. Microarray
- 6- Phylogenetic analysis of viral genomes.
- 7- Selected articles.

- 1- Origin and evolution of viruses.
Origin and evolution of viruses (Chp. 7,14)
- 2- Gene expression systems.
Gene expression systems (Introduction, Chp. 8, 12)
- 3- Molecular-based viral vaccines.
Veterinary Virology (chp. 13; 228-233)
- 4- Phage display.
Phage display of peptides and proteins (Chp. 2)
- 5- Modern techniques used for virus diagnosis:
 - a. Real-time PCR
 - b. Isothermal amplification (3 reviews and papers)
 - c. Microarray(Microarray technology and its applications; Chp. 1)
- 6- Phylogenetic analysis of viral genomes (Report I)
- 7- Selected articles.