

Molecular Biotechnology

2 units (selection)

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Target To understand advanced technology for molecular biology

Outline We will present recent topics on molecular biology and its applications for genetic engineering. 1) Molecular biology on insects and its applications (3), 2) Molecular biology on brain and neural systems (3), 3) Molecular biology on vertebrate development and its applications (4). 4) Molecular biology on human diseases (4).

Style Lecture in combination with Portfolio

Keyword *signalling pathways, transcription factors, genes and diseases*

Relational Lecture “**Technology for Bioreaction**”(0.5), “**Advanced Cell Physiology**”(0.5), “**Advanced Biotechnology**”(0.5)

Requirement N/A

Notice N/A

Goal To understand molecular mechanisms of development and diseases

Schedule

1. Molecular biology of insects, early development
2. Molecular biology of insects, late development
3. Molecular biology of insects, regeneration
4. Molecular biology of insects, brain development
5. Molecular biology of insects, neural development
6. Molecular biology of insects, mutations
7. Molecular biology of vertebrates, early development
8. Molecular biology of vertebrates, late development
9. report for evaluation
10. Molecular biology of vertebrates, brain and neural development
11. Molecular biology of vertebrates, regeneration
12. Molecular biology of human diseases, limbs
13. Molecular biology of human diseases, eyes
14. Molecular biology of human diseases, muscles
15. Molecular biology of human diseases, general
16. Final report for evaluation

Evaluation Criteria Evaluate two reports (50% each)

Textbook N/A

Reference Handouts

Contents <http://cms.db.tokushima-u.ac.jp/cgi-bin/toURL?EID=216879>

Student all

Contact

⇒ Noji (G803, +81-88-656-7528, noji@bio.tokushima-u.ac.jp) **MAIL** (Office Hour: Monday 15:30-17:00)

Note When you take this class, it is necessary to do preparation for 2h and review for 2h every 2h class for your understanding and taking credit.