

97-1 Preliminary Syllabus, Da-Yeh Univ

Information			
Title	動物基因轉殖技術	Serial No. / ID	1083 / MBR5007
Dept.	分子生物科技學系碩士班	School System / Class	研究所碩士班1年1班
Lecturer	李泰林	Full or Part-time	專任
Required / Credit	Optinal / 1	Graduate Class	NO
Time / Place	(一)5 / J505	Language	Chinese

Introduction
<p>The techniques for the application of transgene will be introduced step by step. The morphology of gonads, the isolation of gametes, the preparation of micropipette and microinjector, electroporation, the collection of eggs from zebrafish, and the injection of transgene into eggs will be performed. The analytic techniques such as DNA extraction, restriction enzyme digestion, ligation, transformation, DNA sequencing, protein expression and extraction, PCR, Western blot etc. will also be performed to analyze the transgene in fish or cell lines.</p>

Outline
<ol style="list-style-type: none"> 1. The observation of reproductive systems 2. The preparation of fish / Egg collection and evaluation 3. Transgene: Electroporation 4. The assembling of microinjector 5. The preparation of micropipette 6. Transgene: Microinjection 7. The development of embryos 8. The preparation of transgene (I): Plasmid transformation 9. The preparation of transgene (II): Cutting and Ligation 10. The preparation of transgene (III): Colony selection and Culture 11. The preparation of transgene (IV): DNA extraction and analysis 12. The analysis of transgene (I): Protein purification and analysis 13. The analysis of transgene (II): DNA integration – PCR analysis 14. The analysis of transgene (III): DNA integration - Western Blot 15. The analysis of transgene (IV): Protein expression – Immuno- histochemistry

Prerequisite
General Biology