



Training Courses in Genetic Engineering and Bioinformatics

offered by:

Institute of Genetic Engineering, Ecology, and Health (IGEEH), Karlsruhe, Germany www.aecenar.com/institutes/igeeh,

TEMO Soft-, Hardware & Consulting e.K., Karlsruhe, Germany, www.temo-ek.de, and

- A. Courses description
 - 1. Molecular Cloning (basic techniques for working with DNA) (5 days)
 - 2. Bioinformatics for Researchers (Using Databases, Molecular Modeling) (5 days)

All courses have a duration of 5 days (Monday – Friday). You can book independly each of these courses.

B. Participants

- 1. Technicians or Researchers who are new in genetic engineering techniques
- 2. Graduate Students who want to begin laboratory research in genetics or molecular biology
- 3. Other interested people

C. Training topics and outline

| Mon | 8 - 12 | Theoretical background of the training course and methods, Discussion of |
|-----|---------|---|
| | | the workflow of the training course |
| | 13 – 18 | Preparation of plates for bacteria (LB plates with ampicillin/IPTG/X-Gal, |
| | | SOC medium) |
| Tue | 8 - 12 | DNA isolation, primer design for PCR |
| | 13 – 18 | PCR to isolate SRY gene |
| Wed | 8 - 12 | Agarose gel to check the PCR and isolate the PCR product |
| | 13 – 18 | Ligation of SRY gene in pGEM-T, Transformation in E.coli and plating |
| | | (overnight growth) |
| Thu | 8 - 12 | Screening of E.coli colonies, inoculation of minipreps (overnight growth) |
| | 13 – 18 | Sight seeing tour |
| Fri | 8 - 12 | Miniprep of the plasmid DNA (Isolation of recombinant plasmid from |
| | | E.coli cells) |
| | 14 – 19 | Restriction digest and Agarose Gel, Discussion |

C.1 Molecular Cloning (basic techniques for working with DNA)

Manual see http://aecenar.com/download/doc_download/28-megbi-trainingcourses-i-iii-engl

C.2 Bioinformatics for Researchers (Using Databases, Molecular Modeling)

For outline see: <u>http://www.zgoeg.de/MEGBI/downloads/doc_download/10-megbi-biotechnology-master-of-science-program</u>, pages 43-44. (This course is a shortened version of the program described in Master Programm in Biotechnology, pp. 43-44)

D. Time of courses

The courses are starting in December 2010. Every course has a duration of 5 days and goes from Monday to Friday.

Extra course times can be booked from groups (6-10 persons) two months before if our capacity allows this.

E. Registration Fee

Fee is $750 \in$ per person and course, which includes copies of lab manuals. **Registration deadline is 30 days before the date of starting of training course.** Training capacity does not exceed 10 persons per course.

F. Payment methods

All prices are in EURO (€). Payment by transfer or cash to TEMO e.K. TEMO e.K., IBAN DE74660100750625406756, SWIFT-BIC PBNKDEFF

FOR FUTHER INFORMATION, please contact the following:

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