

A-IMBN-AMBO (Asia-Pacific International Molecular Network-Asian Molecular Biology Organization)

International Training Course: Molecular and Cell Biology in Post-Genome Era.

March 11-20, 2003

Research Institute for Microbial Diseases, Genome Information Research Center and Graduate School of Frontier Biosciences, Osaka University

Lecturers (tentative)

Prof. Mitsuhiro Yanagida (Kyoto Univ.) Prof. Ken-Ichi Arai (Univ. of Tokyo)
Prof. Kunihiro Matsumoto (Nagoya Univ.) Prof. Hiroshi Hamada (Osaka Univ.)
Prof. Tohro Nakano (Osaka Univ.) Prof. Taro Kinoshita (Osaka Univ.)
Prof. Katsuro Koike (Cancer Res. Ins.) Prof. Hisao Masai (Tokyo Metro. Inst.)
Prof. Haruki Nakamura (Osaka Univ.)

Laboratory Courses

- 1. Manipulating the mouse Embryos and Gene targeting (Prof. Masaru Okabe)**
- 2. Molecular Cell Biology (Prof. Hiroshi Nojima)**
- 3. Yeast Molecular Genetics (Prof. Akio Sugino)**
- 4. Molecular and Cell Biology of Malaria Parasites (Prof. Toshihiro Horii)**
- 5. Bioinformatics and Proteomics (Prof. Teruo Yasunaga and Prof. Akio Sugino)**

The training course consists of lectures and laboratory courses, and the trainees select one of the laboratory course.

Organized by Prof. Akio Sugino (Graduate School of Frontier Biosciences, Osaka University)

Supported by the Asia-Pacific International Molecular Biology Network (A-IMBN), The Protein Research Foundation, and Grant-in-Aid for Special Purpose, The Ministry of Education, Culture, Sports, Science and Technology (MEXT) of Japan

Applications should arrive by November 30, 2002 to Dr. Akio Sugino, Graduate School of Frontier Biosciences, Osaka University, 3-1 Yamada-oka, Suita, Osaka 565-0871, Japan

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A-IMBN-AMBO

Invitation to
A-IMBN(Asia-Pacific International Molecular Biology Network)-AMBO
(Asian Molecular Biology Organization)
International Training Course
“Molecular and Cell Biology in Post-Genome Era”

March 11-20, 2003
Research Institute for Microbial Diseases, Genome
Information Research Center and Graduate School of
Frontier Biosciences, Osaka University

To whom it may concern,

Please find enclosed materials concerning the A-IMBN-AMBO international Training Course and display the poster on your information board.

The 2003 A-IMBN-AMBO International Training Course (formally called as AMBO Training Course) is organized by Dr. Akio Sugino and will be held at Research Institute for Microbial Diseases, Genome Information Research Center and Graduate School of Frontier Biosciences, Osaka University from March 11 to 20, 2003. The course is supported by the Asia-Pacific International Molecular Biology Network (A-IMBN), the Protein Research Foundation, and Grant-in-Aid for Special Purpose, The Ministry of Education, Culture, Sports, Science and Technology (MEXT) of Japan. We aim at providing young Asian scientists with basic molecular and cell biological methodology which is useful for Life Sciences.

The training course consists of lectures and experimental courses, which will be conducted by English. The applicants should select one of the five experimental courses listed below. Each course accommodates four participants. The organizing committee will select 20 participants from the applicants considering the information given by the application form and their countries. All participants will receive a fellowship which covers round-trip air fare, domestic transportation fee and lodging accommodations during the course.

For application, please complete the following forms and send them to the following address by November 30, 2002.

- (1) The completed application forms (Forms 1 and 2)
- (2) A curriculum vitae
- (3) A list of scientific publications, if any.
- (4) Two letters of recommendation.

Mailing Address:

Prof. Akio Sugino
The 26th A-IMBN-AMBO International Training Course
Graduate School of Frontier Biosciences, Osaka University
3-1 Yamada-oka, Suita, Osaka 565-0871, Japan
E-mail: asugino@biken.osaka-u.ac.jp
Home page: <http://www.biken.osaka-u.ac.jp/a-imb.html>

Laboratory Courses

Course 1. Manipulating the Mouse Embryos and Gene Targeting

- 1) General Methodology
 - 2) Germ Cells and Embryos (basic physiology of germ cells and embryos)
 - 3) *In vitro* Fertilization (handling of germ cells and observation of fertilized eggs)
 - 4) Cryopreservation of Embryos (method to preserve the embryos in liquid nitrogen)
 - 5) Transgenic Animals (microinjection of transgenes to pronuclei of fertilized eggs)
 - 6) Embryonic Stem Cells and Gene Targeting (transfection and selection of ES cells)
- Course directors: Prof. Masaru Okabe and Dr. Masahito Ikawa (Genome Information Research Center)

Course 2. Molecular Cell Biology

- 1) Plasmid construction to make fusion proteins
- 2) Expression in *E. coli*, yeast, and mammalian cells
- 3) Affinity purification of GST-fusion proteins
- 4) Subcellular localization of GFP-fusion proteins
- 5) Immunoprecipitation/immunoblotting using epitope-tagged proteins and GST-pulldown experiments

Course directors: Prof. Hiroshi Nojima and Dr. (Department of Molecular Genetics, Research Institute for Microbial Diseases)

Course 3. Yeast Molecular Genetics

- 1) Yeast transformation, gene replacement, and Southern Blot analysis including PCR analysis
- 2) Two hybrid analysis
- 3) Protein extraction and Western analysis
- 4) Chromosome spreading analysis (visualization of proteins bound on yeast chromatin)
- 5) Mutagenesis and plasmid shuffling
- 6) Cell cycle and FASC analysis
- 7) DNA tip analysis

Course directors: Prof. Akio Sugino and Dr. Yasuo Kawasaki (Graduate School of Frontier Biosciences)

Course 4. Molecular and Cell Biology of Malaria Parasites

- 1) *In vitro* culture of *P. falciparum*
- 2) Purification of recombinant proteins from *E. coli* and antibodies against the recombinant proteins

- 3) *In vitro* growth inhibition assay for the vaccine and drug candidates
- 4) Molecular analysis of the antigenic variations
- 5) Biochemical analysis of parasite metabolisms

Course directors: Prof. Toshihiro Horii and Dr. Toshihede Mitamura (Department of Molecular Protozoology, Research Institute for Microbial Diseases)

Course 5. Bioinformatics and Proteomics

- 1) Sequence database retrieval
- 2) Sequence analyses using Gene Web II
- 3) 2D gel electrophoresis of proteins (Xenopus egg extracts)
- 4) Protein picking by a spot picker
- 5) Protein analysis by a microsequencer and MS

Course directors: Prof. Teruo Yasunaga (Genome Information Research Center) and Prof. Akio Sugino (Graduate School of Frontier Biosciences)

No. _____

APPLICATION FORM**(Form 1)**

**The 27th A-IMBN-AMBO International Training Course
 “Molecular and Cell Biology in Post-Genome Era”
 Research Institute for Microbial Diseases, Genome Information
 Research Center, Graduate School of Medicine and Graduate School of
 Frontier Biosciences, Osaka University, Suita, Osaka, Japan**

Family name	Given name	First name
in Chinese characters: (if applicable)		
Nationality	Date of Birth Year Month Date	Age
		Sex Male Female
Present status :	Graduate course student Postdoctoral fellow Institution staff member Position :	
Institution (in English)		
Mailing address (in English)		
Telephone number :		
FAX number :		
E-mail address :		
Institution and Mailing address (in Chinese, if applicable)		
Home address and telephone		
Language (please mark)	Excellent	Good
English		Poor
Japanese		
Brief curriculum vitae after graduation, including staying abroad.		

No. _____

APPLICATION FORM
(Form 2)

Indicate the Laboratory course you want to attend :

First choice

Second choice

Past research experience

Present research subject

Describe why you want to attend the course in relation to your present research.

Signature

Date

Return these forms (Form 1 and 2) with curriculum vitae, a list of scientific publications and two letters of recommendation.