# European School of Genetic Medicine 6th Course in Bioinformatics March 19th-23th, 2006 Bertinoro di Romagna, ITALY

# **Prerequisites for participation:**

Students should have some basic knowledge in bioinformatics including sequence analysis, basic knowledge of gene and structure prediction methods, being familiar with molecular databases (e.g. EMBL, SwissProt, KEGG).

# Intended audience:

Graduates, Ph.D. students, Post-Docs in Life Sciences with interest or need for education in bioinformatics. The course is intended as a tutorial to the recent contributions of bioinformatics to molecular and cell biology as well as genetics and knowledge management.

# Fee and registration:

600.-€double room, 700.-€single room (including tuition, course material, room and board for the whole duration of the event, but NOT travel expenses - bus-transfer has to be shared after the course ). Registration: at GSF-Institute for Bioinformatics (<u>Cornelia Canady</u>) or directly at <u>EGF</u>.

# **Travel to Bertinoro:**

Bus-transfer vom Munich to Bertinoro on March, 18th Bus-transfer vom Bertinoro to Munich on March, 23th

# **DIRECTORS:**

H.W.Mewes (GSF and TU Munchen, GERMANY)

# FACULTY:

R. Casadio (Bologna, ITALY), M. Cox (Martinsried, GERMANY), J. Ernst (München, GERMANY), A. Facius (Neuherberg, GERMANY), D. Frishman (Weihenstephan, GERMANY), A. Kaps (Martinsried, GERMANY), C. v. Mering (Heidelberg, GERMANY), H.W. Mewes (Neuherberg GERMANY), J. Müller (München, GERMANY), G. Raetsch (Tübingen, Germany, tentative), T. Rattei (Weihenstephan, GERMANY), M. Scherf (München, GERMANY), V. Stümpflen (Neuherberg, GERMANY), A. Tramontano (Roma,ITALY), R. Zimmer (München, GERMANY)

# **PROGRAM:**

#### Saturday, March 18th – Arrival at the University Residential Centre of Bertinoro

#### Sunday, March 19th - Sequence and Genome Analysis

Introduction of the Faculty and the Participants (short presentations)

Introduction into the Course (H.W. Mewes)

## Sequence and Genome Analysis

Introduction into sequence and genome analysis (H.W. Mewes)

Gene Prediction and Genome Annotation (D. Frishman)

PPInteractions (D. Frishman)

Statistics for Bioinformatics (A. Facius)

## Monday, March 20th - Bioinformatics for Biology

#### **Bioinformatics for Biology**

Functional Modules (C. v. Mering) Gene Regulation (M. Scherf) Metabolic and other Networks (R. Zimmer) Expression Analysis (M. Cox)

## Tuesday, March 21th - Structural Biology and Genetics

## **Structural Biology**

Membrane Proteins (R. Casadio) Structure Prediction (A. Tramontano) **Genetics** Bioinformatics for Genetics (J. Müller) Sight-seeing tour

#### Wednesday, March 22th - Data resources and Information management

## Data resources and information management

Ressources in Bioinformatics (T. Rattei) Data Integration (A. Kaps) Bioinformation Systems (V. Stümpflen) Introduction into Algorithms (J. Ernst) BioXM Integration of Services (A. Kaps)

## Thursday, March 23th - Systems Biology

#### Datamining

Machine learning and applications in biology (G. Raetsch, tentative)

## Systems Biology

Bioinformatics and Systems (H.W. Mewes)

**Open Workshop** 

Departure