**Biology**

**Program for visit from Convitto, 31/1-1/2/2018**

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|  | **Wednesday (We’ll meet 8.15 in room V126):** |
| **8.15** | Introduction to fingerprinting: Chromosomes, basic heritance, SNP’s, STR’s, procedure in overview.  Forming of groups (four groups of 3, 3, 2, and 2 persons) |
| **8.45** | Exp.1: DNA-fingerprinting, start – preparing for PCR (polymerase chain reaction)  Including rehearsal with the micropipettes. |
| **9.45** | Introduction to PCR (and a short break) |
| **10.15** | Exp. 2: Extraction of DNA – “DNA your onions” during pcr.  Pictures, discussion of cytological aspects of the procedure |
| **11.15** | Exp.1: DNA-fingerprinting: Casting the gel |
| **11.30** | Lunch Break |
| **12.15** | Exp.1: DNA-fingerprinting (1h): gel-electrophoresis. Introduction to gel-electrophoresis – what to expect?  Including rehearsal in loading a gel. |
| **13.00** | Exp. 3: Microbiology: Assaying bacteria in our environment (Plate Count Agar). Where are the microorganisms? What is the effect of washing your fingers? Bacterial fallout from the air.  - during gel-electrophoresis, organised in groups, inubation until Thursday |
| **14.00** | Collect results for lab-journals – if there’s time, we’ll look at the gels and make photos |
|  | **Thursday (We’ll meet In V126):** |
| **8.15** | Introduction to the program for the day |
|  | Exp. 4. Microbiology: Growth Factors and yeast  Introduction to growth, draw and explain hypothesis in groups, start the experiment, check every ½-1 hour during the day |
| **9.15** | Exp. 1. DNA-fingerprinting, examining the gels - pictures of gels, homo-heterozygotes, conclusions |
| **10.00** | Exp. 3. Microbiology: Examining the plates from Wednesday (1h) - Pictures, types, conclusions, counting of fall-out-plates /determining a fall out-rate  Break |
| **11.00** | Introduction to blood types and blood type phenotypes – *copied figure +* *take notes* |
| **11.15** | Exp. 5. Blood: Testing for blood types -Eldon-cards, collecting blood types in table |
| **11.45** | **Lunch Break** |
| **12.15** | Exp. 5. Blood: Testing for blood types -determining phenotype frequences in the class - comparing to frequences in Italy, Denmark and maybe other populations.  Introduction to blood type genotypes – copied figure + take notes |
| **13.00** | Exp. 4. Microbiology: Growth Factors and yeast –  Present experiments, collect table with results from groups, draw diagrams, test their hypothesis, explain |
| **13.45** | Collect results for lab-journals |

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| **Wednesday:**  **Experiment 1**: ***DNA-fingerprinting***  **Experiment 2: *Extraction of DNA***  **Experiment 3: *Microbiology: Assaying bacteria in our environment*** | **Thursday:**  **Results from:**  ***Experiment 1: DNA-fingerprinting***  **Experiment 4: *Microbiology: Growth Factors and yeast***  ***Experiment 3: Microbiology: Assaying bacteria in our environment***  **Experiment 5: *Blood: Testing for blood types*** |