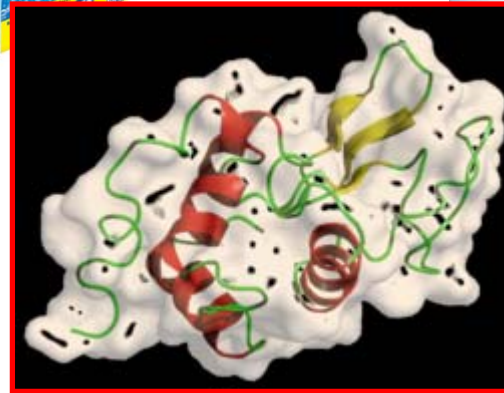
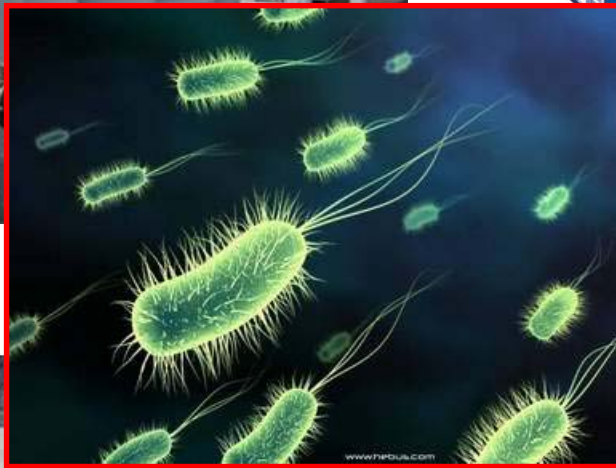
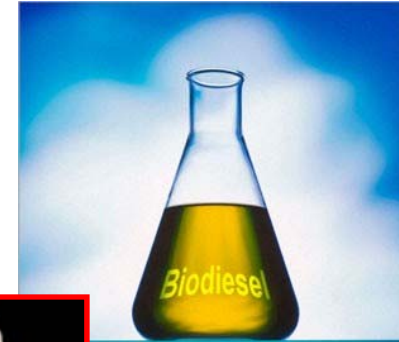


Technical Biology 2013

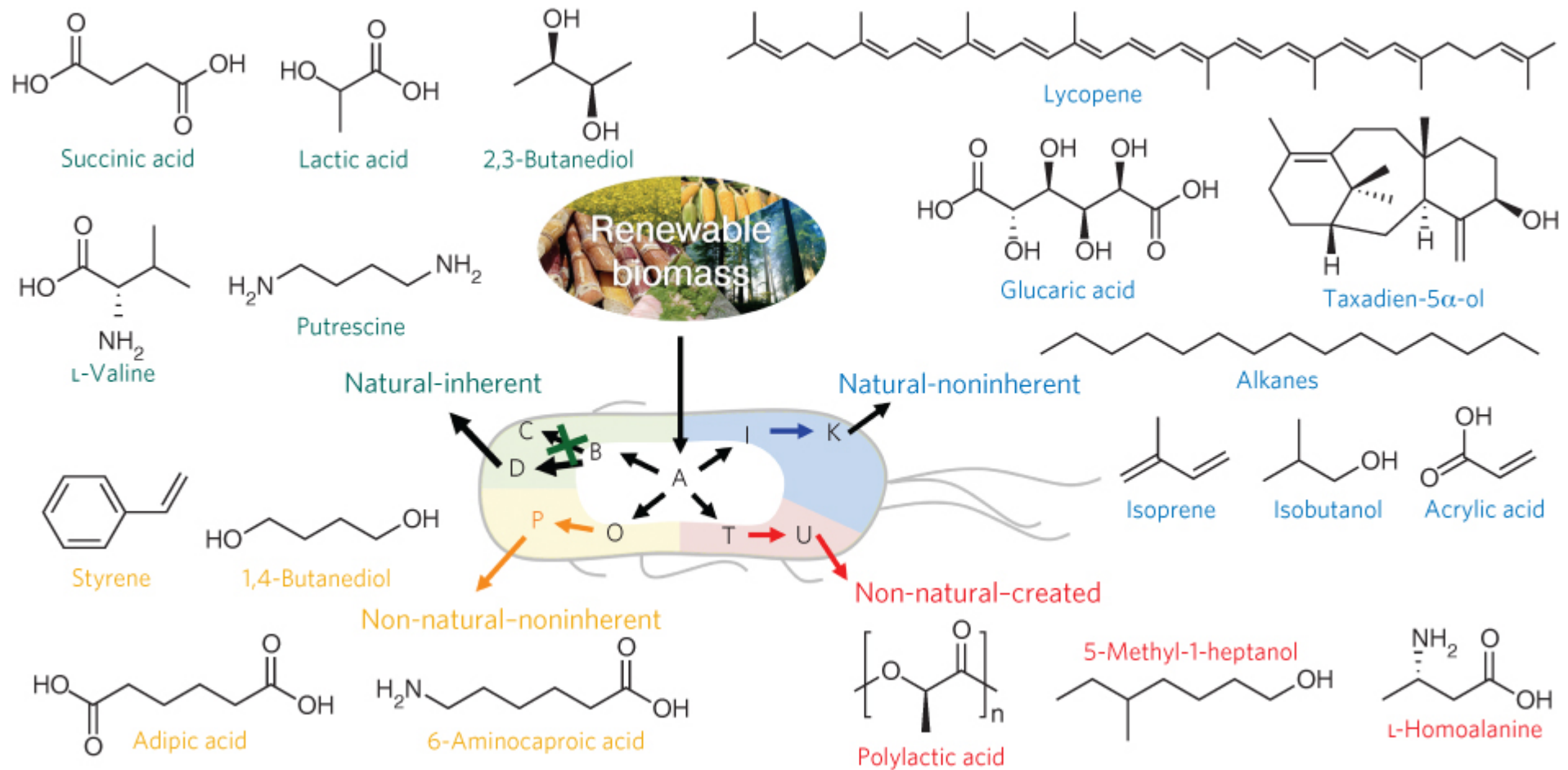


Why Technical Biology?

Industries that hire engineers with basic training in the life sciences:

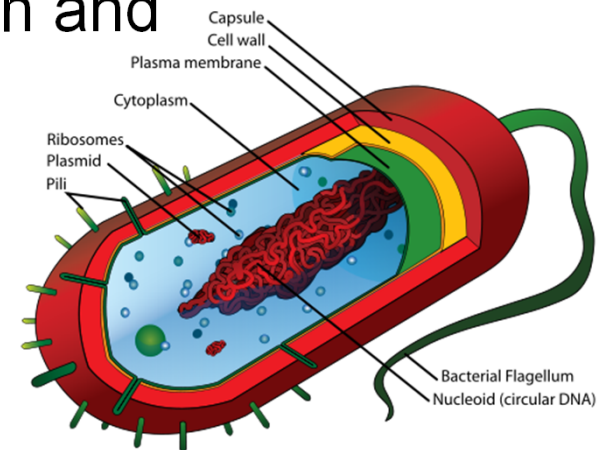
- Biotechnology (e.g. food, biomedical, cosmetics...)
- Energy (biogas, biodiesel...)
- Biorefinery
- Environmental protection (waste water treatment, bioremediation)
- Other related fields

Chemicals produced by microbial cell factories



Course content

- The structure of prokaryotic and eukaryotic **cells**
- Sterilization and **aseptic working** methodology
- Cell growth and cultivation techniques
- The **genes** and their expression as proteins
- **Proteins** (structure, function, purification and characterization)
- **Enzymes** (structure and function)
- **Basic metabolism**
- Possibilities of modern **gene technology**
- **Industrial microbiology**



Course homepage:

<http://www.tbiokem.lth.se/homepage/Kursen/KBKA05/KBKA05.html>

Laboratory exercises (2 students/group)

Report 1 (microscopy and bacterial growth, *Lab 1+ Lab 2*)

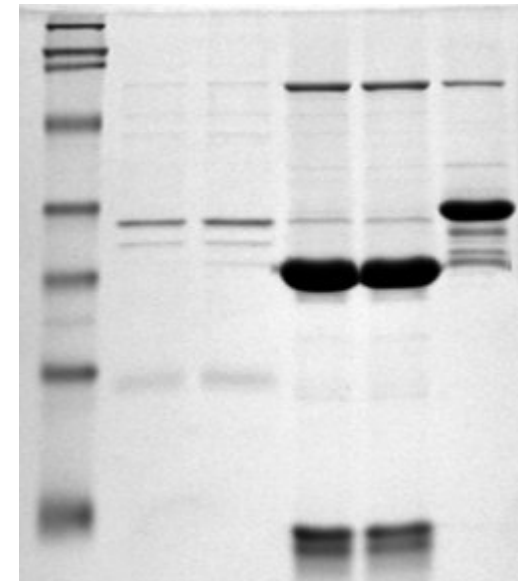
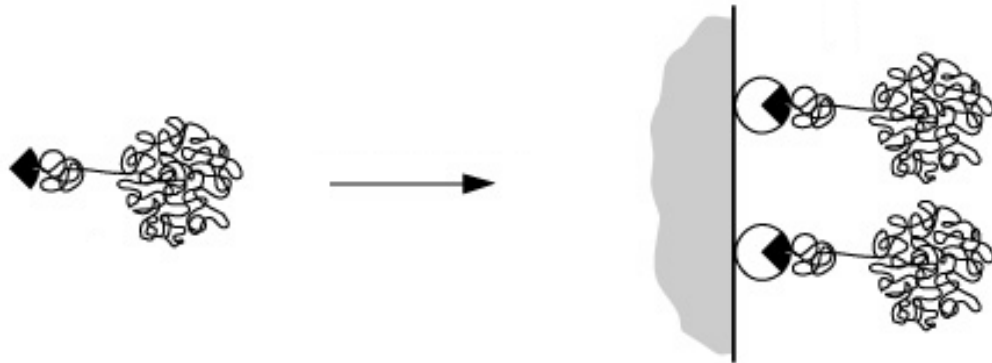
Hand-in by 19 Nov.



Laboratory exercises (2 students/group)

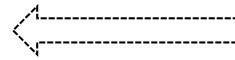
Report 2 (protein purification, *Lab 3*)

Hand-in one week after Lab



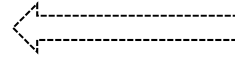
Technical Biology

Lab group A1



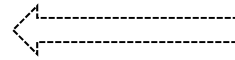
04/11, 13/11, 20/11, 21/11

Lab group A2



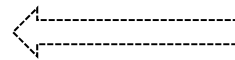
04/11, 13/11, 26/11, 27/11

Lab group B1



05/11, 14/11, 28/11, 29/11

Lab group B2



05/11, 14/11, 02/12, 03/12

Transportprocessor

Lab group K-A 1.1-1.2

Lab group K-A 2.1-2.2

Lab group K-B 1.1-1.2

Lab group K-B 2.1-2.2

Before going to the lab,
you must

**read the lab
compendium!**

*(This will be tested by the
lab supervisors)*

KBKA05

TEKNISK BIOLOGI

LABORATIONSHANDLEDNING
2013

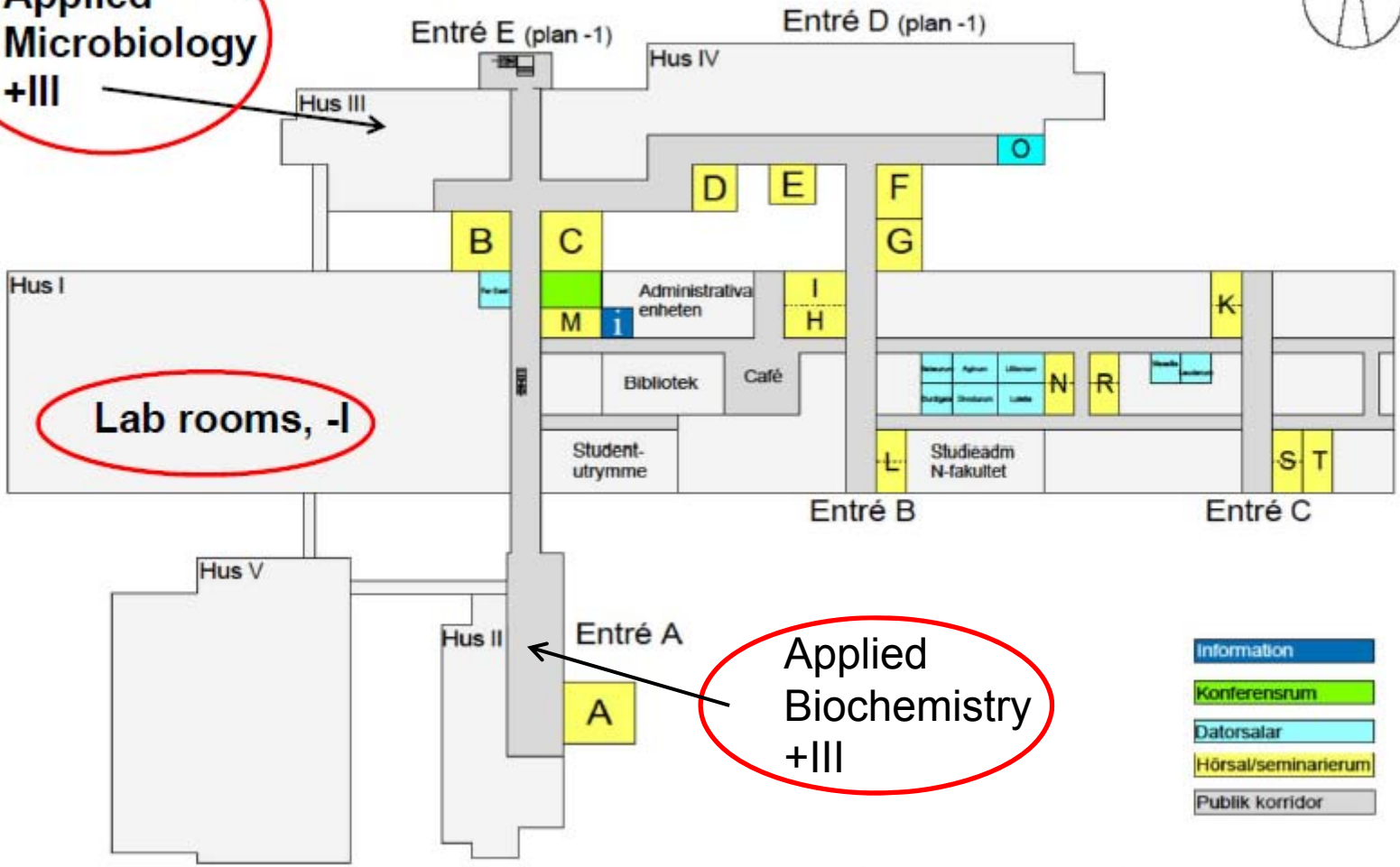
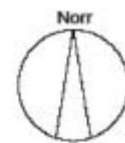
LABORATION 1 OCH LABORATION 2



LUNDS UNIVERSITET
Lunds Tekniska Högskola

Avdelningen för Teknisk Mikrobiologi
Kemikentrum, Lunds tekniska högskola
Box 124, 221 00 Lund,
Tel. 046-2228325, fax. 046-2224203

Applied Microbiology +III



Applied Biochemistry +III

Lab rooms, -I

- Information
- Konferensrum
- Datorsalar
- Hörsal/seminarium
- Publik korridor

Kemicentrum plan 0

Safety!

Firefox

Kemiceentrum: Välkommen till Kemiceent...


www.kc.lu.se

Författaren, artisten och komikern Jonas Gardell, aktuell med boken och tv-serien *Torka aldrig tårar utan handskar*, är inbjuden föreläsare under kvällen.

Olle Söderman hoppas att arrangemanget lockar en stor publik samt att även andra institutioner inspireras till att arrangera liknande arrangemang och diskutera jämställdhet och likabehandling ur olika perspektiv.


Arrangemanget äger rum i kårhusets aula kl 18.30. Anmälan krävs!

Säkerhetsinformation

 **In case of emergency**
I nödläge ska följande åtgärder vidtas.
[In case of emergency](#)

Säkerhetsföreskrifter

Safety regulations


 [Utskriftsversion](#)

Frågor om innehållet: [Kemiceentrum](#)
Webbtekniska frågor: webmaster@lth.se
Senast uppdaterad: 2012-10-25

10.10 november kl 10.15
Place: Kemiceentrum, hörsal C

Disputation i kemiteknik
Modeling for Quality and Safety in Biopharmaceutical Production Processes
Karin Westerberg
Tid: 16 november kl 13.00
Plats: Kemiceentrum, hörsal B

Seminarium "Integrated biofuel production - Policy & Technology"
Tid: 29 november kl 10.00
Plats: Palaestra et Odeum, Paradisgatan 4
Seminarier är kostnadsfritt, men kräver anmälan
SENAST 15 november till:
Emmi.voogand@f3centre.se

 [Program](#)

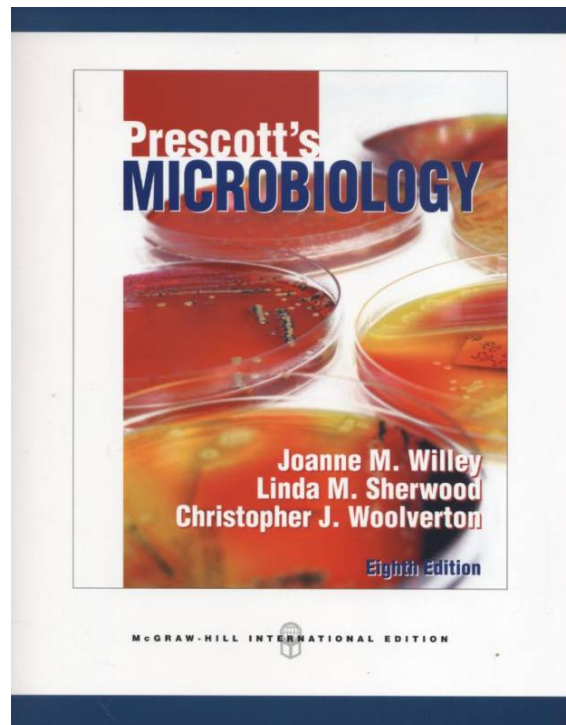
Informationsskärmar på Kemiceentrum

Kemiceentrum har fått två tv-skärmar vid ingång A respektive E. Informationen på skärmarna ska främst rikta sig till studenter, externa besökare och anställda. Vill du informera om något via informationsskärmarna kontakta information@kil.lu.se.

Kemiceentrum, Box 124, 221 00 Lund. Telefon: 046-222 83 49

www.kc.lu.se

Literature



Compendium in Biochemistry

Pure and Applied Biochemistry 2011
Per-Olof Larsson
Matt-Olle Månsson

Firefox
Prescott's Microbiology Companion Site
higher.ed.mcgraw-hill.com/sites/0073375268/student_view0/

PRESCOTT'S
MICROBIOLOGY
EIGHTH EDITION
WILLEY / SHERWOOD / WOLVERTON

Site Map Help Feedback
Online Learning Center

Student Edition

Home Search Instructors

Course-wide Content
Table 23.1 Classificat...
Table 25.1 Some Common...
Careers in Microbiology
Clinical Case Studies
Classification of Proc...
Classification of Viru...
Audio Pronunciation Gu...
Microbiology Prep
Lab Sequence Data
Nobel Prize Winners

Choose a Chapter

Contents

Prescott's Microbiology Companion Site, 8/e

Joanne M. Willey, Hofstra University
Linda M. Sherwood, Montana State University
Christopher J. Woolverton, Kent State University

To learn more about the book this website supports, please visit its [Information Center](#).

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http://higher.ed.mcgraw-hill.com/sites/0073375268/student_view0/

Teachers

Lei Ye

Peter Rådström

Ed van Niel

Per-Olof Larsson

Leif Bülow

Alejandro Munoz de las Heras

Nora Weber

Tove Andersson

Assessment

A. Laboratory exercises

Report 1 (microscopy and bacterial growth)

Report 2 (protein purification)

D. Dugga, optional (8 p)

C. Literature report

D. Written exam (24 p)

Grading

Grade 3 (Pass): approved laboratory reports and literature report; 12-15 p from exam and dugga.

Grade 4 (Very Good): 16-19 p from exam and dugga.

Grade 5 (Excellent): ≥ 20 points.

Individual Literature Report

Topics:

Biosensors, Biogas, Bioremediation Processes, Biopolymers and Bioplastics, Pharmaceutical Biologics, Enzymes for Pulp & Paper, Antibiotic Production, Bio-Diesel, Biorefinery, Metabolic Engineering

Length: 3-4 A4 pages (< 2500 words, font size 12 Times New Roman).

Structure of literature report

Introduction: describe the field and the objectives of the report.

Description/Discussion of the topic: based on your literature study.

Conclusion: address the present limitations and future possibilities.

References: the report should cite 5-7 references, at least one should be peer reviewed scientific paper.

Project meeting Dec. 11

Hand-in before Dec. 19

Technical Biology 2013

