

YASSER GABER

Associate Professor, Faculty of pharmacy, Mutah University, Jordan

Permanent Address: Beni-Suef University, Beni-Suef, Egypt

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My experience in academia is more than 20 years, this included teaching, research, and leadership positions. My academic experience comes from different universities that I studied/worked in e.g., Cairo Uni. (EG), Beni-Suef Uni. (EG), Lund Uni. (SE), Groningen Uni. (NL), Mutah Uni. (JO). Right now, I am the vice-dean, faculty of pharmacy, Mutah University, Jordan. My research interests are about applied microbiology and biotechnology, enzyme discovery and engineering for industrial purposes. I taught more than 20 different courses for the undergraduates including pharmacy and postgraduates' students. I have strong experience in quality assurance management and filing the university ranking applications such as QS and THE ranking, and I am coordinating the application for the American accreditation for faculty of pharmacy Mutah Uni, known as ACPE. Currently, I am giving talks related to scientific publications, ranking and quality assurance issues.

Education

- May 2012 Doctor of philosophy (Ph.D.) in Biotechnology, Lund University, Sweden
- March 2007 M.Sc. Microbiology, Faculty of Pharmacy, Cairo University, Egypt.
- May 1999 B.Sc. Pharmaceutical Sciences, *Excellent with Honour*, Cairo University.

Academic ranks

- September 2018 - Present Associate professor, Faculty of Pharmacy, Department of Pharmaceutics and pharmaceutical Sciences, Mutah University, Jordan
- February 2018 – Present Associate professor, Faculty of pharmacy, Department of Microbiology, Beni-Suef University, Egypt
- 2012 - 2018 Lecturer, Department of Microbiology, Beni-Suef University¹, Egypt
- 2007 – 2012 Assistant lecturer, Department of Microbiology, Beni-Suef University, Egypt
- 2001 – 2007 Demonstrator, Department of Microbiology, Beni-Suef University, Egypt

Leadership positions, committees' memberships and administrative positions

- 19/9/2021 – Current, vice-dean, faculty of pharmacy, Mutah University, Jordan, Decree is issued by Mutah University Board of Trustees
- January 2020 – 19/9/2021, vice-dean, faculty of pharmacy, Mutah University, Jordan, Decree is issued by Mutah University Board of Trustees
- September 2021- current, Editorial board Mutah Lil-Buhuth wad-Dirasat Natural and applied sciences series. Decree is issued by Mutah University President
- January 2020 – current, The organizer for the national and international accreditation applications (ACPE) at faculty of pharmacy, Mutah University
- December 2019 – 19/9/2021, Mutah University Committee for Ranking Issues, Dean of Scientific research, Mutah University, Jordan, Decree is issued by Mutah University President
- December 2019 – Current, Dean Assistant for Quality Assurance issues, Mutah University, Jordan
- February 2018 – October 2018 Membership at EYAS, Egyptian Young Academy of Sciences, ASRT, Egypt

- December 2017 - The Egyptian Organization for Standardization and Quality Control (EOS), Biotechnology committee
- December 2015 – December 2017 Member of Industry Development Council, Academy of Scientific Research and Technology, Egypt.
- September 2015 – Director of the International Ranking Office, Beni-Suef University, Egypt
- December 2014 – September 2015, Vice-director of QAAC - Quality Assurance and Accreditation Center- for University ranking issues, Beni-Suef University, Egypt
- October 2014 – December 2014, Director assistant for Training and Conferences Unit, Beni-Suef University, Egypt
- Beni-Suef university strategic planning committee member, Beni-Suef University, Egypt

Teaching Activities: I participated in teaching the following courses (2014 – present)

Course	Faculty	University	Contribution
1. Advanced Biotechnology	Pharmacy	Mutah University, Jordan	100 %
2. Pharmaceutical Biotechnology	Pharmacy	Mutah University, Jordan	100 %
3. Pharmaceutical Microbiology	Pharmacy	Mutah University, Jordan	100 %
4. Biostatistics	Pharmacy	Mutah University, Jordan	100 %
5. Microbiology I	Pharmacy	Mutah, Jordan	100 %
6. Pharmaceuical Microbiology	Pharmacy	Mutah, Jordan	100 %
7. Pharmacoeconomics	Pharmacy	Mutah, Jordan	100
8. Epidemiology	Pharmacy	Mutah, Jordan	100 %
9. Basic Microbiology and Immunology	Pharmacy	Beni-Suef, Egypt	50 %
10. Parasitology	Pharmacy	Beni-Suef, Egypt	50 %
10. Cell biology	Pharmacy	Beni-Suef, Egypt	50 %
11. Public Health	Pharmacy	Beni-Suef, Egypt	50 %
12. Medical Microbiology	Pharmacy	Beni-Suef, Egypt	50 %
13. Infectious disease – PharmD program	Pharmacy	Beni-Suef, Egypt	20 %
14. Adv. T. in Micro. research – post graduate	Pharmacy	Beni-Suef, Egypt	100 %
15. Biotechnology – Postgraduate program	Pharmacy	Beni-Suef, Egypt	50 %
16. Pharmaceutical Microbiology	Pharmacy	Beni-Suef, Egypt	100 %
17. Proteomics	Postgraduate St. for Adv. Sci.	Beni-Suef, Egypt	100 %
18. Proteomics and Enzymology	Postgraduate St. for Adv. Sci.	Beni-Suef, Egypt	100 %
19. Biotechnology	Pharmacy	Beni-Suef, Egypt	50 %
20. Basic Microbiology and Immunology	Pharmacy	Nahda – Beni-Suef, Egypt	50 %
21. Parasitology	Pharmacy	Nahda – Beni-Suef, Egypt	100 %
22. Basic Microbiology and Immunology	Pharmacy	Fayoum University, Egypt	50 %

- May 2017: Teaching a two-days workshop entitled Structural Bioinformatics – Beni-Suef University
- 2014-present: Involved in teaching and developing NEW curricula such as Proteomics Biotechnology, Basic Microbiology, cell biology, parasitology, and others

Projects, scholarships, and awards:

- A PI of a grant 18000 JOD, Mutah University, Jordan
- Mutah University Award for “Best Course Portfolio Scientific Faculties” 2019.
- May 2017, I won The University Encouragement Award, Beni-Suef University, Sixth Science Day, Beni-Suef University, Beni-Suef, Egypt. December 2014, PI of one-million EGP funded project from Academy of Scientific Research and Technology, Ministry of Scientific Research, Egypt
- December 2013, Short Term Postdoctoral fellowship from The Egyptian ministry of Higher Education
- May 2010-June 2012, a scholarship from European Union, Erasmus Mundus FFEEBB-programme.

- April 2008- April 2010, a two-year scholarship from The Egyptian Ministry of Higher Education.

H-Index:

- Scopus-based H-index: 10, Scopus citations: 436

Conferences and workshops:

- I presented several posters and gave oral talks, and actively participated in different conferences, workshops and events in Jordan, South Africa, Japan, Sweden, Egypt, Germany, Italy, Belgium and The Netherlands (see Appendix)

Scientific societies membership

- SANE; Swedish Alumni Network in Egypt, (**Swedish institute and Swedish Embassy in Cairo**)
- The Netherlands Society for Biochemistry and Molecular Biology (NVBMB), 2012-2014
- European Federation of Biotechnology

Software developed:

- I designed free software, HPLC-EAT, for green chemistry applications³

Scientific social networks:

- ResearchGate and LinkedIn Identifier name: *Yasser Gaber*⁵

Academic Experience:

- November 2012-Present, visiting Researcher then post-doctoral fellow, Groningen University, The Netherlands. I did enzymology and molecular biology research in the group of Professor Marco Fraaije.
- May 2010 – May 2012, Ph.D. student, Biotechnology Department, Lund University, Sweden
I worked in a project aiming to develop an enzymatic process for resolution of racemic clopidogrel.
- April 2008 – May 2010, Guest researcher, Biotechnology Department, Lund University, Sweden
During this period I worked in projects aiming to develop lipase-catalyzed processes for synthesis of specialty chemicals. January 2001- April 2008, Teaching assistant, faculty of pharmacy, Beni-Suef University, Egypt

I conducted a clinical microbiology research including isolation and identification of bacterial and yeast microorganisms and performed antimicrobial susceptibility studies.

Courses, training, methodologies and computer skills:

- I attended several courses and training organized by the following universities: Lund, Uppsala, Linnaeus, Groningen, Cairo and Beni-Suef. Courses, methodologies, and computer skills are listed in an appendix at the end of this CV.

Activities:

- Editor, Cogent Biology Journal, Taylor & Francis Online Publisher³
- Editor reviewer for Frontiers Bioengineering and Biotechnology⁴
- Reviewer for other journals (Biotechnology Reports, Elsevier; Beni-Suef journal of applied sciences, Elsevier)
- 2008 – 2012, Attendance of Nobel Prize laureate lectures held in Lund University

References:

- Prof. Tarif Shawky Farag

Former Beni-Suef university vice-president for scientific research and postgraduate studies affairs Email: tarifag58@bsu.edu.eg, Tarifag58@yahoo.com

- Professor Alaa Abelhalim Marzouk

Former Beni-Suef university vice president for community affairs.

- Prof. Dr. Rajni Hatti-Kaul
Head of Department of Biotechnology, Lund University, Sweden Phone: +46-46-2224840, E-mail: Rajni-Hatti-kaul@biotek.lu.se

Publications list:

1. Abdelkader K, Gutiérrez D, Tamés-Caunedo H, Ruas-Madiedo P, Safaan A, Khairalla AS, **Gaber Y** et al. Engineering a Lysin with Intrinsic Antibacterial Activity (LysMK34) by Cecropin A Fusion Enhances Its Antibacterial Properties against *Acinetobacter baumannii*. *Applied and Environmental Microbiology*. 2022;88(1):e01515-21.
2. Magdy MM, Gaber Y, Sebak M, Azmy AF, AbdelGhani S. Different metabolic pathways involved in anthracene biodegradation by *Brevibacillus*, *Pseudomonas* and *Methylocystis* Species. *Beni-Suef University Journal of Basic and Applied Sciences*. 2022;11(1):1-11.
3. Abbas AM, Rashed ME, El-Gebaly E, AbdelAllah NH, **Gaber Y**. Comparative evaluation of the humoral immune interaction when BCG and conjugated meningococcal vaccines combined or co-administrated in mice. *Comparative Immunology, Microbiology and Infectious Diseases*. 2022;84:101778.
4. Salama S, Habib MH, Hatti-Kaul R, **Gaber Y**. Reviewing a plethora of oxidative-type reactions catalyzed by whole cells of *Streptomyces* species. *RSC advances*. 2022;12(12):6974-7001.
5. Sayed M, **Gaber Y**, Junghus F, Martín EV, Pyo SH, Hatti-Kaul R. Oxidation of 5-hydroxymethylfurfural with a novel aryl alcohol oxidase from *Mycobacterium* sp. MS1601. *Microbial Biotechnology*. 2022.
6. Abdelkader K, Gutiérrez D, Latka A, Boeckeaerts D, Drulis-Kawa Z, Criel B, **Gaber Y**, et al. The Specific Capsule Depolymerase of Phage PMK34 Sensitizes *Acinetobacter baumannii* to Serum Killing. *Antibiotics*. 2022;11(5):677.
7. Maebed, A.Z.M., **Gaber, Y.**, Bakeer, W. and Dishisha, T., 2021. Microbial etiologies of ventilator-associated pneumonia (VAP) in intensive care unit of Beni-Suef University's Hospital. *Beni-Suef University Journal of Basic and Applied Sciences*, 10(1), pp.1-10.
8. AbdelAllah, N.H., **Gaber, Y.**, AbdelGhani, S., Rashed, M.E. and Azmy, A.F., 2021. Chitosan and alginate salt as biomaterials are potential natural adjuvants for killed cholera vaccine. *Journal of Biomedical Materials Research Part A*.
9. Alhadrami, H.A., Sayed, A.M., Hassan, H.M., Youssif, K.A., **Gaber, Y.**, Moatasim, Y., Kutkat, O., Mostafa, A., Ali, M.A., Rateb, M.E. and Abdelmohsen, U.R., 2021. Cnicin as an Anti-SARS-CoV-2: An Integrated In Silico and In Vitro Approach for the Rapid Identification of Potential COVID-19 Therapeutics. *Antibiotics*, 10(5), p.542.
10. Alhadrami, H. A., Sayed, A. M., El-Gendy, A. O., Shamikh, Y. I., **Gaber, Y.**, Bakeer, W., ... & Hozzein, W. N. (2021). A metabolomic approach to target antimalarial metabolites in the *Artemisia annua* fungal endophytes. *Scientific reports*, 11(1), 1-11. **(IF 4)**

11. El-khatib L, Al-dalain S., Al-Matarneh R, Al-Bustanji S, Al-Dmour M, Al-Amarin Y and **Gaber Y** Prevalence of multi-drug resistant *Acinetobacter baumannii* (MDRAB) in Amman Jordan during 2018, Infect Disord Drug Targets. 2020, 22(1), 105-111.
12. **Gaber, Y.**, Rashad, B., Hussein, R., Abdelgawad, M., Ali, N. S., Dishisha, T., & Várnai, A. (2020). Heterologous expression of lytic polysaccharide monoxygenases (LPMOs). *Biotechnology Advances*, 107583-107583. (IF 14.22)
13. Shamikh YI, El Shamy AA, **Gaber Y**, Abdelmohsen UR, Madkour HA, Horn H, Hassan HM, Elmaidomy AH, Alkhalifah DH, Hozzein WN. (2020). Actinomycetes from the Red Sea Sponge *Coscinoderma mathewsi*: Isolation, Diversity, and Potential for Bioactive Compounds Discovery. *Microorganisms*. 2020 May;8(5):783. (IF 4.1)
14. Abdelkader, K., D. Gutiérrez, D. Grimon, P. Ruas-Madiedo, C. Lood, R. Lavigne, A. Safaan, A. S. Khairalla, **Y. Gaber**, T. Dishisha and Y. Briers (2020). "Lysin LysMK34 of *Acinetobacter baumannii* bacteriophage PMK34 has a turgor pressure-dependent intrinsic antibacterial activity and reverts colistin resistance." *Applied and Environmental Microbiology: AEM*.01311-01320. Accepted (IF 4.016)
15. AbdelAllah, N.H., Gaber, Y., Rashed, M.E., Azmy, A.F., Abou-Taleb, H.A. and AbdelGhani, S., 2020. Alginate-coated chitosan nanoparticles act as effective adjuvant for hepatitis A vaccine in mice. *International journal of biological macromolecules*, 152, pp.904-912. (IF 4.78)
16. Elmahdy M., Azmy A. F., El-Gebaly E., Safaan A., **Gaber Y.** (2020) A comparative proteomic study of *Thermobifida cellulosilytica* TB100T secretome grown on Carboxymethylcellulose and Rice Straw. *The Open Biotechnology Journal*, Accepted
17. Ali, M. S., Hussein, R. M., **Gaber, Y.**, Hammam, O. A., & Kandeil, M. A. (2019). Modulation of JNK-1/ β -catenin signaling by *Lactobacillus casei*, inulin and their combination in 1, 2- dimethylhydrazine-induced colon cancer in mice. *RSC Advances*, 9(50), 29368-29383. (IF 3.09).
18. Abdel-Aleem, H., Dishisha, T., Saafan, A., AbouKhadra, A.A. and **Gaber, Y.** (2019). Biocementation of soil by calcite/aragonite precipitation using *Pseudomonas azotoformans* and *Citrobacter freundii* derived enzymes. *RSC Advances*, 9(31), pp.17601-17611. (IF 3.09).
19. Zidan, A.F., Aboukhadra, A.A. & **Gaber, Y.** (2019). Enhancement of resilient modulus of cohesive soil using an enzymatic preparation. *J. Cent. South Univ.* 26: 2596. Doi: 10.1007/s11771-019-4197-1 (IF 0.97)
20. **Gaber, Y.**, Rashad, B., & Fathy, E. (2019). Biological 3D Structural Databases. In *Essentials of Bioinformatics, Volume I* (pp. 47-73). Springer, Cham. [Book chapter], DOI:10.1007/978-3-030-02634-9_4
21. Khadra, A. A., Zidan, A. F., & **Gaber, Y.** (2019). Ground Improvement Technique Using Geogrid Reinforcement with Additives (experimental study). *Life Science Journal*, 16(4).
22. AbouKhadra, A., Zidan, A. F., & **Gaber, Y.** (2018). Experimental evaluation of strength characteristics of different Egyptian soils using enzymatic stabilizers. *Cogent Engineering*, 5(1), 1-11.
23. **Gaber, Y.**, and Ismail M., (2017) Cross-linked Enzyme Aggregates of Pig Liver Esterase Evaluated in Kinetic Resolution of Racemic Clopidogrel. *Biotechnology*, 16, 123-129
24. **Gaber, Y.**, (2016) In-silico smart library design to engineer a xylose-tolerant hexokinase variant. *African J. Biotechnol.* 15(21), 910-916.
25. **Gaber, Y.**, Mekasha S., Vaaje-Kolstad G., Vincent GH Eijsink V.G.H., Fraaije M.W., (2016) Characterization of a Chitinase from the Cellulolytic Actinomycete *Thermobifida fusca*. *Bioch. et Bioph. Acta (BBA)-Proteins and Proteomics* 1864, 1253–1259 (IF 3.016).

26. Sayed, M., **Gaber, Y.**, Bornadel, A., and Pyo S., (2016) Multi-steps Green Process for Synthesis of Six-Membered Functional Cyclic Carbonate from Trimethylolpropane by Lipase Catalyzed Methacrylation and Carbonation, and Thermal Cyclization. *Biotechnol. Prog.* 32 , 83-88 (**IF 2.167**).
27. **Gaber, Y.**, Ismail M., Bisagni S., Takwa M., and Hatti-Kaul R., (2015) Rational mutagenesis of pig liver esterase (PLE-1) to resolve racemic clopidogrel. *J. Mol. Catal. B. Enzym.* 122, 156-162. (**IF 2.189**)
28. Ferrari A., **Gaber, Y.**, Fraaije, M.W., (2014). Fast, sensitive, and easy colorimetric assay for chitinase and cellulase activity detection. *Biotechnol. Biofuels* 7:37, (**IF, 6.444**)
29. **Gaber, Y.**, Åkerman, C.O., M., Hatti-Kaul, R., (2014) Environmentally evaluated HPLC-ELSD method to monitor enzymatic synthesis of a non-ionic surfactant. *Chem. Cent. J.* 8:33 (**IF, 2.552**)
30. **Gaber, Y.**, Ali Amin, M., Hatti-Kaul, R., (2014) An investigation of enzymatic kinetic resolution of racemic clopidogrel. *Asian J. Microbio., Biotechno. and Environmental Sci.* 16(2), 247-251.
31. Åkerman, C.O., **Gaber, Y.**, Ghani, N.A., Lämsä, M., Hatti-Kaul, R., (2011) Clean synthesis of biolubricants for low temperature applications using heterogeneous catalysts. *J. Mol. Catal. B: Enzym.* 72, 263-269. (**IF, 2.189**)
32. **Gaber, Y.**, Törnvall, U., Kumar, M.A., Ali Amin, M., Hatti-Kaul, R., (2011) HPLC-EAT (Environmental Assessment Tool): A tool for profiling safety, health and environmental impacts of liquid chromatography methods. *Green Chem.* 13, 2021-2025.² (**IF, 8.506**)
33. Tran, T.T., Hashim, S.O., **Gaber, Y.**, Mamo, G., Mattiasson, B., & Hatti-Kaul, R. (2011). Thermostable alkaline phytase from *Bacillus sp.* MD2: Effect of divalent metals on activity and stability. *J. Inorg. Biochem.* 105(7), 1000-1007. (**IF, 3.205**)
34. Tran, T.T., Mamo, G., Buxo, L., Le, N.N., **Gaber, Y.**, Mattiasson, B., Hatti-Kaul, R., (2011) Site-directed mutagenesis of an alkaline phytase: Influencing specificity, activity and stability in acidic milieu. *Enzyme Microb. Technol.* 49, 177-182. (**IF, 2.624**)
35. **Gaber, Y.**, Törnvall, U., Orellana-Coca, C., Amin, M.A., & Hatti-Kaul, R. (2010). Enzymatic synthesis of N-alkanoyl-N-methylglucamide surfactants: solvent-free production and environmental assessment. *Green Chem.*, 12(10), 1817-1825. (**IF, 8.506**)

Appendix

Taking major part in organization of the first department conference “Biotechnology for the Emerging Economies” held in Beni-Suef, 7th of April 2015, <http://microbsu.webs.com/bsu-be2015>

1. Member the committee supervising the Beni-Suef University Research City project (October 2014 – present)
2. Participation in Beni-Suef university Research Plan 2015-2020, http://www.bsu.edu.eg/Content.aspx?section_id=462&cat_id=1
3. Member of Beni-Suef university committee for missions affair
4. Member of Beni-Suef university committee for University Buildings Coding Project

Hyperlinks to personal websites and author’s profiles

1. <https://publons.com/researcher/312002/yasser-gaber/>
2. http://www.bsu.edu.eg/Content.aspx?side_id=190&cat_id=28
3. <http://eg.linkedin.com/pub/yasser-gaber/25/291/851>
4. https://www.researchgate.net/profile/Yasser_Gaber2
5. <http://www.researcherid.com/rid/G-4577-2013>

Conferences and workshops:

1. Oral talk entitled “characterization of a chitinase from *Thermobifida fusca*” in the international conference Science and Science Management for Sustainable Development, organized by Alexander von Humboldt and JSPS, National Research Center, 24-26 October, Cairo, **Egypt**
2. Biovision2016, Bibliotheca Alexandrina, 12-14 April, Alexandria, **Egypt**.
3. Participation in the 7th HOPE meeting with Nobel Laureates, sponsored by JSPS, Tokyo, **Japan**, March, 2015. <http://www.jsps.go.jp/english/e-hope/>
4. Participation in Africa Universities Summit sponsored by THE TIMES Higher education and Johannesburg University, 30-31 July, **South Africa**. <http://www.cvent.com/events/the-africa-universities-summit/event-summary-e374eaf1963746bba072de79456ab02d.aspx>
5. Horizon 2020, Science with and for society, Brussels, **Belgium**, May, 2014 <http://www.b2match.eu/science-society-2014/participants/191>
6. November 2013, poster presentation and attendance of a mini-symposium <http://www.biocatalysis.nl/Program.html> , Delft University, Delft, **The Netherlands**
7. **September 2013, Industrial Biotechnology: meeting the challenges,** http://www.kilu.lu.se/industrial_biotechnology_2013/program/, Lund, **Sweden**. Two-posters presentation.
8. September 2013, **21st Annual GBB Symposium, Groningen, The Netherlands. (Poster presentation)** <http://www.rug.nl/research/gbb/education/generalcourses/gbbsymposium/>
9. **May 2012, Clean water through Bio- and Nano-technology Conference,** <http://www.kilu.lu.se/bionano2012>, Lund, **Sweden**.

10. **April 2012, Catalyzing Bio-Economy - Biocatalysts for Industrial Biotechnology, Annual meeting of DECHEMA-VAAM-Section Biotransformations, Frankfurt am Main, Germany. Poster presentation: Enzymatic asymmetric hydrolysis of racemic clopidogrel.**
11. **October 2011, Biotrans2011 conference, Sicilia, Italy. Poster presentation: Enzyme catalyzed kinetic resolution of racemic clopidogrel.**
12. September 2011, 11th Swedish Bioinformatics Workshop (SBW2011), Lund, **Sweden. Oral talk and poster presentation: Molecular modeling as a rational design tool of an esterase,** <http://cbbp.thep.lu.se/sbw2011/abstalks.html>.
13. November 2010, First Swedish-Egyptian Biotechnology Workshop, Cairo, **Egypt. Oral talk: Enzymatic synthesis of biosurfactants.**
14. November 2010, Industrial Biotechnology-A platform for sustainable growth in Sweden, Lund, **Sweden. Poster Presentation: Enzymatic synthesis of N-alkanoyl-N-methylglucamide surfactants: solvent-free production and environmental assessment.** <http://www.greenchem.lu.se/seminars/>

Courses and Training attended:

- I. **October 2013, The Netherlands**
Protein Engineering of cytochrome P450s, I gave an oral presentation
(3 credits, Prof. Dick Janssen, Groningen Univ.)
- II. **April 2008 – May 2012, Sweden:**
 1. Bacteria as Protein Factories
(3 credits, Assoc. Prof. Claes von Wachenfeldt, Biology Dept. Lund Univ.)
 2. Methods in Molecular Biology
(15 credits, Assoc. Prof. Nora Asumees, Biology Dept. Lund Univ.)
 3. Bioprocess Technology
(7.5 credits, Prof. Olla Holst, Biotechnology Dept., Lund Univ.)
 4. Biochemical Reaction Engineering
(7.5 credits, Prof. Gunnar Liden, Chemical Engineering Dept. Lund Univ.)
 5. Enzyme Technology
(7.5 credits, Prof. Patrick Adlercreutz, Biotechnology Dept. Lund Univ.)
 6. Green chemistry and Biotechnology
(7.5 credits, Prof. Eva Nordberg Karlsson, Biotechnology Dept. Lund Univ.)
 7. Structural Bioinformatics
(15 credits, Prof. Salam Al-karadaghi, Center of Molecular Protein Science, Lund Univ.)
 8. Environmental Issues and Hazards in the Chemical Research Laboratory
(2 credits, Prof. Ulf Henrik, Organic Chemistry Dept. Lund Univ.)
 9. Pharmaceutical Bioinformatics
(7.5 credits, Dr. Maris Lapins, Pharmaceutical Biosciences, **Uppsala** Univ.)
 10. English for Research Writing
(8 credits, Dr. Rowena.Jansson, **Linnaeus** Univ.)
 11. Research Ethics for Chemists
(2 credits, Prof. Jonas Josefsson, Philosophy Institution, Lund Univ.)
 12. Introductory Workshop for New PhD Students at LTH
(2 credits, Dr. Anders Ahlberg, Lund Univ.)

13. Scientific Information Management

(3 credits, Alexandra Forsberg, Lund Univ.)

Total credits (ECTS)⁶: 92.5, coordinators of the courses are indicated between the brackets

III. 2001-2012, Beni-Suef, Egypt:

Faculty Development Leadership Program (FDLP) courses held in Beni-Suef University for promoting skills in: Leadership, Scientific Research, Effective Teaching and Effective Communication

IV. 2000-2001, Pre-Master courses, Cairo University, **Egypt**

Advanced courses in Statistics, Microbiology, Immunology, and Genetics

Methodologies:

- Bioinformatics tools for protein engineering such as homology modeling, molecular dynamic simulations, and ligand-receptor docking
- Molecular biology techniques: PCR, ligation, transformation, DNA extraction and sequencing
- Background about **Isothermal Titration Calorimetry**, Supercritical carbon dioxide, fermentation processes, LC-MS, Protein purification and characterization

Computer skills: software and databases

- 3DM-information system (Paid protein engineering database)
I worked on 3DM database systems of alpha-beta hydrolases and Glycoside transferases
 - YASARA Structure Package (Molecular Modeling software)
 - Online databases: Expassy Bioinformatic Resource Portal, UniProt, NCBI and others
-