MARIO LEBENDIKER, Ph.D. November 2017

CURRICULUM VITAE

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1954	Born in Buenos Aires, Argentina
1971-77	Biochemistry Studies (Equivalent to B.Sc. and M.Sc.) at the Faculty of Pharmacy and Biochemistry, Buenos Aires University.
1978	Assistant in the Biology Department at the Faculty of Pharmacy and Biochemistry, Buenos Aires University.
1979-82	Ph.D. in Biochemistry, Animal Virology Center (CEVAN), Buenos Aires University. Recipient of the Fellowship of the National Research Council, Argentina. Thesis: "Analysis of the Macromolecular Components of Foot-and-Mouth Disease Virus. Localization and Identification of the Endonuclease of Virions". Under the Guidance of Dr. Jose La Torre.
1983-85	Postdoctoral Fellow at the Department of Molecular Virology, Hadassah Medical School, The Hebrew University of Jerusalem. Sponsor: Professor Raymond Kaempfer. Subject: Translational Control of Eukaryotic Gene Expression.
1985-1994	Researcher and Group Leader in the Protein Department of Makor Chemicals, a Local Subsidiary of the Sigma, Aldrich, Fluka Corporation. Jerusalem. Subject: In charge of research, development and production of more than 100 fine biochemical products that became an integral part of Sigma catalogue. The development of each project includes: search out library for valuable new products, estimation of potential markets, development of an industrial strategy for purification; physico-chemical and biological stability of the products; development of a biological assay, and scaling-up.
1994-1996	Research Assistant at the Department of Microbiological and Molecular Ecology, Life Science Institute, The Hebrew University of Jerusalem. Sponsor Professor Shimon Shuldiner. Subject: Structural information by NMR and X-Ray Crystallography of a membrane transporter.
1997-Present	In charge of the Protein Purification Facilities at the Wolfson Centre for Applied Structural Biology , Life Science Institute, The Hebrew University of Jerusalem. Subject: the research in our group focuses in how to obtain large quantities of highly purified and biologically active proteins that is necessary for structural and biochemical studies.

2000-Present Two week Course for graduate students on Expression and Purification of Recombinant Proteins (Registerd Courses 72682, 72681 and 72695).

2008-Present Faculty member for Structural Biology in the Experimental Biophysical Methods section of Faculty of 1000 Biology Reports: articles evaluations

SCIENTIFIC EXPERIENCE

Ph.D.: In my doctorate thesis, conducted under the guidance of Dr. La Torre, I have been studying the internal endoribonuclease of Foot-and-Mouth Disease Virions; it's purification and characterization. Activation of the endoribonuclease inside the virions. See publications 1-4 and 10.

As a result of these studies we have formulated an experimental vaccine: inactivation of a vaccine virus strain by activation of the virus-associated endonuclease. (Patent: Acta No. 283355/80 Direccion Nacional de Propiedad Industrial Argentina).

Postdoc: During my postdoctoral fellowship under the guidance of Professor Raymond Kaempfer, the focus of my studies concentrated on the translational control of eukaryotic gene expression.

1. Differential modulation of binding and interaction of eukaryotic initiation factor 2 (eIF-2) with double stranded RNA, Met-tRNAf, mRNA, ATP and GTP.
2. Superinduction of the human immune interferon gene.

See publications 5-9 and 11-12.

Industry: Researcher and a group leader in the protein department of Sigma Chemicals. I was in charge of the research, development and production of more than 100 fine biochemical products that became an integral part of Sigma catalogue. The development of each project includes: search out library for valuable new products; estimation of potential markets; development of an industrial strategy for purification; physico-chemical and biological stability of the products; development of a biological assay and scaling-up for final processing.

The result of this work were:

1. Most of the lectins and lectins conjugated to agarose in Sigma catalogue. For example: Wheat Germ Agglutinin, Phytohemagglutinin PHA-P, Leucoagglutinin PHA-L, Ricinnus Toxin, Soybean Agglutinin, Pea Lectin, Galanthus Nivalis, Datura Stram, Vicia Faba, Artocarpus Integrifolia, etc.
2. Ribosomal Inhibitor Proteins, like: Ricin A, Abrin, Deglycosylated Ricin A, Gelonin, Momordin, Trichosanthin, etc. These kind of proteins are widely used for preparation of immunotoxins.
3. Bacterial toxins as: Cholera Toxin, Pseudomona Exotoxin A, Staphylo Alpha-Toxin. Superantigens as: Staphylo Enterotoxin A, B and Toxic Shock Syndrome Toxin I, etc.
4. Proteins of animal and venom origin like Annexins, Desintegrins, Heparan Sulfate Proteoglycans, Cyclophilin, etc.

Research Assistent: During my work in the Laboratory of Professor Shimon Schuldiner, the focus of my studies concentrated on a transporter protein. I have purified a very unusual membrane protein. We tried to obtain structural information by NMR and X-Ray Crystallography. I had use techniques of molecular biology such as site directed mutagenesis, DNA sequence, etc.; techniques of purification of membrane proteins and liposome reconstitution of the activity.

See publications 13-20.

Present Work: In charge of the Protein Purification Facilities in the Wolfson Center for Applied Structural Biology , Life Science Institute, The Hebrew University of Jerusalem. Elucidation of the nature, function and organization of proteins relies significantly on structural studies. While collaborating on different projects with other units, the research in our group focuses in how to obtain large quantities of highly purified and biologically active proteins that is necessary for crystallization or NMR studies. The Protein Purification Facilities are accessible for students and staff of the University and from biotech Industries, that are interested in over-expression and purification of various proteins, under the guidance of the unit's personal.

PATENTS

Patent Number: 4,471,054 United States Patent
Process for Inactivating Foot-and-Mouth Disease Virus
Lattore Jose; Denoya Claudio; Scodeller Eduardo; Vasquez Cesar; **Lebendiker Mario**; Dubra Maria S. and Crespo Oscar Date: Sept. 11 1984

LIST OF PUBLICATIONS

1. Dubra, M.S., **Lebendiker, M.A**., Grigera, P.R., Tisminetzky, S.G., Costa Giomi, M.P., Sagedhal, A., La Torre, J.L., and Vasquez, C.(1981) Biologia Molecular del Virus de la Fiebre Aftosa. *Medicina 41: 221-229*.
2. La Torre, J.L., Underwood, B.O., **Lebendiker, M.A**., Gorman, B.M., and Brown, F. Application of RNAase (1982) T1 one and two-dimensional analysis to the rapid identification of Foot-and-Mouth Disease viruses. *Infection and Immunity 36: 142-147.*
3. Scodeller, E.A., **Lebendiker, M.A**., Dubra, M.S., Basarab, O., La Torre, J.L., and Vasquez, C.(1982). An experimental vaccine for Foot-and-Mouth Disease Virus. *Proceedings of the 16th Conference of Foot-and-Mouth Disease Virus of the International Organization of Epizaotes 45-55.*
4. Scodeller, E.A., **Lebendiker, M.A**., Dubra, M.S., Crespo, D.A., Basarab, O., La Torre, J.L., and Vasquez, C.(1984).Inactivation of FMDV vaccine strains by activation of virus associated endonuclease. *J. of General Virology, 65(9): 1567-1573*.
5. Itamar, D., Gonsky, R., **Lebendiker, M**., and Kaempfer, R. (1984) The nature of the interaction of eukaryotic initiation factor 2 with double-stranded RNA. Eur. J. Biochem. 145, 373-379.
6. Kaempfer, R., Gonsky, R., and **Lebendiker, M**. (1986). Binding of ATP to eIF-2 induces modulation of its Met-tRNAf-and mRNA-binding activities. *In: Translational Control (M. Mathews, ed.), Cold Spring Harbor, N.Y. pp. 58-62.*
7. **Lebendiker, M.A**., Tal, C., Sayar, D., Pilo, S., Eilon, A., Banai, Y., and Kaempfer, R. (1987). Superinduction of the human gene encoding immune interferon*. EMBO J. 6, 585-589.*
8. Kaempfer, R., Sayar, D., Efrat, S., **Lebendiker, M**., Ketzinel, M., and Tal, C. (1987) Human interleukin-2 and interferon-gamma gene expression is regulated by suppressor T cells. *Lymphokine Research 6, 1640*.
9. Sayar, D., **Lebendiker, M**., Silberberg, C., Reshef, A., Gerez, L., Ketzinel, M., and Kaempfer, R. (1988). Superinduction and differential regulation of expression of human IL-2 receptor alpha-subunit mRNA species. *Lymphokine Research 7, 310.*

10. Grigera,P.R., Tisminetzky, S.G., **Lebendiker, M.A.**, Periolo, O.H. and La Torre, J.L. (1988). Presence of a 43-kDa host-cell polypeptide in purified aphtovirions. *Virology 165 (2): 584-588*
11. Gonsky, R., **Lebendiker, M.A**., Harary, R., Banai, Y., and Kaempfer, R. (1990) Binding of ATP to eukaryotic initiation factor 2: differential modulation of mRNA-binding activity and GTP-dependent binding of Met-tRNAf. *J. Biol. Chem. 265: 9083-9089*.
12. Kaempfer, R., Sayar, D., **Lebendiker, M**., Arad, G., Gerez, L., and Ketzinel, M. (1990) Post-transcriptional regulation of the human gene encoding the p55 alpha-subunit of the IL-2 receptor. *J. Leukocyte Biol. Suppl. 1, 16*.
13. Yerushalmi, H., **Lebendiker, M.A**., and Schuldiner, S.. (1995) EmrE, an Escherichia coli 12-kDa Multidrug Transporter, Exchanges Toxic Cations and H+ and Is Soluble in Organic Solvents. *J. Biol. Chem. 270:6856-6863*
14. Arkin,I.T.,Russ,W.P.,**Lebendiker,M**.,and Schuldiner,S (1996). Determining the Secundary Structure and Orientation of Emr-E, a multi-drug Transporter, indicates a Transmembrane Four Helix Bundle. *Biochemistry 35: 7233-7238*.
15. Schuldiner,S.,**Lebendiker,M**.,Mordoch,S.,Yelin,R. and Yerushalmi,H. (1996). From multidrug resistence to vesicular neurotransmiter transport.In press (in "*Transport Processes in Membrane"Handbook of Biological Physics, ed. Konings, W.N., Kaback H.R.and Lolkema,J.S. ;Elsiever).*
16. **Lebendiker,M**. and Schuldiner,S. (1996).Identification of residues in the translocation pathway of EmrE,a multidrug antiporter from *Escherichia coli*. *J.of Biol.Chem. 271: 21193-21199.*
17. Yerushalmi, H., **Lebendiker, M.A**., and Schuldiner, S.. (1996).Negative dominance studies demonstrate the oligomeric structure of EmrE, a multidrug antiporter from *Escherichia coli*. *J.of Biol.Chem. 271: 31044-31048*.
18. Schuldiner,S.,**Lebendiker,M**. and Yerushalmi,H. (1997). EmrE, the smallest ion-coupled transporter, provides a unique paradigm for structure-function studies. *J. of Experimental Biology 200: 335-341.*
19. Schwaiger, M., **Lebendiker, M**., Yerushalmi, H., Coles, M., Groger, A., Schwartz, C., Schuldiner,S.,and Kessler, H. (1998). NMR-Investigation of the Multidrug Transporter Emr-E an Integral Membrane Protein. *Eur. J. of Biochemistry 254: 610-619*.
20. Steiner Mordoch S., Granot D., **Lebendiker, M.**, and Schuldiner, S. (1999). Scanning Cysteine accessibility of EmrE, an H+-coupled Multidrug Transporter from Escherichia coli, reveals a Hydrophobic pathway for solutes. *J. of Biol. Chemistry 274: 19480-19486*
21. Tate C., Kunji E., **Lebendiker M**., and Schuldiner S. (2001). The projection structure of EmrE, a proton linked multidrug transporter from Escherichia coli, at 7Å resolution. *The EMBO Journal 20: 77-81*
22. Orzech E., Okhrimenko H., Reich V., Cohen S., Weiss A., Melamed-Book N., **Lebendiker M**., Altschuler Y.and Aroeti B.(2001). The AP-1 adaptor of the clathrin coat associates with microtubules via microtubule associated proteins. *J.of Biol. Chemistry 276 (33): 31340-31348*
23. Fish A, **Lebendiker M**, Nechushtai R & Livnah O (2003). Purification, crystallization and preliminary X-ray analysis of ferredoxin isolated from thermophilic cyanobacterium Mastigocladus laminosus. *Acta Crys. D-59: 734-736*
24. Listovsky T., Oren Y., Yudkovsky Y., **Lebendiker M.** and Brandeis M. (2004). Fzr mediates its own degradation. *EMBO J. 00 : 1-8*

25. 25 Klein S., Geiger T., Linchevski I., **Lebendiker M**., Itkin A., Assayag K. and Levitzki A. (2005) Expression and purification of active PKB kinase in *E. coli Protein Expression and Purification 41: 162–169*

26. Sher D., Fishman Y., Zhang M., **Lebendiker M**., Gaathon A., Manchenio J. and Zlotkin E. (2005) Hydralisins: a new category of diverse Beta-Poreforming toxins in Cnidaria. Characterization and preliminary structure-function analysis. *J. of Biol. Chemistry 280: 22847 – 22855*

27. Diskin R., **Lebendiker M**., Engelberg L. And Livnah O. (2007) Structures of p38α Active Mutants Reveal Conformational Changes in L16 Loop that Induce Autophosphorylation and Activation. *J. Mol. Biol. (2007) 365, 66–76*

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29. Shalev-Malul G., Viner-Mozzini Y., Sukenik A., Gaathon A., **Lebendiker M**. and Kaplan A. (2008) An AbrB-like protein might be involved in the regulation of cylindrospermopsin production by Aphanizomenon ovalisporum. *Environmental Microbiology 10(4), 988–999*

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31. Katz C., Benyamini H.,Rotem S., **Lebendiker M.**, Danieli T., Iosub A., Refaely H., Dines M., Bronner V., Bravman T., ShalevD., Rüdiger S., and Friedler A. (2008) Molecular basis of the interaction between the antiapoptotic Bcl-2 family proteins and the proapoptotic protein ASPP2 *PNAS 105 (34): 12277–12282*

32. Reingewertz T.; Benyamini H.; **Lebendiker M.**; Shalev D.and Friedler A.(2009) The C-Terminal Domain of the HIV-1 Vif Protein is Natively Unfolded in its Unbound State. PEDS (Protein Engineering, Design, and Selection) 1–7, doi: 10.1093/protein/gzp004

33. Lieman-Hurwitz J, Haimovich M, Shalev-Malul G, Ishii A, HiharaY, Gaathon A, **Lebendiker M** and Kaplan A. (2009) A cyanobacterial AbrB-like protein affects the apparent photosynthetic affinity for CO2 by modulating low-CO2-induced gene expression. *Environmental Microbiology 11(4), 927–936*

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36. **Lebendiker M.**, and Danieli T. (2010) Purification of Proteins fused to Maltose-binding Protein. *Protein Chromatography: Methods and Protocols. Editor(s): Dermot Walls, Sinéad T. T. Loughran Series: Methods in Molecular Biology Vol.681: 281-293*

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40. Gabizon R, Brandt T, Sukenik S, **Lebendiker M**, Lahav N, Veprintsev D and Friedler A. (2012) Modulating the oligomerization equilibrium of p53 by peptides that bind its C terminal domain. *PLoS ONE 7 (5) e38060*
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43. **Lebendiker M.**, and Danieli T. (2014) Production of prone to aggregate proteins. *FEBS Lett. (2014), http://dx.doi.org/10.1016/j.febslet.2013.10.044*
44. Buch M., Wine Y., Dror Y., Rosenheck S., **Lebendiker M**., Giordano R., Leal R., Popov A., Freeman A and Frolow F. (2014) Protein Products Obtained by Site-Preferred Partial Crosslinking in Protein Crystals and ''Liberated'' by Redissolution. *Biotechnology and Bioengineering DOI 10.1002/bit.25186*
45. Sharabi O., Shirian J., Grossman M., **Lebendiker M.**, Sagi I, and Shifman J. (2014) Affinity- and specificity-enhancing mutations are frequent in multispecific interactions between TIMP2 and MMPs *BMC Res Notes. 2014 7:585 doi:10.1186/1756-0500-7-585*
46. **Lebendiker M.**, Danieli T. and de Marco A. (2014) The Trip Adviser guide to the protein science world: a proposal to improve the awareness concerning the quality of recombinant proteins. *BMC Res Notes. 2014 7:585 doi:10.1186/1756-0500-7-585*
47. Maes M.; Amit E.; Danieli T.; **Lebendiker M**.; Loyter A.and Friedler A. (2014) The disordered region of Arabidopsis VIP1 binds the Agrobacterium VirE2 protein outside its DNA binding site *Protein Engineering, Design, and Selection" (PEDS)1-8 doi:10.1093/protein/gzu036*
48. **Lebendiker M**., Maes M. and Friedler A (2015) A screening methodology for purifying proteins with aggregation problems. *Methods in Molecular Biology: "Insoluble Proteins" book (Springer) 1258: 261-281*
49. Iosub Amir A., van Rosmalen M., Mayer G., **Lebendiker M**., Danieli T. and Friedler A. (2015) Highly homologous proteins exert opposite biological activities by using different interaction interfaces. *Scientific Reports (Nature) 5, 11629; doi: 10.1038/srep 11629*
50. Shavit R., **Lebendiker M.,** Pasternak Z., Burdman S. and Helman Y. (2016) The *vapB-vapC* Operon of *Acidovorax citrulli* Functions as a *bona-fide* Toxin-Antitoxin Module *Front. Microbiol., 06 January 2016 | http://dx.doi.org/10.3389/fmicb.2015.01499*
51. Shoshan M., Dekel N., Goch W., Shalev D., Danieli T., **Lebendiker M.**, Bal W. and Tshuva E. (2016) Unbound Position II in MXCXXC Metallochaperone Model Peptides Impacts Metal Binding Mode and Reactivity: Distinct Similarities to Whole Proteins. *Journal of Inorganic Biochemistry doi: 10.1016/j.jinorgbio.2016.02.016*
52. Amartely H., David A., Shamir M., **Lebendiker M.**, Izraeli S. and Friedler A. (2016) Differential effects of Zinc binding on structured and disordered regions in the multidomain STIL protein. *Chemical Science DOI: 10.1039/x0xx00000x*
53. Edinger N., **Lebendiker M.**, Klein S., Zigler M., Langut Y and Levitzki A. (2016) Targeting polyIC to EGFR over-expressing cells using a dsRNA binding protein domain tethered to EGF *PLoS ONE 11(9): e0162321. doi:10.1371/journal.pone.0162321*

54. Langut Y., Edinger N., Flashner-Abramson E., Melamed-Book N., **Lebendiker M.**, Klein S., and Levitzki A. (2017) PSMA-homing dsRNA chimeric protein vector kills prostate cancer cells and evokes anti-tumor immunity *Oncotarget 2017 Apr 11; 8(15): 24046–24062 10.18632/oncotarget.15733*
55. **Lebendiker M.**, and Danieli T. (2017) Purification of Proteins fused to Maltose-binding Protein. *Methods Mol Biol 1485 257-273: Protein Chromatography: Methods and Protocols. Editor(s): Dermot Walls, Sinéad T. T. Loughran*

Website - Journals

1) Network manager and founder of the Protein Purification Facility website of The Wolfson Centre in The Hebrew University: This site includes a plethora of information in the protein production field, used by students and researchers of many Universities.
More than 72,000 entries since September 2006
http://www.ls.huji.ac.il/~purification/

2) Network manager of the Protein Production and Purification Partnership in Europe (P4EU) network since October 2011: A platform for the exchange of information, know-how and materials between core facility labs in the field of protein expression and purification.
In construction
http://www.structuralbiology.eu/networks/p4eu?tab=contacts

3) Neubig R, and Roman D, (2004) Sites of interest on the World Wide Web *Mol. Interv.4: 298*

4) Lederman L. (2009) Protein Isolation and Purification – Tech News *BioTechniques 46:87-89*

http://www.biotechniques.com/BiotechniquesJournal/2009/February/Protein-Isolation-and-Purification/biotechniques-92073.html?service=print

5) F1000, Faculty of 1000, Faculty Member (contributor) since 2008 (http://f1000.com/my)

6) Editorial Board of F1000 Research since May 2012 (http://f1000research.com)

7) GE Healthcare Life Sciences: External Links Resources for Tagged Protein purification

http://sciencedirect.verticalsearchworks.com/EN/Microsites/1/GE+Healthcare/Home

8) Pure Pursuits: Techniques for simpler, cheaper, and better antibody purification. By Katherine Bagley. The Scientist May, 1st , 2012 http://the-scientist.com/2012/05/01/pure-pursuits/

Courses in The Hebrew University

1) PURIFICATION & EXPRESSION OF RECOMBINANT PROTEIN #72681
   Mario Lebendiker and Tsafi Danieli: Theoretical course two hours per week during one semester
   Years: 2002, 2003, 2005, 2007, 2009, 2010, 2012
2) WORKSHOP ON PROTEIN PURIFICATION #72695
   Mario Lebendiker: two practical courses, one week each one, 45 hours each course
   Years: 2002, 2003, 2005, 2007, 2009, 2010, 2012
3) PROTEIN CHEMISTRY – ADVANCED BIOPHYSICAL METHODS #69703
   Assaf Friedler: 1hour talk
4) BIOCHEMISTRY : ADVANCED LEVEL #72339
   Dudy Engelberg: 2 hour talk
5) Theoretical Course: Protein Production for Biophysical and Biochemical Studies (#92632) – Hebrew University of Jerusalem, Israel. Nov-Dec 2014 *(~28hours course, four days. Participation of near 50 students from all the Hebrew University Campus, Tel Aviv University, Haifa University, Technion and Weizzman Institute)*
6) Practical Course: Protein Production for Biophysical and Biochemical Studies (#92638) – Hebrew University of Jerusalem, Israel. February 2015 *(~24hours course, three days. Participation of six students from the Hebrew University and Haifa University)*
7) Theoretical Course: Protein Production for Biophysical and Biochemical Studies (#92632) – Hebrew University of Jerusalem, Israel. Oct 2014 to Jan 2016 *(2 weekly hours course, first semester. Participation of near 16 students from all the Hebrew University Campus and 1 from SIGMA)*

Congress, Meetings and External Courses

1) PEGS 4th Annual Protein Process Development Conference and 10th Annual Protein Expression Conference, January 2007, San Diego, USA, (Poster)
2) NMR-Life Workshop meeting: "Protein expression and isotope labeling for structural biology" – July 2008, BNMRZ, Garching, Germany
   TALK: Protein Sample Preparation for Structural and Biophysical Studies - Personal Experience Handling Some Difficult Proteins (1hour talk)
3) PEGS Europe - Protein Engineering Summit, September 2009 - Hannover, Germany (participation)
4) Meeting of European Protein Expression Facilities, May 2010 - Heidelberg, Germany and Helmholtz Center for Infection Disease in Brawnschweig, Germany
   TALK: Protein Sample Preparation for Structural and Biophysical Studies - Personal Experience Handling Some Difficult Proteins (1hour talk)
5) GE-Healthcare Innovation day, Tel Aviv, January 2011, 2 days (participation)
6) Ilanit / FISEB 2011, February 7-10, 2011, Eilat, Israel (participation)

7) First P4EU Meeting (Protein production and purification partnership for Europe) - Halle, Germany 23/2/2011
TALK: Protein Aggregation Problems (20 min talk)
Meeting Organizer
8) 4th Halle Conference on Recombinant Protein Production – Halle, Germany 24-26/2/2011
TALK: A simple platform for addressing protein aggregation during protein expression and purification steps (40 min talk)
9) PROTEIN PRODUCTION WORKSHOP 2011 - July 6-7, 2011 – Oxford, England
TALK: Protein Refolding (40 min talk)
10) P4EU Workshop on Eukaryotic protein expression platforms, Copenhagen Nov29th 2011 (participation)
11) Difficult to Express Proteins- 8th ANNUAL PEGS – Boston, USA May 1st 2012
TALK: A Simple Platform for Addressing Protein Aggregation During Protein Expression and Purification Steps (30 min talk)
MODERATOR: Strategies to tackle aggregation problems during purification (90 min talk)
12) P4EU Protein Purification Workshop in IRB Barcelona, Spain June 4th, 2012
TALK: A difficult to produce RNA binding protein. On-column refolding (30 min talk)
13) *Fifth Annual* Protein Purification & Recovery PEPTALK, The Protein Science week, Palm Spring, California, USA 20/23 January 2013 (Invited for a 40 min talk)
TALK: How to Deal with Aggregation Problems of IDPS:"Intrinsically Disordered Proteins"
MODERATOR: Strategies to Tackle Aggregation problems during Purification
14) *Fifth Annual* Protein Purification & Recovery PEPTALK, The Protein Science week, Palm Spring, California, USA 20/23 January 2013 (Invited for a 180 min course)
TALK: Buffer Optimization for Purifying Proteins
15) 4th P4EU Meeting IMBC, Porto, Portugal Nov 11-12, 2013 *Talk: Ion exchange: some applications (30 min talk)*
16) 4th P4EU Meeting IMBC, Porto, Portugal Nov 11-12, 2013 *Talk: Encouraging data publication for reliability assessment (30 min talk)*
17) Israel Society for Biotechnology Engineering (ISBE) December 1, 2013, Dan Hotel, Tel-Aviv
Talk: How to deal with aggregation problems of IDPs "Intrinsically disorder proteins" and other prone to aggregated proteins (30 min talk)
18) Protein expression and characterization workshop. Weizmann Institute of Science, May 11-12, 2014, *Talk: Production of prone-to-aggregate proteins (30 min talk)*
19) CTLS 2014 - Pan-European Core Technologies for Life Science Congress - Institute Pasteur, Paris, France 2- 5 June 2014
20) 5th P4EU meeting at Institute Pasteur – June 5-6 2014,
Talk: Reproducing irreproducible results: A love story for a robust Kinase crystallization (30 min talk)
21) Advisory Board Meeting for the Protein Expression & Purification Facility (SFAB) - Max Planck Institute of Molecular Cell Biology and Genetic - Dresden – GERMANY. July 15-16 2014
22) Max Planck Institute of Molecular Cell Biology and Genetic - Dresden – GERMANY July 17th 2014.
Talk: How to deal with the production of IDPs "Intrinsically disorder proteins" and other prone to aggregated proteins (70 min talk + 120 minutes discussions)

23) PepTalk: The Protein Science Week. Protein Purification and Recovery, Streamlining Processes. 19th to 23rd January 2015 in San Diego, USA
Talk: Reproducing Irreproducible Results: A Case Study for Robust Kinase Crystallization (30 min talk)
24) PepTalk: The Protein Science Week. Protein Purification and Recovery - Streamlining Processes. 19th to 23rd January 2015 in San Diego, USA
Short Course: Protein Purification Strategies: Dealing with Proteins that Are Prone to Aggregate (180 min course)
25) LSU Training course from Wyatt in the use of SEC/MALS & Quasi-Elastic Light Scattering Santa Barbara, USA January 26th to 29th 2015 *(Participation 3 days course)*
26) Immunologic Molecular Center (CIM) La Havana, Cuba, 7th to 9th April, 2015. - *Protein Purification Course (15 hours course – Three days).* Participants: 53 profesionales from: Centro de Inmunología Molecular (CIM), Centro de Ingeniería Genética y Biotecnología (CIGB), Instituto Finlay, Centro de Química Biomolecular (CQB), Centro de Investigación y Desarrollo de Medicamentos (CIDEM), Universidad de la Habana & Centro Nacional de Investigaciones Científicas (CNIC)
27) 8th P4EU Meeting and Joint session with ARBRE network – organized by the Max Planck Institute of Molecular Cell Biology and Genetic - Dresden – Germany July 17-18th 2015
Talk: Quality control from a protein production perspective (20 min talk)
28) 7th PEGS EUROPE Protein & Antibody Engineering Summit - Protein Purification Technologies - Lisbon 11/2015 *Talk: IDPs "Intrinsically disorder proteins", difficult to produce, but with a significant role in cellular pathways. Case studies (30 min talk)*
29) 7th PEGS EUROPE Protein & Antibody Engineering Summit - Protein Purification Technologies - Lisbon 11/2015 Short Course: *Protein Purification Strategies: Dealing with Proteins that Are Prone to Aggregate (3hr course)*
30) 9th P4EU Meeting of the European Core Facilities in Protein Production 30th November to 1st December 2015 in Munich Germany - Max-Planck-Institute of Biochemistry
31) P4EU and AEBRF First Joint meeting - *December 1-2, 2015* (Max-Planck-Institute of Biochemistry) Working group Proposal Guidelines on Protein Quality for Biological Experiments. *Coordinator of the group*
32) Advanced Methods in Protein Purification - 09-13 May, 2016 - Max-Planck-Institute of Biochemistry - Munich Germany .*Main guest Speaker and Trainer 5 days course (theoretical and practical lab course for post-docs)*
33) 12th P4EU Meeting– organized by the European Molecular Biology Laboratory (EMBL) - Heidelberg – GERMANY
34) P4EU and AEBRF Joint meeting for Protein Quality - 16th (evening) June 2016 in Heidelberg Germany - European Molecular Biology Laboratory (EMBL)
35) EMBO Course: Protein expression, purification, and characterization (PEPC10) - 12 to 20 September 2016 | Hamburg, Germany. *Guest Speaker and Trainer 10 days course (theoretical and practical lab course for post-docs)*
36) 8th PEGS EUROPE Protein & Antibody Engineering Summit - Lisbon: *Basic Technologies in a Core Protein Expression Lab: Basic Principles in Protein Purification Strategies. Two days Training Seminar 31/10 to 1/11/2016*
37) 8th PEGS EUROPE Protein & Antibody Engineering Summit Protein Purification Technologies - Lisbon 3/11/2016 *Talk: Improving the time-efficiency and quality of your results (30 min talk)*

38) 8th PEGS EUROPE Protein & Antibody Engineering Summit Protein Purification Technologies - Lisbon 3/11/2016 *Short Course: Protein Purification Strategies: Dealing with Proteins that are Prone to Aggregate (3hr course)*
39) 8th PEGS EUROPE Protein & Antibody Engineering Summit Protein Purification Technologies - Lisbon 4/11/2016 *Talk: Case Study: Human Kinase Crystallization Phosphatase Co-Expression (30 min talk)*
40) 13th P4EU Meeting– organized by Weizmann Institute of Science, Israel 7/8 Dec 2016 *Column chromatography strategies for Adeno Associated Viruses (AAVs) purification (Hadar Amarteli 30min talk)*
41) ILANIT Eilat 20-23/2/2017 In charge of the Early Bird Session: *Reproducing Irreproducible Results - What Can We Do For Recombinant Proteins?* Talk: ***Quality Control of Recombinant Protein: Best Practice Recommendations*** *(30 min talk)*
42) 10th March 2017 Université libre de Bruxelles Meeting: "Challenges and opportunities in Protein Analytics". *Talk:* : *"The Protein Purification Facility": case studies in phosphorilation and glycosilation heterogenicity and others (30 min talk)*
43) Advanced Methods in Protein Purification - 06-10 November, 2017 - Max-Planck-Institute of Biochemistry - Munich Germany .*Main guest Speaker and Trainer 5 days course (theoretical and practical lab course for Core Facilities personnel from P4EU)*
44) 9th PEGS EUROPE Protein & Antibody Engineering Summit - Lisbon: *Basic Technologies in a Protein Production Lab. Two days Training Seminar 13/11 to 14/11/2017 (6hr course)*
45) 9th PEGS EUROPE Protein & Antibody Engineering Summit Protein Purification Technologies - Lisbon 15/11/2016 *Short Course: Protein Purification Strategies: Dealing with Proteins that are Prone to Aggregate (3hr course)*
46) 9th PEGS EUROPE Protein & Antibody Engineering Summit Protein Purification Technologies - Lisbon 17/11/2017 *Talk: Human Heparanase: Lessons Learned from a Self-Destructing Project (30 min talk)*
47)

Courses in ISRAEL Biotech Companies

1. January 2009 12hr course organized by Danyel Biotech for different biotech
2. December 2010 12hr course organized by Danyel Biotech for different biotech
3. April 2011 12hr course OMRIX
4. January 2012 12hr course INSIGHT
5. February 2012 12hr course KAMADA
6. March 2012 12hr course organized by Bioforum for different biotech companies
7. December 2012 12hr course SIGMA
8. April 2017 12hr course BTG / FERRING Holding
9. November 2017 12hr course BTG / FERRING Holding
10.

MEMBERSHIPS:

1) Active member and one of the founders of P4EU: Protein Production Partnership for Europe. **Executive Board Members since December 2016**
2) Member of the recently founded CTLS: Core Technologies for Life Science