

CURRICULUM VITAE

PERSONAL DETAILS

Name	Abraham H. Parola
Date and place of birth	March 13, 1946 Tel Aviv, Israel
Address at work	Department of Chemistry Ben Gurion University of the Negev P.O. Box 653 Beer-Sheva, Israel 84105
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Family Status	Married + 3 children
Citizenship	USA and Israel

EDUCATION

B.Sc., 1964-1968, Bar-Ilan University, Depts. of Chemistry and Judaic Studies, Ramat-Gan, Israel

M.Sc., 1968-1969, Northwestern University, Evanston, Illinois, Dept. of Chemistry, (Heterogeneous Catalysis), Prof. A. Hussey, "The Turnover Mechanism in Catalytic, Hydrogenation of 3,6 Dimethyl cyclohexene over Platinum"

Ph.D., 1969-1973, Brandeis University Waltham, Massachusetts, Dept. of Chemistry, (Physical Organic Chemistry), Prof. S. G. Cohen, "Photoreduction of Benzophenones by Amines. Effect of Solvent, Amine Concentration and Structure"

Post doctorate, 1973-1976, Harvard University, Cambridge, Massachusetts, Harvard Medical School, Dept. of Biological Chemistry, Boston, MA., Prof. E. R. Blout, "Active transport and cyclic peptide, carriers; Cell membrane proteins in human red blood cells and platelets; Fluorescence polarization and cell transformation; Membrane dynamics"

EMPLOYMENT HISTORY

July 2011-June 2012, Sabbatical as a Visiting Investigator at the Department of Structural Biology, Memorial Sloan Kettering Cancer Center, New York, NY, USA.

Mar-Apr. 2010 Sabbatical in the Department of Chemistry University of Sydney, Sydney, Australia, in the Department of Biochemistry, Osaka Medical College, Takatsuki, Japan, Department of Biochemistry and Molecular Biology, Graduate School of Science and Technology, Saitama University, Saitama, Japan and in the Department of Pharmacology, Tokyo Medical University, Shinjuku-ku, Tokyo: participating and lecturing in the Biophysics workshop in Adelaide, Australia, in the Enzyme and Catalysis conference in Shanghai, and in the COST meeting in Berlin.

Aug.2002-Jul.2008, Dean, Faculty of Natural Sciences, Ben Gurion University of the Negev, Beer-Sheva, Israel

Aug-Sept. 2006, Visiting Professor, Department of Chemistry University of Sydney, Sydney, Australia

2000-2002, Chairman, Dept. of Chemistry, Ben Gurion University of the Negev, Beer-Sheva, Israel

2001, Professor, Dept. of Chemistry, Ben Gurion University of the Negev, Beer-Sheva, Israel

Feb. 1997, Visiting Scientist, Pharmacia and Upjohn, PPC Oncology, Experimental Oncology Department, MI Italy

1994-1995, Visiting Assoc. Professor, Harvard Medical School, Dana-Farber Cancer Institute, Department of Tumor Immunology, Boston, MA, working on "Adenosine deaminase complexing protein (ADCP) = CD26 = DPPIV" (dipeptidylpeptidase type IV)

Summer of 1993, Visiting Scientist, Mayo Foundation, Mayo Clinic, Mayo Medical School, Department of Biochemistry and Molecular Biology, Rochester, Minnesota, working on "Pico-nanosecond time resolved photon correlation spectroscopy of native and point mutated tryptophanase" with the aim of exploring "Protein-protein interaction" and the correlation between "Quaternary structure and enzymatic activity";
Sabbatical

1992-1994, Chairman, Dept. of Chemistry, Ben Gurion University of the Negev, Beer-Sheva, Israel.

1990, Assoc. Prof., Dept. of Chemistry, Ben Gurion University of the Negev, Beer-Sheva, Israel

Summer of 1988, NRC Senior Visiting Scientist, Naval Medical Research Institute, Bethesda, Maryland; work on: "Magnetic Fields and Cell Transformation"

Summer of 1987, NRC Senior Visiting Scientist, Naval Medical Research Institute, Bethesda, Maryland; The Laboratory of Fluorescence Dynamics, University of Ill., Urbana, Ill.

1985-1986, NRC Senior Visiting Scientist, Naval Medical Research Institute Bethesda, Maryland; Sabbatical

1980-1981, Visiting Scientist, General Electric Corporate Research and Development Center, Schenectady, New York; Sabbatical

1980-1990, Senior Lecturer, Dept. of Chemistry, Ben Gurion University of the Negev, Beer-Sheva, Israel

1976-1980, Lecturer, Dept. of Chemistry, Ben Gurion University of the Negev, Beer-Sheva, Israel

PROFESSIONAL ACTIVITIES

Academic Committees

2008-2009 Departmental Committees

1999-2001 Chairman, Chemistry Department.

1997-1998 Departmental Committees.

1992-1994 The Committee of the "Faculty of Natural Sciences".

1992-1994 Chairman, Chemistry Department.

1988-1990 Graduate Study Committee.

1982-1983 Undergraduate Studies Committee.

1982-1983 High-School exchange program with the Chemistry Department.

1982- Organized the new Undergraduate Study Program in Biophysical Chemistry.

1980-1982 Undergraduate 1st, 2nd and 3rd year advisor.

1976-1979 Graduate Study Committee.

1977-1979 Department Seminar Chairman.

National Academy Committees

- 1994 Member of the Israel Science Foundation Committee of the National Academy of Sciences for Scientific Equipment.
- 1993 Member of the National Academy Committee on Alon and Guastella Fellowships in Life Sciences, Headed by Prof. S. Shaaltiel.

Organizing Committees of Scientific Conferences

- 1994 Member of the Organizing Committee of the 59th Annual Israel Chemistry Society Meeting in Beer-Sheva.
- 1994 Member of the Committee of the Sweden-Israel Organic and Bio-Organic Meeting, Sweden, Aug. 14-18, 1994.

Professional Functions Outside Universities

- 2000 - : "Hemdat Ha'Darom" College, Board member
- 1998-2002: Achva College, "General Chemistry" a Freshman course taught to Biology majors
- 1998 - : Member of the "National Steering Committee for Environmental Electromagnetic Hazards", appointed by the Ministry of Science.

Consulting

- Feb 2008 : "MND Diagnostic Ltd." (Modules for Novel Diagnostics), Israel, Developing fast detection kits for new and existing viruses
- 1983-1984: "Biotechnology General", Israel and "Biotechnology General", USA on development of a Fluorescence Polarization Immunoassay.

Membership in Professional/Scientific Societies

COST - European Cooperation in the field of Scientific and Technical Research, COST committee senior officials CSO – Chemistry and molecular science and technologies.

European Photochemistry Association

Israel Society for Biochemistry & Molecular Biology (ISBMB)

Israel Chemistry Society

Bioelectromagnetic Society, BEMS

American Biophysical Society

Member of the Israel National Committee for Radio Science of the Israel Academy of Sciences and Humanities Delegation to the International Union of Radio Science (URSI)

Member of the European Bioelectromagnetics Association (EBEA)

AAAS - American Association for Advancement of Science

Ad Hoc Refereeing in the Following Journals

1. *Biophysical Journal*
2. *Journal of Physical Chemistry*
3. *Journal of Neurochemistry*
4. *Journal of Fluorescence*
5. *Biochem. Biophys. Acta*

Other Activities

1. Member of the "Biomedical-Photonics" center.
2. Member of the "James-Frank Center for Laser-Matter Interaction".
3. Member of the "Cancer" center.
4. Member of the "Optronix" center.

5. Visiting Scientists

Prof. Myron Rosenblum, Chemistry Department, Brandeis University, gave a course in "Organometallic Chemistry and Electronic State Symmetry", 1978.

Prof. Saul G. Cohen, Chemistry Department, Brandeis University, Waltham Mass., gave a seminar, 1980.

Prof. Elkan Blout, Department of Biological Chemistry, Harvard Medical School, Boston Mass.

Prof. Colin Steel, Brandeis University, Waltham Mass., gave a series of lectures in Physical Photochemistry.

Prof. Ivar Gaeiver, Nobel Laureate, Center of Research & Development, General Electric, Schenectady NY.

Prof. Murray Goodman, Chemistry Department, University of California at San Diego CA.

Prof. Alexander Rich, Department of Biology, MIT, Cambridge MA.

Prof. Martin Blank, Department of Physiology and Cellular Biophysics, Columbia University, College of Physicians and Surgeons New York, NY, 10032, Fall Semester, 1995. Gave a series of lectures in "Special Topics in Biophysics"

Prof. Reba Goodman, Department of Physiology and Cellular Biophysics, Columbia University, College of Physicians and Surgeons, New York, NY, 10032, gave a seminar in the Biophysics Seminar, 1996.

Prof. Igor Vodyanoy, US Naval Research Office, Arlington, Virginia, gave a series of lectures in Biophysics, 1993.

Prof. Robert S. Phillips, Dozor Visiting Fellow, December 1997, presented a series of three seminars and a mini-course of six lectures in "Advanced Enzymology"

Prof. Betty J. Gaffney, Dept of Chemistry, Johns Hopkins Univ., Baltimore, MD, presently at the Natl. High Magnetic Field Lab., Florida State University, Tallahassee, FL, 1997.

Prof. Robert L. Constable, Dozor Visiting Fellow, December 2002, Department of Computer Sciences, Cornell University, Ithaca NY, USA.

Prof. Leo Radom, Dozor Visiting Fellow, December 2003, Department of Chemistry, University of Sidney, Australia.

Prof. Joseph Schlessinger, Dean's Podium Visiting Fellow, May 2005, Department of Pharmacology, Yale University School of Medicine.

Prof. Daniel Kleppner, Dean's Podium Visiting Fellow, May 2005, Department of Physics, MIT.

Prof. I.B. Bersuker, Dean's Podium Visiting Fellow, June 2005, Institute for Theoretical Chemistry, The University of Texas at Austin.

Prof. Scott A. Strobel, Dean's Podium Visiting Fellow, November 2005, Department of Molecular Biophysics and Biochemistry, Yale University.

Prof. Adrian Parsegian, Dean's Podium Visiting Fellow, November 2006, laboratory of physical and structural Biology NIH.

Dr. James C. Stevens, Dean's Podium Visiting Fellow, December 2006, Dow Chemical Company, Freeport, TX, USA.

Prof. Robert P. Kirshner, Dean's Podium Visiting Fellow, December 2006, Harvard University, Department of Astronomy.

Dr. Amitabha Chattopadhyay, Dozor Visiting Fellow, March 2007, Group Leader Center for Cellular & Molecular Biology, India.

Prof. Eusebio Juaristi, Dozor Visiting Fellow, March 2007, Center for Research & Advanced Studies of the National Polytechnic Institute of Mexico.

Prof. Chi-Huey Wong, Dean's Podium Visiting Fellow, March 2007, President, Academia Sinica, Taipei, Taiwan and Prof. of Chemistry, Scripps Research Institute, La Jolla, CA.

Prof. Armand Kuris, Dean's Podium Visiting Fellow, April 2007, Department of Ecology, Evolution & Marine Biology, University of California, Santa Barbara.

Prof. Claude Cohen-Tannoudji, Dean's Podium Visiting Fellow, May 2007, College de France and Laboratory Kastler Brussels Ecole Normal.

Prof. Peter Grünberg, Dean's Podium Visiting Fellow, May 2007, Institute für Festkörperforschung, Forschungszentrum Jülich.

Prof. Ronald L. Phillips, Dean's Podium Visiting Fellow, May 2007, 2006/7 Wolf Prize Winner in Agriculture University of Minnesota, USA.

Prof. Michel A.J. Georges, Dean's Podium Visiting Fellow, May 2007, 2006/7 Wolf Prize Winner in Agriculture, University of Liege, Belgium.

Prof. Mark Leckie, Dean's Podium Visiting Fellow, May 2007, June 2007, University of Massachusetts at Amherst.

Prof. Itamar Willner, Dean's Podium Visiting Fellow, November 2007, Institute of Chemistry, The Hebrew University of Jerusalem, Israel.

Prof. Bruce A. Pearlman, Dean's Podium Visiting Fellow, December 2007, Synthetic Chemistry Schering- Plough Research Institute, New-Jersey, USA

Prof. Eugene I. Shakhnovich, Dean's Podium Visiting Fellow, January 2008, Department of Chemistry and Biology, Harvard University, Cambridge, MA, USA

Prof. John Graham Ramsay, CBE, DSC, FRS, Honorary Professor in the Faculty of Natural Science, April 2008, The Imperial College and University of Leeds, UK

Prof. Paul F. Agris, Dean's Podium Visiting Fellow, May 2008, Department of Molecular and Structural Biochemistry, North Carolina State University, USA

Prof. David B. Mumford, Dean's Podium Visiting Fellow, Recipient of the 2008 Wolf Prize in Mathematics, May 2008, Brown University Providence, Rhode Island, USA

Prof. Omar Yaghi, Dean's Podium Visiting Fellow, May 2008, Department of Chemistry and Biochemistry, UCLA, USA

Prof. Ada Yonath, Dean's Podium Visiting Fellow, June 2008, Weizmann Institute of Science, Rehovot, Israel

Prof. George Barisas, Dean's Podium Visiting Fellow, Department of Chemistry, Colorado State University, Fort Collins, Colorado

Prof. Ronald J. Clarke, Dean's Podium Visiting Fellow, School of Chemistry, University of Sydney, Sydney, Australia

Prof. Tomas Jovin, Dean's Podium Visiting Fellow, Laboratory of Cellular Dynamics, Max Planck Institute for Biophysical Chemistry Göttingen, Germany

Prof. Kalpathy R.K.Eswaran, Distinguished visiting Professor to the Faculty of Natural Sciences, Emeritus Professor & INSA Hon. Scientist, Indian Institute of Science, Bangalore, India, Formerly Professor & Chairman, Molecular Biophysics Unit, Indian Institute of Science, Bangalore, India & President-Research, ABL biotechnologies Ltd., Chennai, India

EDUCATIONAL ACTIVITIES

(a) Courses Taught (BGU)

Graduate courses

Photochemistry and Photobiology.
Advanced Organic Chemistry Seminar.
Biochemical and Biophysical Journal Club.
Organic Chemistry Seminar.
Special Topics in Biophysics.
Biophysics Seminar.
Reactive Intermediates in Organic Chemistry.
Membrane Lipid-Protein Interactions: Spectroscopic Studies

Undergraduate courses

Physical Organic Chemistry;
Bio-organic Chemistry (for Biology majors);
Organic Chemistry (for Chemical Engineering majors);
Freshman Chemistry;
General & Organic Chemistry laboratory; Academic Supervision.
Special series of lectures to graduate biology majors on: Spectroscopic Methods in Cell Membrane Research.
Introduction of new Undergraduate Study Program in Biophysical Chemistry Undergraduate seminar.
General Chemistry (for Biology and Geology students).

(b) Research Students

(i) ***Ph.D. Students:***

1. Ilana Nathan, Biology Department, Ben-Gurion University, 1979 (together with Profs. A. Dvilansky and A. Livne). Research work on "Membrane Lipid Protein Interaction During Platelets Shape Change and Aggregation"
2. Gedalyahu Skorka, 1978-1983. Research work on "Fluorescent Affinity Labels for Adenosine Deaminase: Correlation of Enzyme Dynamic Parameters with Malignant Transformation".
3. Nurith Porat, 1982. Research work on "Membrane Dynamic Alterations Associated with Cell Transformation: Adenosine Deaminase". Systems investigated: Chick Embryo Fibroblasts Normal and RSV-Transformed.

4. Valeria Caiolfa, 1983. Research work on "High Affinity Florescent Analogue of Adenosine Deaminase Inhibitor and Reconstitution of Adenosine Deaminase Complexing Protein in Liposomes".
5. Stavanit Nemschitz, M.Sc/Ph.D. student, since 1987. Research work on "Transfection of Human Cells with Human Adenosine Deaminase Plasmid; Reconstitution of ADA in Liposomes." Ph.D. thesis: "EMF and Malignant Cell Transformation".
6. Yitchak Ben-Shooshan, M.Sc/Ph.D. student, 1988. "Temperature Effect on Specific Activity of Small Subunit Adenosine Deaminase Bound to Adenosine Deaminase Complexing Protein Reconstituted in Liposomes". Ph.D. thesis: "Vertical Motion of ADCP, a Membranal Protein Reconstituted in liposomes, Assessed by Forster Energy Transfer".
7. Gila Katzir, Ph.D. student, 1990. "EMF Effects on Cell Proliferation".
8. Essa Alfahel, M.Sc./Ph.D. student, 1990. "Ciliary Motion and Membrane Dynamics", together with Prof. Z. Priel.
9. Tali Ben-Kasus (Erez), M.Sc./Ph.D. student, 1992.
- 9a) "Quaternary Structure-Reactivity Correlation in Tryptophanase: Effect of Point Mutation at Either Tryptophanase".
- 9b) "Light Sensitivity of the Coenzyme in the Active Site of Tryptophanase: Correlation with Enzyme Activity".
10. Moreno Zamai, Ph.D. student, 1994. "Sulfonic Distamycin A Derivatives as Anti-angiogenesis Factors".
11. Hemi Avraham, M.Sc./Ph.D student, 1998. "Non-Invasive Diagnostic Determination of Fetus Maturity", together with Dr. J. Molcho, Biomedical Technology.
12. Alex Aranovich, Ph.D. student, 2003. "The interaction of DnaA with membranes: the catalytic effect upon nucleotide exchange on DnaA", together with Dr. Fishov.
13. Natalya Tssesin, Ph.D. student, 2004. "Characterization of the Molecular Mechanism of Cytochrome C Efflux from Isolated Rat Liver Mitochondria by Pro-Apoptotic Proteins" & "Does mitochondrial CL play a role in KCN induced Necrosis?", together with Prof. Ilana Nathan.
14. Israel Patela, Ph.D. student, 2005 "Adhesion complexes and cryo electron microscopy" together with Dr. O. Medalia.
15. Natalya Shadrin, Ph.D. student, 2004. "S-A-R in Integrase", together with Dr. Y. Goldgur. After Dr. Goldgur left to the USA, "Trypsin-like protease controls interferon-activities in cell proliferation, apoptosis and immunomodulation", together with Prof. Ilana Nathan
16. Anna Kogan, Ph.D. student, 2004. "Structure-function study of E. coli tryptophanase", together with Dr. O. almog.
17. Michal Glikman, M.Sc, Ph.D. student, 2005. "Autophagy and Necrosis ", " The chymotrypsin-like protease inhibitor TPCK activates autophagic cell death in MCF-7 cells" together with Prof. Ilana Nathan.
18. Aviv Cohen, 2009, "Humanine, necrosis and neurodegenerative diseases", together with Prof. I. Nathan and Dr. R. Kasher.

(ii) *M.Sc. Students*

1. Ayala Falach, 1983. Research work on "Interferon- γ : The Mechanism of Interaction with Malignant Target Cell Membranes".



2. Yoav Roth, Oct. 1987. Research work on "RSV Transformed Chick Embryo Fibroblasts: Is Adenosine Deaminase Complexing Protein a Modulator of Small Subunit Adenosine Deaminase?"
3. Ariela Markel, 1992. "Fluorescence Energy Transfer in Tryptophanase and its Point Mutated Analogs: Effects of Quasisubstrates on the Conformational Changes Associated with its Catalytic Cycle".
4. Sharon Hazan, 1992.
 - 4a) "Cis - Trans Isomerization of Stilbene Derivatives and Membrane Dynamics in Normal, Virally and SVMF Transformed cells".
 - 4b) "Fluorescence Polarization Assay for Endothelin Converting Enzyme and its Binding to Endothelin Antisense Peptides".
5. Sharona Gil, 1993. "The Regulatory Role of ADCP on ADA Activity in Solution".
6. Elai Davicioni, 1999. "Characterization of the Molecular Mechanism of Cytochrome C Efflux from Isolated Rat Liver Mitochondria by Pro-Apoptotic Proteins ", together with Prof. Ilana Nathan and Dr. Rivka Cohen-Luria.
7. Dror Cohen, 2001, together with Prof. Zvi Cohen.
8. Vardit Danziger, 2002. Research work on "EMF, MVM and Malignant Cell Transformation", together with Prof. J. Tal.
9. Amit Sadeh, 2004. "Ciliary Motion and Membrane Dynamics", together with Prof. Z. Priel.
10. Shani Braier, 2006, project on: "The interaction of DnaA with membranes: the catalytic effect upon nucleotide exchange on DnaA", together with Dr. Fishov.
11. Larisa Ladizhensky, 2004. "Non-Invasive Diagnostic Determination of Fetus Maturity".
12. Uri Rimon, 2004, "EMF and Effect of Minute Virus of Mice (MVM) on Fischer Rat Fibroblasts" together with Prof. J. Tal; after Prof. Tal death: "The interaction of DnaA with membranes", together with Dr. Fishov.
13. Liraz Shidlowky, 2005. "S-A-R in Tnase", together with Prof. Khodorkovsky.
14. Esti Ansbacher, 2007. "Oligomerization of DnaA" together with Prof. I. Fishov.
15. Jenny Lerner, 2007. "Humanine and Apoptosis and Neurosis". together with Prof. I. Nathan and R. Kasher.
16. Nona Papiasshvili, 2008. "Fluorescence Methods for the characteristics of aqueous solutions" together with Prof. E. Pines; "Detection of poisons in water resources (Homeland Security)" with A.Parola
17. Aviv Cohen, 2009, "Humanine, necrosis and neurodegenerative diseases" together with Prof. I. Nathan and Dr. R. Kasher.
18. Karin Shadzunsky, 2009, "Proteases activate Interferon gama", together with Prof. I. Nathan.
19. Nasrin Kasam, since 2009, "Point mutations of Tnase" together with O. Almog.
20. Keren Green, "The dissociation of tetrameric Tnase into dimmers and monomers", together with O. Almog.
21. Danit Rotenberg, "Autophagy: a study of the mechanism of the autophagosome formation by cryo-electron microscopy, together with Profs. I. Nathan and O. Medaliah.
22. Sabina Elzon, since Oct. 2011, "Structure-function studies of ACTIBIND: a T2 RNase with antitumorogenic activity", together with Dr. Orna Almog.

(iii) Undergraduate Students

1. Keren Zilberstein, ZAL, pre-M.Sc. student. Research work on "Reconstitution of Adenosine Deaminase Complexing Protein in Liposomes". Keren was killed in an accident.
2. Keren Singer, 3rd year, undergraduate student at Harvard (Cambridge MA). Joined us on "Sherut-laam": "Effect of Adenosine-Deaminase on the Activity of Small Subunit ADA at Physiological Concentration of Adenosine.
3. Dahlia Yaron, 3rd year undergraduate student, 1989. "Does the Complexing Protein of Adenosine Deaminase Have a Regulatory Role?"
4. Yelena Ronezbloom, 2nd year undergraduate student, 2004. "S-A-R in Tnase".
5. Roni Shertzer, 2nd year undergraduate student, 2002. Research work on "Quaternary Structure-Activity Relationship in Tryptophanase: Effect of Cold Inactivation", together with Dr. Garik Gdalevsky & Dr. Rivka Cohen-Luria. MSc student, 2004, together with Dr. Y. Goldgur & Prof. S. Bittner.

Postdoctoral Fellows

1. Dr. Mathiew Weisman, Beginning Feb. 1983. Joined as an ICRF postdoctoral fellow from Princeton to work on Adenosine Deaminase.
2. Dr. Ilana Nathan, Beginning July 1983. ICRF postdoctoral fellow working on The Interaction of Interferon- γ with Malignant Target Cell Membrane.
3. Dr. Pessia Shuker, Physics Ph.D., in charge of the nanosecond photon counting spectrofluorometer; programming of deconvolution programs, calculations of anisotropy and lifetime data.
4. Dr. Jacob Cohen, Post-Doc., between 1.10.90-30.9.91, about "Lipid-Protein Interactions in Lipid Vesicles Regulate the Activity of Adenosine Deaminase Bound to its Reconstituted Complexing Protein".
5. Dr. Rivka Cohen-Luria, Post-Doc., between 5.93-5.94, about "Time Varying Weak Electromagnetic Fields and Cells Grown in Culture: Possible Involvement of Membrane Lipid-Protein Interactions" and "Adenosine Deaminase - Adenosine Deaminase Complexing Protein: Role in Cell Transformation".
6. Dr. Natalya Strashnikova, Post-Doc., 5.98-10.99, working on: "The quaternary Structure of Tryptophanase from *Proteus Vulgaris*: Point Mutations and Subunit Interactions and Binding/Dissociation Kinetics, Followed by Time Resolved Trp Fluorescence Lifetime and Anisotropy".
7. Dr. Chithra Hariharan, Post-Doc., 1.10.98-30.9.99, working on: 1. "The Nature of Binding between The Novel Fluorescent anti-Angiogenic Drug PNU145156E and Human Basic Fibroblast Growth Factor using Tryptophan Fluorescence Quenching and Energy transfer to PNU145156E"; 2. "The Interaction Between Heparin and Its Analogs and WT and Doubly Point Mutated bFGF".
8. Dr. Irit Rotman-Halil, Post-Doc., since January 1st, 2001, working on "Ciliary Motion and Membrane Dynamics", together with Prof. Z. Priel.

Senior Research Fellows

1. Dr. I. Fishov, beginning October 1991, holds a two years appointment through the Absorption Ministry, working on: "Chromosome Segregation, Cell Shape and Surface Synthesis in *E. coli*" (together with Prof. A. Zaritsky).
2. Dr. G. Gdalevsky, beginning February 1992, following a two year appointment with the help of Absorption Ministry, a "Giladi" fellowship holds now a "Kame'a" appointment, working on: "Light Sensitivity of the Coenzyme in the Active Site of Tryptophanase and the Purification of WT and Point Mutated Tnase from *E. coli* and *Proteus vulgaris*".
3. Dr. R. Cohen-Luria, June 1993 – March 2008, Senior Research Associate.

AWARDS AND FELLOWSHIPS:

- 1968-1969 Northwestern University, Chemistry Department Fellowship.
- 1969-1970 Brandies University, Research Fellowship.
- 1971-1973 Goldwyn Fellowship Award.
- 1974-1976 National Institute of Health, Postdoctoral Fellowship.
- 1980-1981 General Electric Distinguished Visiting Scientist Fellowship.
- 1982 NATO Fellowship to participate in summer course.
- 1985-1988 National Research Council Senior Visiting Scientist Award.
- 2010- Carol and Barry Kaye Chair in Applied Science

SCIENTIFIC PUBLICATIONS

Chapters in collective volumes

1. "Lipid-Protein Interaction During Platelet Activation"
G. Fleisher, I. Nathan, A. Livne, A. Dvilansky and **A.H. Parola**
in: "*Platelets: Cellular Response Mechanisms and Their Biological Significance*".
Edited by A. Rotman, F.A. Meyer, C. Gitler and A. Silberberg, John Wiley & Son Ltd., 95-106 (1980).
2. "Fluorescent Affinity Labeling of Adenosine Deaminase by 5-Dimethylaminonaphthalene-1-sulfonyl-3'-o-adenosine"
G. Skorka, P. Shuker, D. Gill and **A.H. Parola**
in: "*Liposomes Drugs and Immunocompetent Cell Function*"
Edited by C. Nicolau and A. Paraf, 108 (1981).
3. "Membrane Dynamic Alterations Associated with Cell Transformation and Malignancy"
A.H. Parola
in: "*Membrane in Tumor Growth*". Edited by T. Galeotti, G. Neri and S. Papa,
Elsevier Biomedical Press, Amsterdam, 69-80 (1982).
4. "Dynamic Interaction of Fluorescently Labeled Adenosine Deaminase in Intact Human Erythrocytes: Relation to Abnormal Activity in Malignant Cells"
A.H. Parola, G. Skorka, P. Shuker and D. Gill
in: "*Physical Methods on Biological and Model Systems*". Edited by F. Conti, W.E. Blumberg, J. de Gier and F. Pocchiari, NATO ASI-Series, Series A. Life Sciences, 71, pp. 245-250. Plenum Press, N.Y. and London (1985).
5. "Membrane Lipid-Protein Interactions"
A.H. Parola
in: "*Biomembranes, Physical Aspects*", Edited by M. Shinitzky, pp. 159-277, Balaban Press VCH, New York and Cambridge (1993).
6. "Electric and Magnetic Fields and Carcinogenesis"
A.H. Parola and A. Markel

in: *"Biological Effects of Electric and Magnetic Fields: Beneficial and Harmful Effects"*, Edited by D.O. Carpenter and S. Ayrapetyan, Vol. 2, pp. 177-197, Academic Press (1994).

7. "High Photosensitivity of the Active Site-Bound Pyridoxal Phosphate in *Escherichia coli* Tryptophanase"

G. Y. Gdalevsky, T. Ben-Kasus, Y.M. Torchinsky and **A.H. Parola**.

in *"Spectroscopy of Biological Molecules: Modern Trends"* Edited by Pedro Carmona, Raquel Navarro and Antonio Hernanz, pp. 183-184, Kluwer Academic Publishers, Dordrecht, The Netherlands (1997).

Refereed articles in scientific journals

8. "Photoreduction by Amines"

S.G. Cohen, **A. Parola** and G.H. Parsons

Chem. Rev., **73**, 141-161 (1973).

9. "Photoreduction by Hydrzonium Ions, Quenching by Hydrazines"

S. Ojanpera, **A. Parola** and S.G. Cohen

J. Am. Chem. Soc., **96**, 7379-7380 (1974).

10. "Effect of Concentration of Amine and of Medium in Photoreduction of Ketones by Amines"

A.H. Parola, A.W. Rose and S.G. Cohen

J. Am. Chem. Soc., **97**, 6202-6209 (1975).

11. "Microviscosity of the Membrane Lipids of Normal, Transformed and Revertant 3T3 Cells"

P. Fuchs, **A. Parola**, P.W. Robbins and E.R. Blout

Proc. Nat. Acad. Sci. USA, **72**, 3351-3354 (1975).

12. "Nanosecond Fluorescence Lifetime and Anisotropy Studies of Normal, Transformed and Revertant 3T3 Cells"

A.H. Parola, P.W. Robbins and E.R. Blout

Israel J. Med. Sci., **12**, 1362 (1976).

13. "Membrane Dynamic Alteration Associated with "Transformation" by BUdR in BUdR-Dependent Cells: Fluorescence Polarization Studies with a Lipid Probe"

S.L. Rosenthal, **A.H. Parola**, E.R. Blout and R.L. Davidson

Exp. Cell Res., **112**, 419-429 (1978).

14. "Membrane Dynamic Alterations Associated with Viral Transformation and Reversion: Decay of Fluorescence Emission and Anisotropy Studies of 3T3 Cells"

A.H. Parola, P.W. Robbins and E.R. Blout

Exp. Cell Res., **118**, 205-214 (1979).

15. "Membrane Microenvironmental Changes During Activation of Human Blood Platelets by Thrombin; A Study with a Fluorescent Probe"

I. Nathan, G. Fleisher, A. Livne, A. Dvilansky and **A.H. Parola**

J. Biol. Chem., **254**, 9822-9828 (1979).

16. "Membrane Dynamic Alteration Associated with the Tumorigenicity of Polyoma Transformed and Revertant Hamster Cells"

A.H. Parola and M. Souroujon

Int. J. Cancer, **24**, 800-805 (1979).

17. "Effect of Solvent in Photoreduction and Quenching of Benzophenone by Triethylamine, 1-Azabicyclo (2,2,2) Octane and 1,4-Diazabicyclo-(2,2,2) Octane"

A.H. Parola and S.G. Cohen

J. Photochem., **12**, 41-50 (1980).

18. "Membrane Dynamic Alteration Associated with Activation of Human Platelets by Thrombin"

I. Nathan, G. Fleisher, A. Dvilansky, A. Livne and **A.H. Parola**

Biochim. Biophys. Acta, **598**, 417-421 (1980).

19. "Fluorescent Substrate Analogue For Adenosine Deaminase: 5-Dimethylaminonaphthalene-1-Sulfonyl-3'-O-Adenosine"
G. Skorka, P. Shuker, D. Gill, J. Zabicky and **A.H. Parola**
Biochemistry, **20**, 3103-3109 (1981).
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61. "The Crystal Structure of Apo Tryptophanase from *Escherichia Coli* Reveals a wide open Conformation".
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64. "New Tryptophanase Inhibitors: Towards Prevention of Bacterial Biofilm Formation". Roni Scherzer, Garik Y. Gdalevsky, Yehuda Goldgur, Rivka Cohen-Luria, Shmuel Bittner, Abraham H. Parola. *Journal of Enzyme Inhibition & Medicinal Chemistry*. **24**, 350-355, (2009)
65. "Regulatory Role of Adenosine Deaminase Complexing Protein (Dipeptidyl Peptidase IV = CD26) on the Malignancy Marker Adenosine Deaminase: Effect of Membrane Cholesterol and Phase-Transition".
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66. "Conformational Changes and Loose Packing Promote *E. coli* Tryptophanase Cold Lability".
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67. "Towards instantaneous quantitative fluoroimaging drugs determination in body fluids with no added reagents"
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68. "Bax Δ C Induced Increased Membrane Lipid Order in Isolated Rat Liver Mitochondria"
Natalia Tsesin, Elai Davicioni, Rivka Cohen-Luria, Ilana Nathan and **Abraham H. Parola**, WSEAS
Transaction on Biology and Medicine, **7**, 263-276 (2010)
69. "TPCK activates autophagic cell death in MCF-7 cells is associated with indirect down-regulation of intracellular proteases".
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70. "Protective Effect of Humanin and Its Derivatives against Necrotic Cell Death
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71. "The interaction of serine protease inhibitors with IFN- γ enhances Fas mediated
apoptosis through upregulation of FasR; a novel therapeutic strategy against cancer.
Natalia Shadrin, Michal Glickman, **Abraham H. Parola*** and Ilana Nathan, to be Submitted.
72. "Membrane Occupancy-Dependent Rejuvenation of DnaA is Associated with its conformationally
driven oligomerization"
Alexander Aranovich, Shani Braier, Esti Ansbacher Hanna Rapoport, Rony Granek, **Abraham H. Parola***
and Itzhak Fishov, to be submitted.
73. "Does Cardiolipin play a role in KCN-induced Necrosis?"
Natalia Tsesin, Udi Zelig, Shaul Mordechai, Ilana Nathan and **Abraham H. Parola***, to be submitted.

Articles in preparation

1. "Structure Determination of the Fluorophore in Amniotic Fluid whose Fluorescence Polarization indicate Fetal Lung Maturity"
L. Ladizhensky, G. Y. Gdalevsky, J. Molcho E. Maymon, R. Cohen-Luria, **A. H. Parola**.
2. "Extacellular ATP Induced Membrane Fluidization in Ciliary Cells: II. Possible Involvement of PKC, cAMP and the Cytoskeleton"
E. Alfahel, A. Korngreen, **A.H. Parola** and Z. Priel.
3. "On the Regulatory Role of Dipeptidyl Peptidase IV (= CD26 = Adenosine Deaminase Complexing Protein) on Adenosine Deaminase activity in Normal and Transformed Chick Embryo Fibroblasts"
Y. Roth, N. Porat, Y. Sharoni, R. Cohen-Luria and **A.H. Parola**.

LECTURES AND PRESENTATIONS AT MEETINGS AND INVITED SEMINARS

a) Invited lectures at conferences/meetings

1. Nanosecond Fluorescence Lifetime and Anisotropy Studies of Normal, Transformed and Revertant 3T3 Cells"
A.H. Parola*, P.W. Robbins and E.R. Blout
Presented at the Annual Meeting of the Israel Biochemical Society, *Israel J. Med. Sci.*, **12**, 1362, April (1976).
2. "Membrane Microenvironmental Changes During Platelet Activation: A Study with Covalently Bound Fluorescent Probe"
A.H. Parola*, A. Dvilansky, G. Fleisher and I. Nathan
Israel J. Med. Sci., **13**, 963 (1977).
3. "Membrane Dynamic Alterations Associated with Cell Transformation and Malignancy"
A. H. Parola

Presented at the "Membrane in Tumor Growth" meeting in Rome, Italy, in: "Membrane in Tumor Growth". Edited by T. Galeotti, G. Neri and S. Papa, Elsevier Biomedical Press, Amsterdam, 69-80 (1982), July (1982).

4. "Membrane Dynamic Alterations Associated with Cell Transformation and Malignancy"
A.H. Parola, Presented in the "Membrane Biophysics" meeting, Tel-Aviv University, Oct. (1982). (Not followed by published proceedings).
5. "Dynamic Interaction of Fluorescently Labeled Adenosine Deaminase in Intact Human Erythrocytes"
A.H. Parola
Presented at the "Biological Membranes" meeting in Haddassa Medical Center, Jerusalem, Israel (1983). (Not followed by published proceedings).
6. "1-N⁶-Etheno (Erythro-9-(2-Hydroxy-3-Nonyl)) Adenine, ϵ -EHNA: A Fluorescent Inhibitor for Adenosine Deaminase"
V.R. Caiolfa, D. Gill and **A.H. Parola**
The 33rd Annual Meeting of the Biophysical Society, Cincinnati, Ohio, Feb. (1989). *Biophys. J.*, **55**, 24a (1989).
7. "Adenosine Deaminase in Cell Transformation: Biophysical Manifestation of Membrane Dynamics"
A.H. Parola, N. Porat, V.R. Caiolfa, M. Weisman, D. Yaron, K. Singer, E. Solomon and D. Gill
Presented at the First Josef Cohn Meeting on "Membrane Lipids: Biophysics and Biochemistry", January 2-7, 1990, Rehovot and Kibbutz Ein-Gedi, Israel. (Not followed by published proceedings).
8. "Adenosine Deaminase in Cell Transformation: Biophysical Manifestation of Membrane Dynamics"
A.H. Parola
International Symposium on Innovative Fluorescence Methodologies in Biochemistry and Medicine, September 23-26, 1991; Rome, Italy. (Not followed by published proceedings).
9. "Chick Embryo Fibroblasts Exposed to Time-Varying Weak Magnetic Fields Share Cell Proliferation, Adenosine Deaminase Activity and Membrane Characteristics of Transformed Cells"
A.H. Parola, N. Porat and L.A. Kiesow
Office of Naval Research, Meeting on Bioelectromagnetics at the Naval Aerospace Medical Research Laboratory, April 14-16, 1993, Pensacola, Florida. (Not followed by published proceedings).
10. "Malignancy Markers Indicate that Electromagnetic Fields May Cause Cell Transformation"
Nemschitz-Baram, S.C., Tal, Y. and **A.H. Parola**
The 16th Annual Meeting of the Bioelectromagnetics Society, Copenhagen, Denmark, 1994. (Not followed by published proceedings).
11. "Adenosine Deaminase in Cell Transformation: Biophysical Manifestation of Membrane Dynamics"
A.H. Parola
The Swedish-Israeli 2nd Conference on Organic and Bio-organic chemistry, August 14-18, 1994, Stockholm, Sweden. (Not followed by published proceedings).
12. "Purine Signal Transduction Induces Membrane Fluidization in Ciliary Cells"
E. Alfahel, A. Korengreen, **A.H. Parola** and Z. Priel
The 3rd International Symposium on "Innovative Fluorescence Methodologies in Biochemistry and Medicine, Kaanapali, Maui, Hawaii, USA, July 30-Aug. 2, 1995. (Not followed by published proceedings).
13. "Membrane lipid-protein interactions control the activity of adenosine-deaminase bound to its complexing protein, reconstituted in vesicles: Effect of cholesterol content and temperature"
A.H. Parola
"Domain Organization in Membranes: Biological Implications" - Research Workshop of the Israel Science Foundation Jerusalem, March 16-18, 1998.
14. "Compositional Heterogeneity in Bacterial Membrane as Revealed from Excimerization of Pyrene Labeled Phospholipids"
Sharon Vanounou, **A.H. Parola** and Itzhak Fishov
"Domain Organization in Membranes: Biological Implications" - Research Workshop of the Israel Science Foundation Jerusalem, March 16-18, 1998.
15. "The Enhanced Cell Proliferation Caused by Sinusoidally Varying Magnetic Field is Suppressed by Radical Scavengers"
A. H. Parola and G. Katsir
The 21st Annual Bioelectromagnetics Meeting, Long Beach California, June 20-24, 1999. (Not followed by published proceedings).
16. "Cold Inactivation and Dissociation into Dimers of *Escherichia Coli* Tryptophanase and its W330F Mutant Form"

- T. Erez, G. Y. Gdalevsky, Y. M. Torchinsky, R. S. Phillips, and **A.H. Parola**
 The 4th International Weber Symposium on "Innovative Fluorescence Methodologies in Biochemistry and Medicine", Kaanapali, Maui, Hawaii, June 23-27, 1999. (Not followed by published proceedings).
17. "Phosphatidylethanolamine and Phosphatidylglycerol are Segregate into Different Domains in Bacterial Membrane. Study with Pyrene-Labeled Phospholipids"
 S. Vanounou, **A. H. Parola** and I. Fishov
 The 46th Biophysical Society Annual Meeting in San Francisco, California, February 23-27, 2002.
 18. "The interaction of Bax with isolated mitochondria results in membrane proteo-lipid pores formation as revealed by a fluorescent lipidic probe"
A.H. Parola, R. Cohen-Luria, E. Davicioni, I. Fishov and I. Nathan
 The 48th Biophysical Society Annual Meeting, Baltimore, Maryland, Feb. 14-18, 2004. *Biophys. J.*, 1741-Plat.
 19. "Low Frequency Fields Induce a Stress Effect upon Higher Plants, as Evident by the Universal Stress Signal, Alanine"
 Ben-Izhak Monselise E., Cohen-Luria R., **Parola A.H.**, Kost D.
 THE 3rd INTERNATIONAL WORKSHOP ON BIOLOGICAL EFFECTS OF ELECTROMAGNETIC FIELDS, Kipriotis Village Resort, KOS, GREECE, 4-8 OCTOBER 2004. C2: 3, Monday, October 4.
 20. "The Enhanced Cell Proliferation Caused by a Low Frequency Weak Magnetic Field is Suppressed by Radical Scavengers".
 Katsir G., Cohen-Luria R., **Parola A.H.**
 THE 3rd INTERNATIONAL WORKSHOP ON BIOLOGICAL EFFECTS OF ELECTROMAGNETIC FIELDS, Kipriotis Village Resort, KOS, GREECE, 4-8 OCTOBER 2004. B10: 5, Thursday, October 7.
 21. "Binding of the Antiangiogenic Drug PNU145156E to basic FGF: Removal of Polar Interactions Affects Protein Folding"
 R. Cohen-Luria, M. Zamai, C. Hariharan, D. Pines, M. Safran, A. Yayon, V.R. Caiolfa, E. Pines, and **A.H. Parola**
 The VIIIth International Conference on Molecular Spectroscopy, 13-18 Sept., 2005 Wroclaw-Ladek Zdroj, Poland.
 22. "The enhanced proliferation of cells in culture and the stress effects upon higher plants induced by sinusoidal-varying low frequency electromagnetic fields are suppressed by radical scavengers"
Abraham H. Parola, Daniel Kost, Gila Katsir, Edna Ben-Izhak Monselise and Rivka Cohen-Luria
 XXVIIIth General Assembly of International Union of Radio Science (URSI), session KO2, paper registration No COM10-01731-2005, October 23-29, 2005, New Delhi, India.
 23. "Radical scavengers suppress varying low frequency electromagnetic fields-enhanced proliferation in cultured cells and stress effects in higher plants"
 Abraham H. Parola, Daniel Kost, Gila Katsir, Edna Ben-Izhak Monselise and Rivka Cohen-Luria
 International Scientific symposium dedicated to the memory of the late Prof. Jacov Tal, Wed, 15:45, March 1, 2006, Ben Gurion Univ of the Negev, Beer Sheva
 24. "Interaction between basic fibroblast growth factor and the anti-angiogenic drug PNU145156E"
 M. Zamai, C. Hariharan, D. Pines, M. Safran, A. Yayon, V.R. Caiolfa, R. Cohen-Luria, E. Pines, and **A.H. Parola**
 The 5th Congress of Medicinal Chemistry Section of the Israeli Chemical Society, March, 30, 2006, The Weizmann Institute of Science, Rehovot.
 25. Interaction between Basic Fibroblast Growth Factor and the Anti-angiogenic Drug PNU145156E "
 Moreno Zamai, Chithra Hariharan, Dina Pines, Michal Safran, Avner Yayon, Valeria R. Caiolfa, Ehud Pines, Rivka Cohen-Luria, and **Abraham H. Parola**,
 Chemistry Colloquium, University of Sydney, Sydney, Australia, Sept. 2006.
 26. "Continuous monitoring of poisonous contents in water"
A.H. Parola, R. Cohen-Luria, Y. Kalisky, and E. Razi
 International Conference, From Invention & Development to Product, From Research Institutes to the Water Industry, November 28-30, 2006, Zuckerberg Institute for Water Ressearch, ZIWR, Conferences & Workshops, Wednesday, 29 November 2006, Water safety and security, C1-g, Ben-Gurion University of the Negev, Sede Boker.
 27. "Molecular Crowding of DnaA on the Membrane Surface".
 A. Aranovich, Garik Y. Gdalevsky, Rivka Cohen-Luria, **Abraham H. Parola**.
 European Biophysics Congress, July 14-18 2007, London.
 28. "Towards instantaneous quantitative fluoroimaging drugs determination in body fluids with no added reagents"

Natalia V. Strashnikova, Arcady P. Gershanik, Nona Papiashvili, Daniel Khankin, Rivka Cohen-Luria, Shlomo Mark, Yehoshua Kalisky, and **Abraham H. Parola***
XIII EUROPEAN CONFERENCE ON THE SPECTROSCOPY OF BIOLOGICAL MOLECULES,
Palermo, August 28 - September 02, 2009.

29. "Conformational Changes and Loose Packing Promote E. coli Tryptophanase Cold Lability" BIT's Inaugural Symposium on Enzyme and Biocatalysis, April 22-24, (2010) Shanghai, China.
30. Fluorescence for the study of anti-angiogenic drug-mechanism
Abraham H. Parola, Frontiers in artificial photosynthesis; from solar to photodynamics,
March 15, 2011, Ben Gurion University, Beer Sheva, Israel.

b) Presentation of papers at conferences/meetings

1. "Nanosecond Fluorescence Lifetime and Anisotropy Studies of Normal, Transformed and Revertant 3T3 Cells"
A.H. Parola*, P.W. Robbins and E.R. Blout
The Annual Meeting of the Israel Biochemical Society
Isr. J. of Med. Sci. **12**, 1362 (1976).
2. "Membrane Microenvironmental Changes During Platelet Activation: A Study with Covalently Bound Fluorescent Probe"
A.H. Parola*, A. Dvilansky, G. Fleisher and I. Nathan
The Annual Meeting of the Israel Biochemical Society
Isr. J. Med. Sci. **13**, 963 (1977).
3. "Membrane Microenvironmental Changes During Platelet Aggregation: Study with Fluorescent Probes"
I. Nathan, A. Dvilansky, G. Fleisher and A.H. Parola
The XV Congress of the International Society of Hematology
Thrombosis and Haemostasis, **38**, 150 (1977).
4. "Platelet Aggregation and Fluorescence Polarization"
I. Nathan, G. Fleisher, A. Dvilansky and A.H. Parola
The XVII Congress of the International Society of Hematology
Thrombosis and Haemostasis, **A1**, 266 (1979).
5. "Fluorescent Affinity Labeling of Adenosine Deaminase by 5-Dimethylaminonaphthalene-1-sulfonyl-3'-o-adenosine"
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"*Liposomes Drugs and Immunocompetent Cell Function*". Edited by C. Nicolau and A. Paraf, 108 (1981).
6. "Membrane Lipid Fluidity of Human Lymphocytes is Unaffected by Concanavalin A Stimulation; A Fluorescence Polarization Study with a Lipophilic Probe"
A.H. Parola, J.H. Kaplan, S.H. Lockwood and E.E. Uzgiris
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7. "Fluorescent Adenosine Analogue and Photoaffinity Labels for Adenosine Deaminase"
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8. "Membrane Dynamic Alteration Associated with Cell Transformation and Malignancy"
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9. "Dynamic Interactions of Fluorescently Labeled Adenosine Deaminase in Human Intact Erythrocytes"
A.H. Parola, G. Skorka, N. Porat and D. Gill
NATO Advanced Study Institute on "Excited State Probes in Biochemistry and Biology",
Acireale, Italy, (1984). (Not followed by published proceedings).
10. "Adenosine Deaminase Complexing Protein in Normal and RSV-Transformed Chick Embryo
Fibroblasts: A Transformation Sensitive Protein"
N. Porat, D. Gill and A.H. Parola
The 9th International Biophysics Congress. Jerusalem, Israel, Aug. (1987).
11. "¹I, N⁶-Etheno (Erythro-9-(2-Hydroxy-3-Nonyl)) Adenine, ε-EHNA: A Fluorescent Inhibitor for
Adenosine Deaminase"
V. Caiolfa, D. Gill and A.H. Parola*
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12. "¹I, N⁶-Etheno (Erythro-9-(2-Hydroxy-3-Nonyl)) Adenine, ε-EHNA: A Fluorescent Inhibitor for
Adenosine Deaminase"
V. Caiolfa, D. Gill and A.H. Parola*
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13. "Does Non-Covalent Lipid-Protein Interaction Control ADA Activity Reconstituted in Liposomes?"
V. Caiolfa, M. Weisman and A.H. Parola
The 53rd Annual Meeting of the Israel Chemical Society, Beer-Sheva, Israel, Feb. (1988). (Not followed
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14. "Membrane Dynamics in Cell Transformation"
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The 53rd Annual Meeting of the Israel Chemical Society, Beer-Sheva, Israel, Feb. (1988). (Not followed
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15. "Time Varying Low Magnetic Field Causes Cell Transformation"
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16. "Characterization of Fluorescent Analogue of Human Interferon-γ"
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proceedings).
17. "Characterization of Fluorescent Analogue of Human Interferon-γ"
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20. "Time Varying Low Magnetic Field Causes Cell Transformation"
A.H. Parola, N. Porat and L.A. Keisow
Gordon Conference on Bioelectrochemistry, Plymouth N.H., August (1988). (Not followed by published
proceedings).
21. "Reconstitution of Adenosine Deaminase Complexing Protein in Liposomes: Interaction with Small
Subunit Adenosine Deaminase"
V.R. Caiolfa, N. Porat and A.H. Parola

- The 33rd Annual Meeting of the Biophysical Society, Cincinnati Ohio, Feb. (1989).
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22. "1-N⁶-Etheno (Erythro-9-(2-Hydroxy-3-Nonyl)) Adenine, ϵ -EHNA: A Fluorescent Inhibitor for Adenosine Deaminase"
V.R. Caiolfa, D. Gill and A.H. Parola
The 33rd Annual Meeting of the Biophysical Society, Cincinnati Ohio, Feb. (1989).
Biophys. J., **55**, 24a (1989).
23. "Does the Complexing Protein of Adenosine Deaminase Have A Regulatory Role?"
D. Yaron, K. Singer, N. Porat and A.H. Parola
The 34rd Annual Meeting of the Biophysical Society, Baltimore Md, Feb. (1990), and the 10th International Biophysical Congress, Vancouver, July 29 - Aug. 3 (1990).
Biophys. J., **57**, 432a (1990).
24. " Deviation From Homeoviscous Adaptation in *E. coli* Membranes"
A.H. Parola, M. Ibdah, D. Gill, and A. Zaritsky
The 34rd Annual Meeting of the Biophysical Society, Baltimore Md, Feb. (1990), and the 10th International Biophysical Congress, Vancouver, July 29 - Aug. 3 (1990).
Biophys. J., **57**, 480a (1990).
25. "Lipid-Protein Interaction Modulates Adenosine Deaminase Activity When Reconstituted in Liposomes: Effect of Cholesterol"
S.C. Nemschitz, V.R. Caiolfa, N. Porat and A.H. Parola
The 34rd Annual Meeting of the Biophysical Society, Baltimore Md, Feb.(1990).
Biophys. J., **57**, 250a (1990).
26. "Adenosine Deaminase Complexing Protein: A Malignant-Transformation Marker in Chick Embryo Fibroblasts"
Y. Roth, N. Porat, Y. Sharoni and A. H. Parola
The 34rd Annual Meeting of the Biophysical Society, Baltimore MD, Feb. (1990), and the 10th International Biophysical Congress July 29 - Aug. 3 (1990), Vancouver, Canada.
Biophys. J., **57**, 71a, (1990).
27. "Effect of Temperature on Adenosine-Deaminase Activity in Solubilized Form and in Lecithin Liposomes"
I. Ben-Shooshan and A.H. Parola
The 10th International Biophysical Congress July 29 - Aug. 3 (1990), Vancouver, Canada, p. 288.
28. "Adenosine Deaminase in Cell Transformation: Biophysical Manifestation of Membrane Dynamics"
N. Porat, D. Gill and A.H. Parola
The Gordon Research Conference on Bioelectrochemistry, N.H., July 23-27, 1990. (Not followed by published proceedings).
29. "The Effect of Time-Varying Low Magnetic Fields on Cells Grown in Culture"
A.H. Parola, N. Porat and L.A. Kiesow
The Gordon Research Conference on Bioelectrochemistry, N. H., July 23-27, 1990. (Not followed by published proceedings).
30. "Adenosine Deaminase in Cell Transformation: Biophysical Manifestation of Membrane Dynamics"
A.H. Parola
The 35th annual meeting of the Biophysical Society, Feb. 24-28, 1991, San-Francisco.
31. "The Energy Levels of ϵ -Adenosine"
R.A. Agabaria, A.H. Parola and D. Gill
The 35th annual meeting of the Biophysical Society, Feb. 24-28, 1991, San-Francisco.
32. "Adenosine Deaminase as a Malignancy Marker"
S.C. Nemschitz, J. Tal and A.H. Parola
The 15th International Congress of Biochemistry, Jerusalem, Israel, August 4-8, 1991. (Not followed by published proceedings).
33. "Membrane Dynamic Alterations Associated with the Effect of Interferon- γ on Normal and Malignant Cell Systems".

- A.H. Parola, I. Ben-valid, R. Henzel, H. Masalha, S.C. Nemschitz, A. Dvilansky and I. Nathan.
The 15th International Congress of Biochemistry, Jerusalem, Israel, August 4-8, 1991. (Not followed by published proceedings).
34. "The Energy Levels of ϵ -Adenosine"
R.A. Agabaria, A.H. Parola and D. Gill
International Symposium on Innovative Fluorescence Methodologies in Biochemistry and Medicine, September 23-26, 1991, Rome, Italy. (Not followed by published proceedings).
35. "Membrane Dynamic Alterations Associated with the Effect of Interferon- γ on Normal and Malignant Cell Systems".
A.H. Parola, I. Ben-valid, R. Henzel, H. Masalha, S.C. Nemschitz, A. Dvilansky and I. Nathan.
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36. Attended the 13th Annual Meeting of BEMS, Salt Lake City, Utah, June 23-27, 1991.
37. "High Light Sensitivity of the Coenzyme in the Active Site of Tryptophanase"
G. Gdalevsky, T. Ben-Kasus, A. Markel, D. Gill, Y.M. Torchinsky, R.S. Phillips, A.H. Parola.
The 37th Annual Meeting of the Biophysical Society, Washington, D.C., Feb. 14-18, 1993.
38. "Membrane Dynamics of Ciliated Cells: Extracellular ATP Markedly Reduces Membrane Order Parameter"
E. Elfahel, A.H. Parola, and Z. Priel.
The 37th Annual Meeting of the Biophysical Society, Washington, D.C., Feb. 14-18, 1993.
39. "Fluorescence Energy Transfer in Tryptophanase: Mechanism and Effects of Quasisubstrates"
A. Markel, T. Ben-Kasus, G. Gdalevsky, D. Gill, Yu M. Torchinsky, R.S. Phillips, A.H. Parola.
The 37th Annual Meeting of the Biophysical Society, Washington, D.C., Feb. 14-18, 1993.
40. "Fluorescence Polarization Assay for Endothelin Converting Enzyme"
S. Hazan, I. Fishov, M. Zamai, V.R. Caiolfa and A.H. Parola.
The 37th Annual Meeting of the Biophysical Society, Washington, D.C., Feb. 14-18, 1993.
41. "Lipid Phase-Transition Affects the Activity of Adenosine Deaminase Reconstituted in Liposomes"
I. Ben-Shooshan and A.H. Parola
The 11th International Biophysics Congress, Budapest, Hungary, July 25-30, 1993.
42. "Coenzyme Fluorescence and Energy Transfer in Tryptophanase from *Escherichia coli*" Markel, A., Ben-Kasus, T., Gdalevsky, G., Gill, D., Phillips, R.S., Torchinsky, Yu. M. and Parola, A.H.
The 59th Annual Meeting of the Israel Chemical Society. Beer-Sheva, Israel, Jan. 31-Feb. 1, 1994. (Not followed by published proceedings).
43. "Light Sensitivity of the Coenzyme in the Active Site of Tryptophanase"
Gdalevsky, G., Ben-Kasus, T., Markel, A., Gill, D., Torchinsky, Y.M., Phillips, R.S. and Parola, A.H.
The 59th Annual Meeting of the Israel Chemical Society. Beer-Sheva, Israel, Jan. 31-Feb. 1, 1994. (Not followed by published proceedings).
44. "Fluorescence Polarization Assay for Endothelin Converting Enzyme"
Hazan, S., Fishov, I., Zamai, M., Caiolfa, V. and Parola A.H.
The 59th Annual Meeting of the Israel Chemical Society. Beer-Sheva, Israel, Jan. 31-Feb. 1, 1994. (Not followed by published proceedings).
45. "Fluorescence of Tryptophanase and Its Quasisubstrates Complexes"
Markel, A., Ben-Kasus, T., Gdalevsky, G., Gill, D., Phillips, R.S., Torchinsky, Y.M. and Parola A.H.
The Annual Meeting of the Israel Biochemical Society. Bar-Ilan, Israel, 1994. (Not followed by published proceedings).
46. "Cellular Response to Time Varying Weak Electromagnetic Fields"
Nemschitz-Baram, S.C., Katsir, G., Tal, Y. and Parola A.H.
The Annual Meeting of the Israel Biochemical Society. Bar-Ilan, Israel, 1994.
47. "Do Time Varying Weak Magnetic Fields Cause Cell Transformation?"
Katsir, G., Nemschitz-Baram, S.C., Tal, Y. and Parola A.H.

The 38th Biophysical Society Annual Meeting, New Orleans, LA, USA, 1994.
Biophys. J., **66**, 252a, (1994).

48. "Quaternary Structure of Tryptophanase, Native and Point Mutated: Time Resolved Fluorescence Anisotropy"

Parola, A.H., Fisher, P.J., Markel, A., Ben-Kasus, T., Sedarous, S.S. and Prendergast, F.G.

The 38th Biophysical Society Annual Meeting, New Orleans, LA., USA, 1994.

Biophys. J., **66**, 402a, (1994).

49. "Fluorescence of Tryptophanase and Its Quasibsubstrates Complexes"

Torchinsky, Y.M., Markel, A., Ben-Kasus, T., Gdalevsky, G., Gill, D., Phillips, R.S. and Parola, A.H.

The 9th Meeting in Vitamin B₆ and Carbonyl Catalysis, Capri, Italy, 1994.

50. "Enzyme-Bound Pyridoxal Phosphate Displays Maximum Light Sensitivity in the Catalytically Active Conformation"

Torchinsky, Y.M., Gdalevsky, G., Ben-Kasus, T., Markel, A., Gill, D. and Parola, A.H.

The 9th Meeting in Vitamin B₆ and Carbonyl Catalysis, Capri, Italy, 1994.

51. "Cold Lability of the Wild Type and Mutant Tryptophanases From *Escherichia coli*"

Ben-Kasus, T., Gdalevsky, G., Markel, A., Phillips, R.S., Torchinsky, Y.M. and Parola, A.H.

The 9th Meeting in Vitamin B₆ and Carbonyl Catalysis, Capri, Italy, 1994.

52. "Cell Exposed to Electromagnetic Fields Exhibit Enhanced Cell Proliferation"

Katsir, G. and Parola A.H.

The 16th Annual Meeting of the Bioelectromagnetics Society, Copenhagen, Denmark, 1994. (Not followed by published proceedings).

53. "Malignancy Markers Indicate that Electromagnetic Fields May Cause Cell Transformation"

Nemschitz-Baram, S.C., Tal, Y. and Parola A.H.

The 16th Annual Meeting of the Bioelectromagnetics Society, Copenhagen, Denmark, 1994. (Not followed by published proceedings).

54. "Increase of Intracellular Calcium and Membrane Potential in Ciliated cells During the Signal Transduction of Extracellular ATP: Induction - A Pronounced Effect on Membrane Dynamics"

Alfael E., Parola A.H. and Priel Z.

The FEBS meeting, Helsinki/Espoo, Finland. June 26-July 1, 1994.

55. "Adenosine Deaminase Complexing Protein Exhibits a Regulatory Role on ADA Activity"

S. Rave, I. Ben-Shooshan, M. Zamai, R. Cohen-Luria, Y. Roth, N. Porat and A.H. Parola

The 39th Biophysical Society Annual Meeting, San Francisco, CA., USA, Feb. 12-16, 1995.

56. "The Membrane Dynamics of *Escherichia coli* Cells is Dependent on Their Physiological State"

I. Fishov, Z. Binenbaum, A.H. Parola and A. Zaritzky

The 39th Biophysical Society Annual Meeting, San Francisco, CA., USA, Feb. 12-16, 1995.

57. "A Model for the Interaction of the Sulfonic Distamycin A Derivatives, Angiogenesis-Modulating Agents, with Recombinant Human Basic Fibroblast Growth Factor (bFGF)"

M. Zamai, A.H. Parola, V.R. Caiolfa, M. Grandi, F. Manetti, F. Corelli, M. Botta and N. Mongelli

The 39th Biophysical Society Annual Meeting, San Francisco, CA., USA, Feb. 12-16, 1995.

58. "The Role of Protein Kinase C and the Cytoskeleton in the Signal Transduction of Extracellular ATP in Ciliated Cells: Monitoring by Changes in Membrane Fluidity"

E. Alfahel, A.H. Parola and Z. Priel

The 39th Biophysical Society Annual Meeting, San Francisco, CA., USA, Feb. 12-16, 1995.

59. "Purinergic Signal Transduction Induces Membrane Fluidization in Ciliary Cells"

E. Alfahel, A. Korengreen, A.H. Parola and Z. Priel

The 3rd International Symposium on "Innovative Fluorescence Methodologies in Biochemistry and Medicine, Kaanapali, Maui, Hawaii, USA, July 30-Aug. 2, 1995. (Not followed by published proceedings).

60. "Dynamics and Photochemistry of Dinitro-Stilbene Derivatives in the Binding Site of anti DNP"

I. Likhtenstein, O. Chen, V. Papper, B. Uzan, B. Glaser, I.G.Y. Adin, A.H. Parola and D. Gill

The 1st Meeting of the Slovenian Biochemical Society with International Participation, Portoroz, Slovenia, September 28-October 1, 1995. (Not followed by published proceedings).

61. "Novel Fluorescence - Photochrome Labeling Techniques for Study of Biomembranes Molecular Dynamics"
I. Likhtenstein, R. Bishara, V. Papper, B. Uzan, I. Fishov, D. Gill and A.H. Parola,
The 1st Meeting of the Slovenian Biochemical Society with International Participation, Portoroz, Slovenia, September 28-October 1, 1995.
62. "Cold-Induced Dissociation of Tetrameric *E. coli* Tryptophanase into Dimers"
Ben-Kasus, T., Gdalevsky, G. Ya, Phillips, R.S., Torchinsky, Y.M. and Parola, A.H.
The XIIth International Biophysics Congress, Amsterdam, The Netherlands, Aug. 11-16, 1996.
63. "Basic Fibroblast Growth Factor Binding and Anti-Angiogenic Activity of Sulfonic Distamycin A Derivatives"
M. Zamai, V.R. Caiolfa, M. Mariani, N. Mongolia, M. Grandi and A.H. Parola
The XIIth International Biophysics Congress, Amsterdam, The Netherlands, Aug. 11-16, 1996.
64. "The Role of Protein Kinase A in Membrane Fluidization Induced by Acetylcholine"
E. Alfahel, A.H. Parola and Z. Priel
Biomembrane Structure and Function, St. Catherine's College, Oxford, UK, Aug. 18-21, 1996.
65. "Distamycin-A Derivatives Potentiate Tumor Necrosis Factor Activity via The Modulation of Tyrosine Phosphorylation"
M. Kafka J. P. Zou, A. Dvilansky, A.H. Parola, M. Zamai and I. Nathan
25th Annual Meeting of the International Society for Experimental Hematology, New York, NY, Aug. 23-27, 1996.
66. "Cell Transformation by Exposure to Electromagnetic Fields"
A.H. Parola
The first annual symposium of RADIO SCIENCES In Israel, Israel National Committee for Radio Sciences, of the National Academy for Sciences and Humanities, Tel Aviv University, December 11-12, 1996.
67. "Picosecond Time-Resolved Fluorescence Studies Characterize The Binding between The Novel Fluorescent anti-Angiogenic Drug PNU151484 and Human Basic Fibroblast Growth Factor"
M. Zamai, V. R. Caiolfa, D. Pines, E. Pines and A.H. Parola
The 41st Annual Meeting of the Biophysical Society, New Orleans, March 2-6, 1997.
68. "Vertical Displacement of A Membranal Protein Revealed by Arrhenius Plot: A Reconstitution Study on Adenosine Deaminase Complexing Protein"
I. Ben-Shooshan and A.H. Parola
The 41st Annual Meeting of the Biophysical Society, New Orleans, March 2-6, 1997.
69. "High Photosensitivity of the Active Site-Bound Pyridoxal Phosphate in *Escherichia coli* Tryptophanase"
G.Y. Gdalevsky, T. Ben-Kasus, Y.M. Torchinsky and A.H. Parola.
in " *Spectroscopy of Biological Molecules*". Edited by P. Carmona et al.
The 7th European Conference, Madrid Spain, 7-12 Sept. 1997. (Not followed by published proceedings).
70. "The Role of Protein Kinase A in Membrane Fluidization Induced by Acetylcholine"
E. Alfahel, A.H. Parola and Z. Priel
The 17th International Congress of Biochemistry and Molecular Biology (IUMBM) August 24-29, 1997, San Francisco USA.
FASEB J., **11** A1057, 1997.
71. "Picosecond Time-Resolved Fluorescence Studies Characterize The Binding between The Novel Fluorescent anti-Angiogenic Drug PNU151484 and Human Basic Fibroblast Growth Factor"
M. Zamai, V.R. Caiolfa, D. Pines, E. Pines and A.H. Parola
The 17th International Congress of Biochemistry and Molecular Biology (IUMBM) August 24-29, 1997, San Francisco USA.
FASEB J., **11** A1426, 1997.
72. "Cold-Induced Dissociation of Tetrameric *E. coli* Tryptophanase into Dimers"
Ben-Kasus, T., Gdalevsky, G. Ya, Phillips, R.S., Torchinsky, Y.M. and Parola, A.H.

The 17th International Congress of Biochemistry and Molecular Biology (IUMBM) August 24-29, 1997, San Francisco USA.

FASEB J., **11** A1033, 1997.

73. "Regulation of The Activity of Adenosine Deaminase Bound to Normal and Transformed Chick Embryo Fibroblasts"

R. Cohen-Luria, N. Porat, Y. Roth, Y. Sharoni, and A.H. Parola

The 17th International Congress of Biochemistry and Molecular Biology (IUMBM) August 24-29, 1997, San Francisco USA.

FASEB J., **11** A1032, 1997.

74. "Vertical Displacement of A Membranal Protein Revealed by Arrhenius Plot: A Reconstitution Study on Adenosine Deaminase Complexing Protein"

I. Ben-Shooshan and A.H. Parola

The 17th International Congress of Biochemistry and Molecular Biology (IUMBM) August 24-29, 1997, San Francisco USA.

FASEB J., **11** A1025, 1997.

75. "The Enhanced Cell Proliferation Caused by Sinusoidally Varying Magnetic Field is Suppressed by Radical Scavengers"

G. Katsir and A.H. Parola

The 20th Annual Meeting of the Bioelectromagnetic Society, St. Pete Beach, Florida, USA. June 7-11, 1998

76. "Membrane Lipid-Protein Interactions Control the Activity of Adenosine-Deaminase Bound to its Complexing Protein, Reconstituted in Vesicles: Effect of Cholesterol Content and Temperature"

A.H. Parola

FASEB Summer Research Conference, "Molecular Biophysics of Cellular Membranes", August 1-6, Saxtons River, Vermont, 1998.

77. "Regulation of Adenosine Deaminase Activity in Normal and Transformed Chick Embryo Fibroblasts"

R. Cohen-Luria, Y. Roth, S. Gill-Rave, N. Porat, Y. Sharoni and A.H. Parola.

FASEB Summer Research Conference, "Molecular Biophysics of Cellular Membranes", August 1-6, Saxtons River, Vermont, 1998.

78. "Probing the active site of adenosine deaminase by a pH responsive novel fluorescent competitive inhibitor"

V.R. Caiolfa, R. A. Agbaria, D. Gill and A.H. Parola

The 5th IUBMB Conference on The Biochemistry of Health and Diseases, Jerusalem, board # 71, October 20, 1998.

79. "Nature of Interaction Between Basic Fibroblast Growth Factor and the Antiangiogenic Drug PNU145156E (7,7-(Carbonyl-bis[imino-N-Methyl-4,2-pyrrolicarbonylimino[N-methyl-4,2-pyrrole]-carbonylimino])-bis-(1,3-naphthalene disulfonate))

M. Zamai, V.R. Caiolfa, D. Pines, E. Pines and A.H. Parola

FISEB Federation of the Israeli Societies of Experimental Biology, Eilat, Israel, A-23, Dec. 8-11, 1998. (Not followed by published proceedings).

80. "Regulation of Adenosine Deaminase Activity in Normal and Transformed Chick Embryo Fibroblasts"

R. Cohen-Luria, Y. Roth, S. Gill-Rave, N. Porat, Y. Sharoni and A.H. Parola

FISEB Federation of the Israeli Societies of Experimental Biology, Eilat, Israel, B-166, Dec. 8-11, 1998. (Not followed by published proceedings).

81. "Membrane Lipid-Protein Interactions Control the Activity of Adenosine-Deaminase Bound to its Complexing Protein, Reconstituted in Vesicles: Effect of Cholesterol Content and Temperature"

A.H. Parola, V.R. Caiolfa, I. Ben-Shooshan, J. Cohen, N. Porat, I. Fishov and R. Cohen-Luria

FISEB Federation of the Israeli Societies of Experimental Biology, Eilat, Israel, A-132, Dec. 8-11, 1998. (Not followed by published proceedings).

82. "Membrane Dynamics Control ADA Activity: Effect of Cholesterol and Temperature"

A.H. Parola, V.R. Caiolfa, I. Ben-Shooshan, I. Fishov and R. Cohen-Luria

- The 43rd Biophysical Society 1999 Annual Meeting, Baltimore, Maryland, Su-Pos209, Feb. 13-17.
Biophys. J., **76**, A67, 1999.
83. "Heterogeneity of Bacterial Membrane: Study with Various Fluorescent Probes"
I. Fishov, Z. Binenbaum, S. Vanounou, A. H. Parola and E. Klyman
The 43rd Biophysical Society 1999 Annual Meeting, Baltimore, Maryland, Su-Pos176, Feb. 13-17.
Biophys. J. **76**, A61, 1999.
84. "The Enhanced Cell Proliferation Caused by Sinusoidally Varying Magnetic Field is Suppressed by Radical Scavengers"
A. H. Parola and G. Katsir
The 21st Annual Bioelectromagnetics Meeting, Long Beach California, June 20-24, 1999. (Not followed by published proceedings).
85. "Coexistence of Domains with Distinct Order and Polarity in Bacterial Membrane is Revealed by Laurdan Fluorescence"
S. Vanounou, A. H. Parola and I. Fishov
The 4th International Weber Symposium on "Innovative Fluorescence Methodologies in Biochemistry and Medicine", Kaanapali, Maui, Hawaii, June 23-27, 1999. (Not followed by published proceedings).
86. "Cold Inactivation and Dissociation into Dimers of *Escherichia coli* Tryptophanase and its W330F Mutant Form"
T. Erez, G. Y. Gdalevsky, Y. M. Torchinsky, R. S. Phillips, and A. H. Parola
The 4th International Weber Symposium on "Innovative Fluorescence Methodologies in Biochemistry and Medicine", Kaanapali, Maui, Hawaii, June 23-27, 1999. (Not followed by published proceedings).
87. "Time Resolved Fluorescence Study of the Molecular Interaction Between Basic Fibroblast Growth Factor and Novel Anti-Angiogenic Drugs"
C. Hariharan, D. Pines, E. Pines, M. Zamai, R. Cohen-Luria, A. Yayon and A. H. Parola
13th International Biophysics Congress, New-Delhi, India September 19-24, 1999.
J. Biosci., **24** (1), P131, 79, 1999.
88. "Signal Transduction Pathways Underlying the Extracellular ATP Induced Membrane Fluidization"
O. Zagoory, E. Alfahel, A. H. Parola and Z. Priel
The 13th International Biophysics Congress, New-Delhi, India September 19-24, 1999.
J. Biosci., **24** (1), P294, 136, 1999.
89. "Pyridoxal Phosphate Binding to Wild Type, W330F, and C298S Mutants of *E. coli* Apotryptophanase: Unraveling the Cold Inactivation of Tryptophanase"
T. Erez, R.S. Phillips and A. H. Parola
10th International Symposium on Vitamin B6 and Carbonyl Catalysis
4th Meeting on PQQ and Quinoproteins, Santa-Fe, New Mexico, Oct 31-Nov 5th, 1999 (P75). (Not followed by published proceedings).
90. "Cold inactivation and Dissociation of Tryptophanase"
Y.M. Torchinsky, T. Erez, G.Y. Gdalevsky, R.S. Phillips and A. H. Parola
10th International Symposium on Vitamin B6 and Carbonyl Catalysis
4th Meeting on PQQ and Quinoproteins, Santa-Fe, New Mexico, Oct 31-Nov 5th, 1999 (P16). (Not followed by published proceedings).
91. "Pyridoxal Phosphate Sensitized photoinactivation of Tryptophanase"
G.Y. Gdalevsky, T. Erez, Y.M. Torchinsky and A. H. Parola
10th International Symposium on Vitamin B6 and Carbonyl Catalysis
4th Meeting on PQQ and Quinoproteins, Santa-Fe, New Mexico, Oct 31-Nov 5th, 1999 (P85). (Not followed by published proceedings).
92. "Effects of quasisubstrates and cations on spectral properties of tryptophanase"
T. Erez, A. Markel, G.Y. Gdalevsky, Y.M. Torchinsky, R.S. Phillips and A. H. Parola
10th International Symposium on Vitamin B6 and Carbonyl Catalysis, 4th Meeting on PQQ and Quinoproteins, Santa-Fe, New Mexico, Oct 31-Nov 5th, 1999 (P48). (Not followed by published proceedings).

93. "Cold Dissociation of *E. coli* Tryptophanase: Time-Resolved Fluorescence Studies of WT and W330F Forms"
G.Y. Gdalevsky, C. Hariharan, T. Erez, R. Cohen-Luria and A.H. Parola.
14th Symposium of the Protein Society, San Diego, CA, Aug. 5-9, 2000.
94. "¹⁵N NMR Spectroscopic study of ammonium ion assimilation by etiolated *Spirodela oligorrhiza* (*Lemnaceae*), affected by sinusoidally varying magnetic fields."
E.B-I. Monselise, G.Y. Garty, A.H. Parola and D. Kost
8th Congress of the Federation of European Societies of Plant Physiology, Budapest, Hungary, August 21-25. *Plant Physiol. Biochem.* (PPB), **38**: S14 - 05, 2000.
95. "Binding of fibroblast growth factor-2 to the heparin like antiangiogenic drug - PNU145165E: removal of polar interactions affects protein folding"
M. Zamai, C. Hariharan, D. Pines, M. Safran, A. Yayon, V.R. Caiolfa, R. Cohen-Luria, E. Pines and A. H. Parola. 45th Biophysical Society Annual Meeting, Boston, Massachusetts, 1324-Pos, Feb. 17-21. *Biophys. J.*, **80**, 317a, 2001.
96. "Binding of fibroblast growth factor-2 to the heparin like antiangiogenic drug - PNU145165E: removal of polar interactions affects protein folding". Parola A.H., Zamai M., Hariharan C., Pines D., Safran M., Yayon A., Caiolfa V.R., Cohen-Luria R. and Pines E. 9th Congress of the European Society for Photobiology. Lilehammer, Norway 3-8 September. Abs. # 1469. 2001.
97. "Alanine formation in etiolated *Spirodela oligorrhiza* (*Lemnaceae*), is affected by red/far-red light pulses and by sinusoidal varying, radio frequency, low magnetic fields. An ¹⁵N NMR Spectroscopic study".
E.B-I. Monselise, A.H. Parola and D. Kost. 9th Congress of the European Society for Photobiology. Lilehammer, Norway 3-8 September 2001.
98. "Lipid Phase-Transitions and Active Site Accessibility of Adenosine Deaminase".
I. Ben-Shooshan, A. Kessel, N. Ben-Tal, R. Cohen-Luria and A.H. Parola.
International Conference on Sequence, Structure and Function in Membrane Protein Systems, Zichron Ya'acov, Israel, November 4-8, 2001. Abs. p.#74.
99. "Magnetic Field Augments Parvovirus Anti-Tumor Activity: Implications for Cancer Gene Therapy"
S. Bar-Am, Y. Segev, I. Atingov, R. Mintz, J. Tal, A.H. Parola
Life Sciences Day, Faculty of Health Sciences, Ben-Gurion University of the Negev, 2001.
100. "Bax Induced Cytochrome C Efflux from Isolated Mitochondria"
E. Davicioni, I. Nathan, I. Fishov, R. Cohen-Luria and A.H. Parola
The 46th Biophysical Society Annual Meeting in San Francisco, California, February 23-27, 2002, abstract control # 2377.
101. "Sinusoidally varying magnetic fields cause abiotic stress. ¹⁵N NMR evidence of free alanine accumulation by *Spirodela oligorrhiza* (*Lemnaceae*)"
Monselise E. B-I, Parola A.H. and Kost, D.
13th Congress of The Federation of European Societies of Plant Physiology. Hersonissos, Heraklion, Crete, Greece, 2-6 September 2002.
102. Bi-National France-Israel Symposium on Enabling Nano- and Micro- Technologies in Biotechnology. Biotechnology Institute Day. Ben-Gurion University of the Negev, October 31, 2002. Chairman.
103. "Crystallization and preliminary X-ray analysis of the Apo form of *Escherichia coli* tryptophanase"
A. Kagan, G. Gdalevsky, R. Cohen-Luria, A.H. Parola and Y. Goldgur. The 68th Meeting of the Israel Chemical Society, Dan Panorama, Tel Aviv. Abs. PA-8. January 26-27, 2003.
104. "Bax Induced Cytochrome C Efflux from Isolated Mitochondria". E. Davicioni, R. Cohen-Luria, I. Fishov, I. Nathan and A.H. Parola. Israel Society for Biochemistry & Molecular Biology (ISBMB), Annual Meeting 2003, Tel Aviv University, 13 April 2003.
105. " Binding Interactions of Chromosomal Replication Initiator Protein DnaA with Membrane: Spectroscopic Characterization". A. Strockhin, G. Y. Gdalevsky, R. Cohen-Luria, A.H. Parola and I. Fishov. Israel Society for Biochemistry & Molecular Biology (ISBMB), Annual Meeting 2003, Tel Aviv University, 13 April 2003.

106. "Crystal structure of the holo form of *E. Coli* tryptophanase". Kogan, G. Gdalevsky, R. Cohen-Luria, A. H. Parola and Y. Goldgur. The Seventh International School on the Crystallography of Biological Macromolecules, Como, Italy, May 10-14, 2003.
107. "Crystallization and preliminary X-ray analysis of the Apo form of *Escherichia coli* tryptophanase". Kagan, G. Gdalevsky, R. Cohen-Luria, A.H. Parola and Y. Goldgur. Israel Crystallography Association, Annual Meeting, Ben-Gurion University of The Negev, Beer-Sheva, May 20, 2003.
108. "Crystal structure of the holo form of *E. Coli* tryptophanase". Kogan, G. Gdalevsky, R. Cohen-Luria, A. H. Parola and Y. Goldgur. Israel Crystallography Association, Annual Meeting, Ben-Gurion University of The Negev, Beer-Sheva, May 20, 2003.
109. "The interaction of Bax with isolated mitochondria results in membrane proteo-lipid pores formation as revealed by a fluorescent lipidic probe". A.H. Parola, R. Cohen-Luria, E. Davicioni, I. Fishov and I. Nathan
48th Biophysical Society Annual Meeting, Baltimore, Maryland, Feb. 14-18, 2004. *Biophys. J.*, 1741-Plat.
110. "Reversible membrane binding as a strategy for function regulation of the key *E. coli* cell cycle proteins, DnaA and MinD". Mileykovskaya, E., Corbin, B., and Margolin, W., Dowhan, W., Strockhin, A., Gdalevsky, G.Y., Cohen-Luria, R., Parola, A.H. and Fishov, I. The 48th Biophysical Society Annual Meeting, Baltimore, Maryland, Feb. 14-18, 2004. *Biophys. J.*, 1874-Plat.
111. "Cold dissociation of *E. coli* tryptophanase and its mutants: a structural view". G.Y. Gdalevsky, A. Kogan, R.S. Phillips, R. Cohen-Luria, N. Tsessin, A.H. Parola and Y. Goldgur. Annual meeting of the Israeli Crystallographic Association, TAU, July 26, 2004.
112. "The interaction of Bax Δ C with isolated mitochondria: a glance from the membrane lipids". E. Davicioni, R. Cohen-Luria, I. Nathan and A.H. Parola. Biophysical Society *Discussions*, Asilomar, CA, October 28-31, 2004.
113. "Membrane-Catalyzed Nucleotide Exchange on DnaA protein: Effect of Surface Molecular Crowding". Aranovich A., Gdalevsky G. Y., Cohen-Luria R., Parola A. H. and Fishov, I. The 4th congress of the Federation of the Israel Societies for Experimental Biology (FISEB). Eilat, Israel. February 7-10, 2005.
114. "Cold dissociation of *Escherichia coli* tryptophanase and its mutants: structure-activity relationships". Abraham H. Parola, Anna Kogan, Garik Y. Gdalevsky, Rivka Cohen-Luria and Yehuda Goldgur. The 49th Biophysical Society Annual Meeting in Long Beach, California, February 12-16, 2005. *Biophys. J.*, 264-Pos.
115. "Utilization of Intrinsic Fluorescence Polarization Ratio of Untreated Amniotic Fluid: A Step Towards a Non-Invasive Method for the Determination of Fetal Lung Maturity", Hemy Avraham, Eric Ohana, Eli Maymon, Rivka Cohen-Luria, Jonathan Molcho, and Abraham H. Parola. The 52nd Annual Meeting of the Society for Gynecologic Investigation, Los Angeles, California, March 23-26, 2005. Abstract #49: Clinical Perinatology: Low Birth Weight, Fetal Death; Perinatal Outcomes.
116. "Cold dissociation of *E. coli* tryptophanase and its mutants: a structural view" N. Tsessin, A. Kogan, G.Y. Gdalevsky, R.S. Phillips, R. Cohen-Luria, Y. Goldgur and A.H. Parola The 8th Israeli Bioinformatics Symposium IBS 2005 of the Israeli Society for Bioinformatics and Computational Biology, May 22nd, Beer Sheva, Israel.
117. "Tryptophanase inhibitors: towards a new generation of antibiotics eliminating biofilm formation" R. Scherzer, G.Y. Gdalevsky, Y. Goldgur, R. Cohen-Luria, S. Bittner and A.H. Parola The 15th IUPAB & 5th EBSA International Biophysics Congress, August 27th - September 1st 2005, Montpellier – France.
118. "Inter-subunits region differences in *E. coli* and *P. vulgaris* tryptophanase affect cold lability" A. Kogan, G.Y. Gdalevsky, R. S. Phillips, R. Cohen-Luria, Y. Goldgur and A.H. Parola The 15th IUPAB & 5th EBSA International Biophysics Congress, August 27th - September 1st 2005,

Montpellier – France.

119. “Binding of the Antiangiogenic Drug PNU145156E to basic FGF: Removal of Polar Interactions Affects Protein Folding”

R. Cohen-Luria, M. Zamai, C. Hariharan, D. Pines, M. Safran, A. Yayon, V.R. Caiolfa, E. Pines, and A.H. Parola

The VIIIth International Conference on Molecular Spectroscopy, 13-18 Sept., 2005 Wroclaw-Laddek Zdroj, Poland (Abstract # O-19).

120. “The enhanced proliferation of cells in culture and the stress effects upon higher plants induced by sinusoidal-varying low frequency electromagnetic fields are suppressed by radical scavengers”

Abraham H. Parola, Daniel Kost, Gila Katsir, Edna Ben-Izhak Monselise and Rivka Cohen-Luria
XXVIIIth General Assembly of International Union of Radio Science (URSI), session KO2, paper registration No COM10-01731-2005, October 23-29, 2005, New Delhi, India.

121. “Tryptophanase inhibitors: towards a new generation of antibiotics eliminating biofilm formation”.

R. Scherzer, G.Y. Gdalevsky, Y. Goldgur, R. Cohen-Luria, S. Bittner and A.H. Parola

Katzir Conference on Molecular Prospectives on Protein-Protein Interactions, November 6-10, 2005, Eilat, Israel.

122. “Membrane-catalyzed nucleotide exchange on DnaA protein: effect of surface molecular crowding”

Aranovich, A., G.Y. Gdalevsky, R. Cohen-Luria, A.H. Parola, and I. Fishov

Katzir Conference on Molecular Prospectives on Protein-Protein Interactions, November 6-10, 2005, Eilat, Israel.

123. “Towards the Isolation and Characterization of Unidentified Fluorescent Substance in Amniotic Fluid: a Potential Biological Marker for Fetal Lung Maturity”

Abraham H. Parola, Larisa Ladizhensky, Eric Ohana, Eli Maymon, Hemy Avraham, Garik Y. Gdalevsky, Rivka Cohen-Luria, Jonathan Molcho

The 50th Biophysical Society Annual Meeting, February 18-22, 2006 Abstract Control Number: 3339
Poster Session Title: Fluorescence Spectroscopy, Date: Wed, February 22, 1-3pm Poster Board Number: LB131. Salt Lake City, UT.

124. “The Interaction of BAX with Isolated Mitochondria Results in Membrane Proteo-Lipid Pores

Formation as Revealed by a Fluorescent Lipidic Probe”. Abraham H. Parola, Rivka Cohen-Luria, Elai Davicioni, Ilana Nathan. Optical Spectroscopy of Biomolecular Dynamics II: Katzir Conference. March 19-23, 2006, Eilat, Israel,

125. “Molecular Crowding of DnaA on the Membrane Surface – a Switch for the Nucleotide Exchange”

Alexander Aranovich, Garik Y. Gdalevsky, Rivka Cohen-Luria, Abraham H. Parola and Itzhak Fishov
Gordon Research Conference on Bacterial Cell Surfaces (<http://www.grc.org/programs/2006/bactcell.htm>), June 25-30, 2006, Colby-Sawyer College, New London, NH.

126. “Molecular Crowding of DnaA on the Membrane Surface – a Switch for the Nucleotide Exchange”.

Alexander Aranovich, Garik Y. Gdalevsky, Rivka Cohen-Luria, Abraham H. Parola and Itzhak Fishov. 2nd Congress of European Microbiologists (FEMS 2006), July 4-8, 2006, Madrid, Spain.

127. “Cold dissociation of E. coli tryptophanase and its Y74F and C298S mutants”.

Gdalevsky G.Y., A. Kogan, R.S. Phillips, Y. Goldgur, R. Cohen-Luria and A.H. Parola.

The 20th Symposium of The Protein Society, August 5-9, 2006. San Diego, California.

128. “Molecular Crowding of DnaA on the Membrane Surface – a Switch for the Nucleotide Exchange”.

A. Aranovich, G.Y. Gdalevsky, R. Cohen-Luria, A.H. Parola and I. Fishov.

EMBO Workshop on Cell Cycle and Cytoskeletal Elements in Bacteria (<http://embo.ruc.dk/index.html>). August 23-27, 2006, Carlsberg Academy in Copenhagen, Denmark.

129. “Towards the Isolation and Characterization of Unidentified Fluorescent Substance in Amniotic Fluid: a Potential Biological Marker for Fetal Lung Maturity”.

Ladizhensky, L., E. Ohana, E. Maymon, A. Hemy, G.Y. Gdalevsky, R. Cohen-Luria, J. Molcho, Jonathan and A.H. Parola. 1st European Chemistry Congress, 27 - 31 August 2006, Budapest-Hungary.

130. "The Interaction of BAX With Isolated Mitochondria Results in Membrane Proteo-Lipid Pores Formation as Revealed by a Fluorescent Lipidic Probe".
Tsesin, N., E. Davicioni, R. Cohen-Luria, I. Nathan and A.H. Parola. 1st European Chemistry Congress, 27 - 31 August 2006, Budapest-Hungary.
131. Molecular Crowding of DnaA on the Membrane Surface – A Switch for the Nucleotide Exchange
Alexander Aranovich, Garik Y. Gdalevsky, Rivka Cohen-Luria, Abraham H. Parola, and Itzhak Fishov.
The 72nd annual meeting of the Israel Chemical Society, the Hilton Hotel in Tel-Aviv, Tuesday and Wednesday, February 6-7, 2007.
132. Synthesis of specific tryptophanase inhibitors for bacterial biofilm elimination
Liraz Shidlovsky, Pnina Krief, Vladimir Khodorkovsky, Garik Y. Gdalevsky, Rivka Cohen-Luria, Abraham H. Parola
The 72nd annual meeting of the Israel Chemical Society, the Hilton Hotel in Tel-Aviv, Tuesday and Wednesday, February 6-7, 2007.
133. Bax Δ C induced membrane lipid reorganization in isolated rat liver mitochondria is consistent with the formation of lipid pores
Natalia Tsesin, Elai Davicioni, Rivka Cohen-Luria, Ilana Nathan and Abraham H. Parola
The 72nd annual meeting of the Israel Chemical Society, the Hilton Hotel in Tel-Aviv, Tuesday and Wednesday, February 6-7, 2007.
134. Molecular crowding of DnaA on the membrane surface – a switch for the nucleotide exchange
Alexander Aranovich, Garik Y. Gdalevsky, Rivka Cohen-Luria, Abraham H. Parola, and Itzhak Fishov
6th European Biophysics Congress, Imperial College London, 14th to 18th July 2007
- 135
- A. Molecular Crowding of DnaA on the Membrane Surface – A Switch for the Nucleotide Exchange
Alexander Aranovich, Garik Y. Gdalevsky, Rivka Cohen-Luria, Abraham H. Parola, and Itzhak Fishov.
- B. Bax Δ C induced membrane lipid reorganization in isolated rat liver mitochondria is consistent with the formation of lipid pores
Natalia Tsesin, Elai Davicioni, Rivka Cohen-Luria, Ilana Nathan and Abraham H. Parola
- C. Molecular crowding of DnaA on the membrane surface – a switch for the nucleotide exchange
Alexander Aranovich, Garik Y. Gdalevsky, Rivka Cohen-Luria, Abraham H. Parola, and Itzhak Fishov
All in Xth International Conference on Molecular Spectroscopy -ECSBM 2007, Sep. 1-6, 2007
136. Extensive Membrane Lipid Reorganization Precedes Bax.C-induced Cytochrome c Release in Isolated Rat Liver Mitochondria.
Elai Davicioni, Rivka Cohen-Luria, Natalia Tsesin, Ilana Nathan, and Abraham H. Parola
Membrane Biophysics of Fusion, Fission, and Rafts in Health and Disease, Organized by Fredric S. Cohen and Joshua Zimmerberg, The 61st Annual Meeting and Symposium of the Society of General Physiologists, Marine Biological Laboratory, Woods Hole, MA, September 5 – 9, 2007
137. Membrane-catalyzed Nucleotide Exchange on DnaA: Effect of Surface Molecular Crowding
Alexander Aranovich, Garik Y. Gdalevsky, Rivka Cohen-Luria, Itzhak Fishov, and Abraham H. Parola
The 2nd International Symposium on Bio-Inspired Engineering (ISBIE), Poster 39, October 8-10, 2007. Royal Hotel, Dead Sea, Israel.
138. Intrinsic Fluorescence Polarization of Amniotic Fluid: II. Toward a Noninvasive Method for the Determination of Fetal Lung Maturity
Hemy Avraham, Eric Ohana, Eli Maymon, Rivka Cohen-Luria, Jonathan Molcho and Abraham H. Parola
The 2nd International Symposium on Bio-Inspired Engineering (ISBIE), Poster 40, October 8-10, 2007. Royal Hotel, Dead Sea, Israel.
139. Bax interaction with isolated mitochondria: initial steps of apoptosis
Elai Davicioni, Rivka Cohen-Luria, Natalia Tsesin, Ilana Nathan and Abraham H. Parola
The 2nd International Symposium on Bio-Inspired Engineering (ISBIE), Poster 41, October 8-10, 2007. Royal Hotel, Dead Sea, Israel.

140. The crystal structure of apo Escherichia coli tryptophanase reveals a wide open conformation. Natalia Tsesin, A. Kogan, Garik Y Gdalevsky, Juha-Pekka Himanen, Rivka Cohen-Luria, Abraham H. Parola, Yehuda Goldgur and Orna Almog
The 2nd International Symposium on Bio-Inspired Engineering (ISBIE), Poster 42, October 8-10, 2007. Royal Hotel, Dead Sea, Israel
141. The crystal structure of apo Escherichia coli tryptophanase reveals a wide open conformation. Natalia Tsesin, A. Kogan, Garik Y Gdalevsky, Juha-Pekka Himanen, Rivka Cohen-Luria, Abraham H. Parola, Yehuda Goldgur and Orna Almog
Feb. 1-6, 2008 Biophys Long Beach CA, USA
142. Regulatory role of adenosine deaminase complexing protein (Dipeptidyl Peptidase IV=CD26) on the malignancy marker adenosine deaminase: effect of membrane cholesterol and phase-transition", the 3rd International Symposium on Dipeptidyl peptidases and Related Proteins, Antwerp, Belgium, April 23-25, 2008.
143. Loose packing and PLP release promote cold inactivation and dissociation of *E. coli* tryptophanase. Abstracts 33rd FEBS Congress and 11th IUBMB Conference Biochemistry of Cell Regulation, Kogan, Anna; **Gdalevsky, Garik Y.**; Cohen-Luria, Rivka; Goldgur, Yehuda; Phillips, Robert S.; Parola, Abraham H.; and Almog, Orna Athens, Greece June 28- July 3, 2008. FEBS Journal vol. 275 (Suppl.1) June 2008, PP3-28, p. 218.
144. Reduced Tight Assembly of Trpase Tetramer Enhanced PLP Release Leading to Dissociation and Cold Inactivation
Parola, A. H.; Kogan, A.; Gdalevsky, G. Y.; Cohen-Luria, R.; Goldgur, Y.; Phillips, R. S.; Almog, O.) 2nd International Interdisciplinary Conference on Vitamins, Coenzymes and Biofactors, Athens Georgia, Oct. 2008
145. Crystal Structure of *E. coli* tryptophanase in "semi-holo" form: an insight into allostery of the enzyme
Parola, A. H., Reznov, L., Goldgur, Y., Himanen, J. P., Gdalevsky, G.Y., Kogan, A., Cohen-Luria, R., Almog, 2nd International Interdisciplinary Conference on Vitamins, Coenzymes and Biofactors, O. Athens Georgia, Oct. 2008
146. Amino acids differences in the sequence of oligomeric enzymes may influence dimer-monomer equilibrium.
Parola, A.H., Gdalevsky, G.Y., Kogan, A., Cohen-Luria, R., Phillips, R.S., Goldgur, Y., Almog, O.
2nd International Conference on Molecular Perspectives on Protein-Protein Interactions 27 June-1 July, 2008 Dubrovnik, Croatia.
147. Indole Derivatives as Inhibitors for Tryptophanase. Mariya Vasilevitsky, Alyona Judin, Anna Kogan, **Garik Y. Gdalevsky**, Orna Almog and Avraham H Parola¹ The 74th Meeting of the Israel Chemical Society, February 8-9, 2009, Tel Aviv, Israel
148. Cooling of *E. coli* Tryptophanase leads to a covalent bond scission and cold lability
Anna Kogan¹ Garik Y. Gdalevsky, Rivka Cohen-Luria, Yehuda Goldgur, Robert S. Phillips, Abraham H. Parola*, **Orna Almog*** The 74th Meeting of the Israel Chemical Society, February 8-9, 2009, Tel Aviv, Israel
149. Towards instantaneous quantitative fluoroimaging drugs determination in body fluids with no added reagents
Natalia V. Strashnikovaa, Arcady P. Gershanika, Nona Papiashvilia, Rivka Cohen-Luriaa, Shlomo Markb, Yehoshua Kalisky, and **Abraham H. Parola**, XIII EUROPEAN CONFERENCE ON THE SPECTROSCOPY OF BIOLOGICAL MOLECULES, Palermo, August 28 - September 02, 2009.
150. Membrane occupancy-dependent rejuvenation of DnaA is associated with its conformationally driven oligomerization
Abraham H. Parola* Alexander Aranovich, Shani Braier, Esti Ansbacher Hanna Rapoport, Rony Granek, and Itzhak Fishov*, The 54th American Biophysical Society Annual Meeting, San Francisco, California, February 20-24, 2010.

151. " Conformational Changes and Loose Packing Promote E. coli Tryptophanase Cold Lability"
Abraham H. Parola, BIT's Inaugural Symposium on Enzyme and Biocatalysis, April 22-24, (2010)
Shanghai, China.
152. Cold Inactivation and Dissociation of wild type tryptophanase and Its Mutant V59M
Nasrin Qasim, Keren Green, Garik Gadlevsky, Avraham H. Parola and Orna Almog, Annual Israle
Chemical Scociety Meeting, 7-8 Feb. (2011), Tel Aviv, Israel
153. The V15M mutant of E. coli Tryptophanase showed a similar cold lability as the wild type
Keren Green, Nasrin Qasim, Garik Gadlevsky, Avraham H. Parola and Orna Almog, Annual Israle
Chemical Scociety Meeting, 7-8 Feb. (2011), Tel Aviv, Israel
154. Fluorescence for the study of anti-angiogenic drug-mechanium
Abraham H. Parola, Frontiers in artificial photosynthesis; from solar to photodynamics,
March 15, 2011, Ben Gurion University, Beer Sheva, Israel.
155. Spectroscopic methods for detection of impurities in water
Natalia V. Strashnikova, Arcady P. Gershanik, Nona Papiashvili, Rivka Cohen-Luria, Shlomo Mark, Guy
Shilon, Daniel Khankin, Yehoshua Kalisky, Ofra Kalisky and Abraham H. Parola#
presented at SPIE Security + Defense, 19-22 September, Prague, Czech Republic 2011, (paper #8187-16).
156. Crystal Structure of *E. coli* tryptophanase in "semi-holo" form: an insight into allostery of the enzyme
Parola, A. H., Reznov, L., Goldgur, Y., Himanen, J. P., Gdalevsky, G.Y., Kogan, A., Cohen-Luria, R.,
Almog, The 56th Biophysical Society Meeting, San Diego, Feb25-29, 2012.

c) Presentation at a workshop

1. "Probing the active site of adenosine deaminase by a pH responsive novel fluorescent competitive inhibitor"
V.R. Caiolfa, R.A. Agbaria, D. Gill and A.H. Parola
Israel Science Foundation Workshop: Proton Solvation and Proton Mobility, Neve-Ilan, Israel, October 18-23, 1998.
2. "Interaction between Basic Fibroblast Growth Factor and the Anti-angiogenic Drug PNU145156E"
Moreno Zamai, Chithra Hariharan, Dina Pines, Michal Safran, Avner Yayon, Valeria R. Caiolfa, Ehud Pines, Rivka Cohen-Luria, and Abraham H. Parola, Australian Biophysical Chemistry Workshop, Adelaide, Australia, April 6-10, 2010.

d) Seminar presentations at universities and institutions

(i) (USA)

1. "Adenosine Deaminase in Cell Transformation: Biophysical Manifestation of Membrane Dynamics".
Presented at the Department of Biological Chemistry, University of Michigan Medical School, Ann Arbor, Michigan, Feb. 6th, 1990.
2. "Adenosine Deaminase in Cell Transformation: Biophysical Manifestation of Membrane Dynamics".
Presented at the Department of Health, N.Y. Health Dept., Albany, N.Y., Feb. 8th, 1990.
3. "Phase Modulation Spectrofluorometry Reports on the Effect of Time Varying Weak Magnetic Fields on Chick Embryo Fibroblasts".
Presented at the General Electric R&D Center, Schenectady, N.Y., Feb. 9th, 1990.
4. "Adenosine Deaminase in Cell Transformation: Biophysical Manifestation of Membrane Dynamics".
Presented at the Department of Mathematical Biology and Biophysics, National Institutes of Health, Bethesda MD on Feb. 12, 1990.

5. "Adenosine Deaminase in Cell Transformation: Biophysical Manifestation of Membrane Dynamics". Presented at Dupont DeNumerous Department of Molecular Biology, Wilmington Delaware, on Feb. 13, 1990.
6. "Adenosine Deaminase in Cell Transformation: Biophysical Manifestation of Membrane Dynamics". Presented at the Department of Clinical Biochemistry, Albert Einstein Medical School, N.Y., NY., on Feb. 14, 1990.
7. "Phase Modulation Spectrofluorometry Reports on the Effect of Time Varying Weak Magnetic Fields on Chick Embryo Fibroblasts". Presented at the Naval Medical Research Inst. Bethesda MD. on Feb. 23, 1990.
8. "Adenosine Deaminase in Cell Transformation: Biophysical Manifestation of Membrane Dynamics" Presented at the Department of Chemistry and Biochemistry, University of Georgia, Athens, GA, Feb. 27, 1993.
9. "Adenosine Deaminase in Cell Transformation: Biophysical Manifestation of Membrane Dynamics" Presented at the Department of Biophysics Naval Research Laboratories, Washington, D.C., Feb. 24, 1994
10. "Adenosine Deaminase in Cell Transformation: Biophysical Manifestation of Membrane Dynamics" Presented at the Medical Department, Brookhaven National Laboratories, Upton, New York, April 12, 1995.

(ii) Australia

1. "Interaction between basic fibroblast growth factor and the anti-angiogenic drug PNU145156E", University of Sydney, Departmental colloquium, Sept. 2006.

(iii) (Israel)

1. "Chick Embryo Fibroblasts Exposed to Time-Varying Weak Electromagnetic Fields Share Characteristics of Viral Transformed Cells" Department of Electrical Engineering Colloquium, Ben-Gurion University, January, 1990.
2. "The Mechanisms of Interaction Between Time-Varying Weak Magnetic Fields and Cells: Possible Involvement of Membrane Lipid-Protein Interactions and Free Radicals" Department of Chemistry Colloquium, Bar-Ilan University, April, 1991.
3. "Adenosine Deaminase in Cell Transformation: Biophysical Manifestation of Membrane Dynamics" Department of Chemistry, Colloquium, Ben-Gurion University, Oct., 1991.
4. "Adenosine Deaminase in Cell Transformation: Biophysical Manifestation of Membrane Dynamics" Department of Chemistry, Colloquium, Weizmann Institute of Science, March, 1992.
5. "Adenosine Deaminase in Cell Transformation: Biophysical Manifestation of Membrane Dynamics" Department of Biochemistry, Faculty of Health Sciences, Ben-Gurion University, June, 1992.
6. "Cell Transformation by Exposure to Electromagnetic Fields" The first annual symposium of RADIO SCIENCES In Israel, Israel National Committee for Radio Sciences of the National Academy for Sciences and Humanities, Tel Aviv University, December 11-12, 1996.
7. "Adenosine deaminase in cell transformation: Biophysical Manifestation of Membrane Dynamics" Department of Physiology and Pharmacology, Sacler School of Medicine, Tel Aviv University, December 26, 1996.
8. "Bioelectromagnetics: Mechanism of Interaction of Low Frequency, Weak Magnetic Fields with Cells Grown in Culture" Asaf Harofe Hospital, Zrifin, May, 1999.
9. "The Role of Free Radical Pairs and their Corresponding Spin States During Solvent Cage Recombination and Dissociation in Bioelectromagnetic Effects on Cell Proliferation" Rambam Hospital, Haifa, July, 1999.

10. "Nature of Interaction Between Basic Fibroblast Growth Factor and the Antiangiogenic Drug PNU145156E (7,7-(Carbonyl-bis[imino-N-Methyl-4,2-pyrrolicarbonylimino[N-methyl-4,2-pyrrole]-carbonylimino])-bis-(1,3-naphthalene disulfonate))"
Bar-Ilan University, Ramat Gan, May 17, 2000.
11. "The Binding of the Antiangiogenic Drug Suradista to bFGF: Indication for an Induced Fit Mechanism by a Heparin-Like Template"
Life Sciences Day, Faculty of Health Sciences, Ben-Gurion University of the Negev, June 6th, 2000.
12. "Interaction between basic fibroblast growth factor and the anti-angiogenic drug PNU145156E"
The 5th Congress of Medicinal Chemistry Section of the Israeli Chemical Society, March, 30, 2006, The Weizmann Institute of Science, Rehovot.
13. "Radical scavengers suppress low frequency EMF enhanced proliferation in cultured cells and stress effects in higher plants" and
"Reduced Tight Assembly of Trpase Enhances PLP Release Leading to Dissociation and Cold Inactivation"
Dec, 30th, 2008, Departmental Seminar, Department of Medicinal Chemistry, School of Pharmacy, Hadassah Medical School, The Hebrew University, Jerusalem.
14. "Radical scavengers suppress low frequency EMF enhanced proliferation in cultured cells and stress effects in higher plants" and
"Reduced Tight Assembly of Trpase Enhances PLP Release Leading to Dissociation and Cold Inactivation"
Jan 7th, 2009 Departmental Seminar, Department of Biological Chemistry, The University Center at Ariel, Israel.

(iv) (Japan)

1. . "Radical scavengers suppress low frequency EMF enhanced proliferation in cultured cells and stress effects in higher plants" and
"Reduced Tight Assembly of Trpase Enhances PLP Release Leading to Dissociation and Cold Inactivation"
March, 2010, Department of Biochemistry, Osaka Medical College, Takatsuki, Japan
2. " Membrane occupancy-dependent rejuvenation of E. coli DnaA is driven by its conformationally associated oligomerization "
Alexander Aranovich, Shani Braier, Esti Ansbacher, Hanna Rapoport, Rony Granek, **Abraham H. Parola*** and Itzhak Fishov*
March 2010, Department of Pharmacology, Tokyo Medical University, Shinjuku-ku, Tokyo, Japan
3. . "Radical scavengers suppress low frequency EMF enhanced proliferation in cultured cells and stress effects in higher plants" and
"Reduced Tight Assembly of Trpase Enhances PLP Release Leading to Dissociation and Cold Inactivation"
Department of Biochemistry and Molecular Biology, Graduate School of Science and Technology, Saitama University, Saitama, Japan.

Recent third year undergraduate student projects

- 1."Cold inactivation of Escherichia coli tryptophanase and its mutant V59M"
Presented by: Maymon Tal, Department of Life sciences, June, 2009
2. "The role of hydrophobic side chain in cold inactivation of *Escherichia coli* Tryptophanase"
Presented by: Lotem Luski, Medical Laboratory Studies. August, 2009

Patent Disclosure letters

1. "An Improved Fluorescence Polarization Immunoassay"
A.H. Parola and E.E. Uzgiris
July 7, 1981 G.E. Corporate R&D center.

2. "A Method for Increasing Sensitivity of Fluorescence Immunoassay by Selective Irreversible Bleaching of Chromophores in Human Serum"
A.H. Parola and E.E. Uzgiris, Dec. 1, 1980 (RD13214).
3. "Methods for prevention of necrosis."
Nathan I, Parola A and Kasher R., 2010; P-73957-USP.
4. "The regulation of expression and activity of α 1-antitrypsin induces or inhibits autophagic cell death"
Michal Glykman, Ilana Nathan and Abraham H. parola

Research Grants:

- 1974-1976 NIH Postdoctoral Research Grant (\$11,500).
- 1978-1979 Research grant from the Head Scientist, Ministry of Health, Israel.
Granted for research on "The Development of Fluorescent Probes for Studying Platelet Aggregation", to A.H.P. (PI) in collaboration with Dr. A. Dvilansky, Hematology Department, Soroka Medical Center, Beer-Sheva (\$10,000).
- 1977 The Dean of the Faculty of Natural Sciences reserve grant donated to A.H.P. (PI) for development and construction of nanosecond photon-counting of the Physics Department and Prof. D. Chipman of the Biology Department at Ben-Gurion University). This is the first step toward the establishment of an interdisciplinary biophysical spectroscopy laboratory at Ben-Gurion University (\$8,000).
- 1982-1983 Research grant from the Head Scientist, Ministry of Health, Israel. Granted for research on: "Altered membrane protein dynamics in malignant cells: Adenosine deaminase" (\$10,000).
- 1983-1985 Research grant from "Israel Cancer Association". Granted for research on "Development of fluorescent Interferon- γ for the study of its interaction with membrane of target cancer cells". (to A.H.P. (PI), jointly with Dr. I. Nathan, Hematology Department, Soroka Medical School) (\$14,000).
- 1983-1984 Biotechnology-General (\$15,000).
- 1984-1986 Israel Cancer Research Foundation Postdoctoral Fellowship to Dr. M. Weisman, Sponsored by A.H.P. to work on the Adenosine Deaminase project (\$25,000).
- 1984-1987 Leukemia Research Foundation, Chicago ILL. Research Grant on "Altered membrane protein dynamics in leukemia: Adenosine Deaminase" (\$68,000).
- 1984-1985 High Education Commission Grant for Phase Modulation spectrofluorometer, SLM 4800. (\$72,000), (half of it matched by BGU).
- 1989-1992 Office of the Chief of Naval Research, Arlington, Virginia, #NOOO14-89-J-1625: "The Effects of Time-Varying Weak Magnetic Fields on the Function and Dynamics of Membranes of Cells Grown in Culture" (\$165,000).
- 1989 Received from Naval Medical Research Institute the Electromagnetic Incubators (about \$50,000).
- 1991 Research support for Ph.D. students - newcomers from Russia: Support given to Mr. Y. Gorochov (25,000 NIS from BGU; 20,000 NIS from the "Committee of High Education in Israel; \$8,000 from Keren Bat-Sheva De Rothchild)
- 1991 Matching support from the Dean of the Faculty of Natural Sciences for the purpose of acquiring basic research and teaching equipment for the Biophysical Program (\$10,000).
- 1991 A grant from Misrad Haklita (Absorption Ministry) for the Joining of Dr. I. Fishov for two years to a joint research between Profs. A. Zarisky (PI) and A.H. Parola (PI) on: "Chromosome Segregation, Cell Shape and Surface Synthesis" (32,000 + 2,800 NIS).
- 1991-1994 The Charles H. Ravson Basic Research Foundation For Life Sciences, Administered by Israel Academy of Sciences and Humanities #348/91-1: "The Mechanism of Interaction Between Time Varying Weak Electromagnetic Fields and Cells Grown in Culture: Possible Involvement of Membrane Lipid-Protein Interactions and Free Radicals" (\$150,000 for 3 years).
- 1991 A grant for the purchasing of instrumentation for the above research proposal, from the Basic Research Foundation Administered by the Israel Academy of Sciences and Humanities, #348/91 (\$25,000).
- 1992 A grant from Misrad Haklita (Absorption Ministry) for Dr. G. Gdalevsky to join the research between Prof. U. Torchinsky, Y. Kost (PI) and A.H. Parola (PI) on Tryptophanase.

- 1993-1994 A grant from the Vice-President of Research & Development, Ben-Gurion University of the Negev, on : "Quaternary structure-activity correlation in tryptophanase" (\$10,000).
- 1995 Pharmacia-Farmitalia Carlo Erba, Milan, Italy: A research contraction : "Anti-cancer drugs and angiogenesis" (\$40,000).
- 1995-1996 Office of the Chief of Naval Research, Arlington, Virginia, Continuation of #NOO014-96-1-80. "The Effects of Time-Varying Weak Magnetic Fields on the Function and Dynamics of Membranes of Cells Grown in Culture" (\$62,000).
- 1996-1997 "James-Frank Center for Laser-Matter Interaction" (DM 33,000).
- 1998 A grant from the Vice-President of Research & Development, Ben-Gurion University of the Negev, for a joint research between A.H.P. (PI) and Dr. I. Fishov (PI), on : "DnaA-Membrane Binding Interactions: Spectroscopic Characterization" (\$5000).
- 1998 Isareli Academy of Sciences, VATAT (#9027/98): "K-2 Multifrequency phase modulation spectrofluorometer" to A.H.P. (PI) together with Dr. Izchak Fishov (PI) and Prof. Gertz Likhtenstein (PI) (\$112,000 total).
- 1999 A grant from the Vice-President of Research & Development, Ben-Gurion University of the Negev, for a joint research between A.H.P. (CI) and Dr. I. Fishov (PI), on : "DnaA-Membrane Binding Interactions: Spectroscopic Characterization" (\$5000).
- 1999 A grant from the Vice-President of Research & Development, Ben-Gurion University of the Negev, for a joint research between A.H.P. (PI), Prof. Y. Yayon (PI), and Dr. E. Pines (CI) on : "Molecular Interaction Between Basic Fibroblast Growth Factor and Novel Anti-Angiogenic Drugs" (\$5000).
- 1999-2001 "Ministry of Science, Center for Future Technologies", Temed Industrial Park, "Khamama": Development and Design of an Archetype Equipment for the Detection of Poisons and Drugs Utilizing Time Resolved Laser Spectroscopy" (TRLS) (1st yr. - \$40,000, 2nd yr. - \$55,000, 3rd yr. - \$20,000).
- 2002 A grant proposal presented to the Isareli Academy of Sciences by Dr. I. Fishov (PI) and A.H.P. (CI): Involvement of the *E.coli* Sec translocation system in determination of nucleoid morphology and formation of membrane domains. Exceeded the required mark for a grant from the Vice-President of Research & Development, Ben-Gurion University of the Negev.
- 2002-2005 Isareli Academy of Sciences, DnaA-membrane interaction: spectroscopic characterization, A.H.P (PI) & Dr. I. Fishov (CI) (3 years, \$50,000/year) (#519/02).
- 2008-2011 Isareli Water Authorities (Netzivut Hamaim), The Deterction of Poisons in Water Resources for Homeland Security A.H.P (PI) & Dr. Y. Kalisky (CI) from The Nuclear Research Center, Dimona, (3 years, 560,000 Shekels).
- 2011-2014 Isareli Water Authorities (Netzivut Hamaim), The Deterction of Poisons in Water Resources for Homeland Security A.H.P (PI) & Dr. Y. Kalisky (CI) from The Nuclear Research Center, Dimona and Shlomo Mark from Samy Shamuun College (3 years extension, 360,000 Shekels).

Research Interests:

1. Protein-protein interactions: effect of cold inactivation on the quaternary structure of tryptophanase.
2. Bacterial cell cycle and the transertion model: DnaA and membrane domains.
3. Programmed cell death (apoptosis): Bax induced cytochrome c efflux from isolated mitochondria (together with Prof. I. Nathan); membrane dynamics in apoptosis vs. necrosis; autophagy
4. Free radicals and bioelectromagnetics.
5. Membrane dynamic changes associated with viral, chemical and electromagnetic cell transformation and malignancy.
6. Protein-drug interaction: fibroblast growth factor - 2 (bFGF) and the antiangiogenic drug - Suradista
7. Membrane dynamics, cellular signaling and ciliary motion.
8. Adenosine deaminase (ADA) and adenosine deaminase complexing protein (ADCP = CD26 = DPPIV): in cell transformation: biophysical manifestation of membrane dynamics; reconstitution in liposomes: effect of lipid composition, cholesterol and phase transition on ADA activity - spectroscopic deciphering of passive modulation, site accessibility and hydrophobic mismatching models.
9. Homeoviscous adaptation, growth rate and morphogenesis in bacteria.

10. Platelet activation and aggregation.
11. Diagnostic developments:
 - Fluorescence immunoassays;
 - Assay for endothelin converting enzymes;
 - Non-invasive determination of fetal lung maturity (together with Dr. J. Molcho);
 - Development and design of archetype equipment for the detection of drugs utilizing time resolved laser spectroscopy; 3D and synchronous fluorescence spectra, for the detection of poisons in water resources.
 - Fluorescence assay for quantitative Interferon- γ determination in sera.
12. Spectrofluorometry is the major method used in the above: single photon correlation and multifrequency phase modulation for lifetime, anisotropy decay and energy-transfer studies; fluorescent affinity labels; fluorescent probes.
13. Photochemistry:
 - a. Hydrogen vs. electron transfer in photoreductions.
 - b. Triplet charge-transfer complexes.
 - c. Energy wastage in photochemical processes.
 - d. Solar energy utilization and charge-transfer complexes; U.V. absorbers.

Collaborations

Prof. Y. Tal, Head Virology Dept., Soroka Medical School (ADA plasmids and normal vs. transformed cell transfection; effect of weak, low frequency electromagnetic fields on normal and transformed cells - studies with the MVM virus)

Prof. A. Dvilansky and Prof. I. Nathan, Hematology, Soroka Medical School (γ -interferon, lymphokines, cell differentiation, haematopoietic cells, blood platelets and chronic lymphocytic leukemia; anti-cancer drugs and angiogenesis, apoptosis)

Dr. S. Aaronson, NCI at NIH (magnetic fields and cell transformation)

Prof. A. Zaritsky and Dr. I. Fishov, Dept. of Life Sciences (homeoviscous adaptation in *E. coli*, DnaA and cell cycle, chromosome segregation, cell shapes and surface synthesis)

Dr. Molcho, Dept. of Electrical and Computer Engineering and Prof. Liberman & Prof. Mazor, Gynecology, Soroka Medical School (non-invasive diagnostic determination of fetal lung maturity)

Prof. Y. Sharoni, Clinical Biochemistry, Soroka Medical School (labeling and binding of ^{125}I -ADA to chick embryo fibroblasts, normal and RSV transformed)

Prof. Z. Priel, Chemistry Department (cilia cell membrane dynamics and secondary signaling)

Prof. D. Gill, Physics Department (Spectroscopy of ϵ -Adenosine)

Prof. Y. Torchinsky, Biotechnology Center (Tryptophanase - quaternary structure - SAR)

Prof. R. Phillips, Chemistry and Biochemistry Dept., Univ. of Georgia, Athens Georgia (point mutations of Tryptophanase)

Prof. F. Prendergast, Dept of Biochem. & Molec. Biol., Mayo Clinic, Rochester MN (Time and phase resolved fluorescence of tryptophanase)

Prof. A. Muhlrud, Hadassah Dental School and Dr. M. Werber, Biotechnology General LTD (Myosin Sub. fragment-1)

Dr. Valeria Caiolfa, Pharmacia-Farmitalia Carlo-Erba, Milan, Italy (Endothelin; anticancer drugs; angiogenesis)

Prof. R. Shuker, Physics Department (Nd/Yag mode-locked dye laser)

Prof. Z. Rosenwaks, Physics Department (photobleaching, phosphorescence of ϵ -Ado)

Prof. E. Gratton, Laboratory of Fluorescence Dynamics, Univ. of Illinois, Urbana, Ill. (time and phase resolved fluorescence spectroscopy)

Prof. A. Liboff, Dept. of Physics Univ. of Oakland, MI and Prof. W.D. Winters, Dept. of Microbiology, Univ. of Texas Hlth Sci Ctr, San Antonio, Texas (transformed cells and electromagnetic fields).

Dr. E. Pines, Chemistry Department (Ti/Sapphire laser pumped by Millennia X diode pumped laser for photon correlation spectroscopy)

Prof. G. Likhtenstein, Chemistry Department (cis-trans isomerization of stilbenes and membrane dynamics)

Dr. R. Cohen-Luria, senior Research Associate.

Dr. J. Kuhn, Biology Department, Technion, Haifa (Quaternary structure in *Escherichia coli* Tryptophanase: point mutated Tnase from *E. coli* and *Proteus vulgaris*)

Dr. N. Strashnikova, working on: "Detection of Poisons and Drugs Utilizing Time Resolved Laser Spectroscopy" and in charge of the multifrequency phase modulation K2 spectrofluorometer.

Prof. V. Sominsky, working on: Detection of Poisons and Drugs Utilizing Time Resolved Laser Spectroscopy.

Prof. A. Yayon, Molecular Cell Biology, Weizmann Inst., Rehovot (Molecular Interaction Between Basic Fibroblast Growth Factor and Novel Anti-Angiogenic Drugs; bFGF mutants are provided by AY)

Dr. Y. Goldgur, Chemistry Department (proteins X-ray crystallography)

Dr. O. Almog, S-A-R in Tnase (X-ray crystallography).

Prof. V. Khodorkovsky, S-A-R in Tnase (organic synthesis).

Dr. Yehoshua Kalisky—KAMAG The Institute of Nuclear Research, Dimona (detection of poisons in water resources—homeland security)

Dr. Gonen Ashkenazy – Chemistry Department (synthesis of inhibitors to tryptophanase)

Dr. Michael Meijler – Chemistry Department (quorum sensing and combinatorial synthesis of inhibitors to tryptophanase)

Prof. Boaz Shaanan – Department of Life Sciences (quaternary structure of DnaA)

Prof. Roni Granek – Department of Biotechnology (quaternary structure of DnaA).

Prof. Hanna Rappoport -- Department of Biotechnology (secondary structure of DnaA)