Dr. Eduardo Bárzana García
Secretario del Consejo Universitario
P r e s e n t e

La Comisión del Mérito Universitario, en su sesión efectuada el miércoles 26 de febrero del presente, conoció la propuesta que presenta el Consejo Técnico de la Facultad de Química, para designar Profesora Extraordinaria a la Dra. Ada Yonath. Después de analizar la propuesta y escuchar los argumentos del Dr. Jorge Manuel Vázquez Ramos, Director de la Facultad de Química, esta Comisión tomó el siguiente:

Acuerdo CMU-03/14.- Emitir una recomendación favorable sobre la propuesta que presenta el Consejo Técnico de la Facultad de Química para designar a la Dra. Ada Yonath como Profesora Extraordinaria, ya que cumple cabalmente con los requisitos que señala la Legislación Universitaria y en atención al carácter excepcional de su labor docente y de investigación en Bioquímica.

La Dra. Ada Yonath, estudió Química en la Universidad Hebrea de Jerusalén, continuó con la Maestría en Bioquímica y, posteriormente el Doctorado en cristalografía de rayos X en el Instituto Weizmann de Ciencias, Israel. También, realizó estancias posdoctorales en Carnegie Mellon en Pittsburgh y en el Instituto Tecnológico de Massachusetts. Sus importantes investigaciones científicas han sido plasmadas en más de 150 publicaciones en revistas arbitradas. Además, es la cuarta mujer en la historia en recibir un Premio Nobel de Química.

Ha sido pionera en el uso de la técnica de crio-bio-cristalografía, para cristalizar el ribosoma. Dicha técnica consiste en la exposición de cristales de ribosomas a temperaturas de -185°C, lo que permitió minimizar la desintegración de la estructura cristalina debida al bombardeo de rayos X. Con este estudio detonó la investigación sobre la estructura del ribosoma en varios laboratorios a nivel mundial.

Una consecuencia importante de sus estudios, fue la co-cristalización de ribosomas bacterianos formando complejos con antibióticos, los cuales se unen en sitios muy cercanos a los centros funcionales del ribosoma, donde bloquean la síntesis de proteínas. Los descubrimientos de la Dra. Ada, fueron publicados en la revista Nature y han permitido entender los mecanismos moleculares de cómo los antibióticos actúan sobre las bacterias patógenas.

Por la relevancia de su trabajo ha sido distinguida con diversos doctorados *Honoris Causa* otorgados por las Universidades de Oxford y de Cambridge, Reino Unido; la Universidad de Toulouse, Francia; la Universidad de Oslo, Noruega. Cabe destacar que es miembro activo de la Academia Internacional de Astronáutica, la Academia Nacional de Ciencias de Estados Unidos, la Academia Coreana de Ciencia y Tecnología y de la Organización Europea de Biología Molecular, entre otras.

La Dra. Ada ha sido merecedora de diversos premios entre los que destacan: el Premio Nobel de Química, el L'Oréal-UNESCO Award for Women in Science, el Albert Einstein World Award of Science, el Louisa Gross Horwitz Prize y el Paul Ehrlich and Ludwig Darmstaedter Prize, por mencionar algunos.

Por su excepcional labor docente y de investigación en Bioquímica para dar a conocer la función y estructura del ribosoma, la Comisión del Mérito Universitario acordó recomendar la designación de la Dra. Ada Yonath como Profesora Extraordinaria, para colaborar en la Facultad de Química y en otras entidades académicas universitarias.

A t e n t a m e n t e
"POR MI RAZA HABLARÁ EL ESPÍRITU"
Ciudad Universitaria, D.F., a 10 de marzo de 2014
El Presidente de la Comisión

Mtro. José Arturo Fernández Pedrero

HSF/lvc/agc

VNIVERSIDAD NACIONAL
AVTÓNOMA DE
MEXICO

FACULTAD DE QUÍMICA
SECRETARÍA GENERAL

Oficio FQ/SG/020/14

Q. Hortensia Santiago Fragoso
Coordinadora de Vinculación con el
Consejo Universitario
Presente.

Por este conducto me permito hacer llegar a usted diferentes documentos asociados a la solicitud que presenta esta Facultad para nombrar como Profesora Extraordinaria a la Dra. Ada Yonath Chair.

En tal sentido y por instrucciones del Dr. Jorge Vázquez Ramos, Director de esta Facultad, hago a usted la petición de que dichos documentos sean ingresados a las instancias que correspondan del H. Consejo Universitario, de manera que nuestro máximo órgano colegiado nos pueda dar respuesta a la brevedad posible.

Los documentos a que hice referencia anteriormente, son:

- Carta Invitación del Sr. Rector a la Dra. Ada Yonath para recibir el nombramiento de Profesor Extraordinario
- Carta de aceptación firmada por la Dra. Ada Yonath
- Acuerdo del H. Consejo Técnico número AG/15/1/14
- Propuesta del Plan de Trabajo
- Carta de apoyo del H. Consejo Técnico al nombramiento
- Carta de Apoyo del Consejo Asesor de Investigación al nombramiento
- Semblanza de la Dra. Ada Yonath
- Curriculum Vitae de la Dra. Ada Yonath

Sin otro particular por el momento, le agradezco su amable atención y aprovecho la ocasión para enviarle un cordial saludo.

A t e n t a m e n t e,
"POR MI RAZA HABLARÁ EL ESPÍRITU"
Cd. Universitaria, D.F., a 12 de febrero de 2014.
El Secretario

QFB. Raúl Garza Velasco

U.N.A.M.
COORDINACIÓN DE VINCULACIÓN CON EL CONSEJO UNIVERSITARIO
18 FEB
RECIBIDO
FIRMA
HORA 19:17

VNIVERSIDAD NACIONAL
AVTNOMA DE
MEXICO

RECTORÍA

Torre de Rectoría, 6°. Piso
04510 Ciudad Universitaria, D.F.
Tels. 5622-1280 5622-1281 Fax 5550-8772

Mexico City, 15 January, 2014

Dr. Ada Yonath
Nobel Prize in Chemistry
Weizmann Institute
Israel

Dear Dr. Ada Yonath:

I have been informed by Dr. Jorge Vázquez, Director of the Faculty of Chemistry of the *Universidad Nacional Autónoma de México* (UNAM), about your willingness to create the "Ada Yonath Chair". In order to do so, it would correspond to the Technical Council of this Faculty to present your candidacy as Extraordinary Professor to the University Council, the university's maximum authority, to recommend the creation of this Chair, which includes a salary and travelling expenses.

For UNAM it would be the greatest honor to count with such distinguished academician within the faculty members.

My best regards,

Dr. José Narro
Rector

Ccp. Dr. Eduardo Bárzana García. Secretario General
Dr. Jorge Vázquez Ramos. Director de la Facultad de Química

WEIZMANN INSTITUTE OF SCIENCE

Ada Yonath, Professor
The Martin S. and Helen Kimmel Professor of Structural Biology
Director, The Helen and Milton A. Kimmelman Center for Biomolecular Structure and Assembly

Tel: +972 8 934 3028
Fax: +972 8 934 4154/4136
E-mail: Ada.yonath@weizmann.ac.il
Department of Structural Biology
The Weizmann Institute of Science
Rehovot 76100, Israel
http://www.weizmann.ac.il/sb/faculty_pages/Yonath/home.html

19 January 2014

Jorge Vázquez Ramos, D. Phil
Director
School of Chemistry
National University of Mexico

Dear Jorge,

Many thanks for offering me the title "UNAM Extraordinary Visiting Professor", which I gladly accept.

I feel honored and privileged to be able to visit UNAM at least once a year for interacting with the undergraduate and postgraduate students, by lecturing, participating in scientific and technical workshops, etc.

I find your suggestion to collaborate with UNAM highly acceptable and am looking forward to it.

With best regards,

Ada Yonath

VNIVERSIDAD NACIONAL
AVTONOMA DE
MEXICO

FACULTAD DE QUÍMICA
H. CONSEJO TÉCNICO
ACTA 1/14
Acuerdo AG/15/1/14

Dr. Jorge Manuel Vázquez Ramos
Director de la Facultad
Presente

El H. Consejo Técnico, en su sesión ordinaria del 23 de enero del año en curso, tomó el siguiente:

Acuerdo AG/15/1/14 Proponer como Profesor Extraordinario a la Dra. Ada Yonath, Premio Nobel de Química 2009, dado que este órgano colegiado conoció sobre su voluntad en el sentido de recibir esta distinción por parte de la Universidad Nacional Autónoma de México y, consecuentemente, el Consejo Técnico se pronuncia ampliamente en favor de este nombramiento, ya que la Dra. Yonath, durante una visita realizada en 2012 a la Facultad de Química, dejó constancia de su altísima calidad académica, su gran calidad humana, su especial vocación por la docencia y su evidente cariño hacia la juventud.

Atentamente
"POR MI RAZA HABLARÁ EL ESPÍRITU"
Ciudad Universitaria, D.F., a 29 de enero de 2014.
El Secretario

QFB. Raúl Garza Velasco

PROPUESTA: Dra. Ada Yonath, Profesora Extraordinaria de la UNAM

Funciones asociadas a la cátedra:

Conferencias a estudiantes tanto de nivel licenciatura como de posgrado (una semestral).

Taller de discusión con estudiantes de todos los niveles sobre ciencia, educación e investigación (uno al año, una mañana).

Seminarios de Investigación en temáticas predefinidas (uno al año).

Talleres de discusión y asesoría a grupos de investigación de la Facultad de Química y de otras entidades universitarias.

Apoyo en la organización de un Coloquio Bianual sobre temáticas de interés con Premios Nobel e investigadores del mayor nivel mundial.

Ciudad Universitaria, México, D.F. 04510
Tels: (525) 616-2604 y (525) 622-3690
Fax:(525) 616-1868
jorman@unam.mx

VNIVERSIDAD NACIONAL
AVTNOMA DE
MEXICO

FACULTAD DE QUÍMICA
H. CONSEJO TÉCNICO

AL H. CONSEJO UNIVERSITARIO:

El Consejo Técnico de la Facultad de Química conoció sobre la voluntad que ha mostrado la Dra. Ada Yonath, Premio Nobel de Química 2009, de ser nombrada Profesora Extraordinaria por la Universidad Nacional Autónoma de México.

En tal sentido, este órgano colegiado no puede sino pronunciarse ampliamente en favor de este nombramiento que mucho realzaría el nombre de nuestra *Alma Mater* y de nuestra Facultad.

Durante una visita realizada en 2012 a la Facultad de Química, la Dra. Yonath dejó ver no sólo su extraordinaria calidad académica, sino también su gran calidad humana, su especial vocación por la docencia y su notable cariño hacia la juventud.

El Consejo Técnico se siente muy honrado por la aceptación de la Dra. Yonath y confía en que nuestro máximo órgano de autoridad validará este nombramiento.

A t e n t a m e n t e
"POR MI RAZA HABLARÁ EL ESPÍRITU"
Ciudad Universitaria, D.F., a 4 de febrero de 2014.

El H. Consejo Técnico

Ada Gutiérrez A.

Facultad de Química
Secretaría Académica de Investigación y Posgrado

H. Consejo Universitario

El Consejo Asesor de Investigación de la Facultad de Química, manifiesta su voluntad y apoyo para que la Dra. Ada Yonath, Premio Nobel de Química 2009, sea nombrada Profesora Extraordinaria por la Universidad Nacional Autónoma de México, por lo que este órgano colegiado no puede sino pronunciarse ampliamente en favor de este nombramiento que mucho realza el nombre de nuestra *Alma Mater* y de nuestra Facultad.

La Dra. Yonath han visitado y dictado conferencias magistrales en la Facultad de Química, donde ha mostrado su notable calidad académica y humana, así como su enorme vocación y compromiso por la docencia, pero sobre todo, su gran interés por estimular en la carrera científica a nuestros jóvenes estudiantes. Nos sentimos muy honrados por esta distinción y confiamos en que nuestro máximo órgano de autoridad validará este nombramiento.

"POR MI RAZA HABLARÁ EL ESPIRÍTU"
Cd. Universitaria D.F., a 6 de febrero de 2014

Consejo Asesor de Investigación

Dr. Felipe Cruz García
Secretario Académico de Investigación y Posgrado

Dr. Carlos González Rivera
Representante del Departamento de Ingeniería Metalúrgica

Dr. Luis Cedeño Caero
Representante del Departamento de Ingeniería Química

Dr. José Fausto Rivero Cruz
Representante del Departamento de Farmacia

Teléfonos
5622 3168 • 5622 3899 ext. 44460 44461
saipfqui@unam.mx

Dr. Eleazar Martínez Barajas
Representante del Departamento de Bioquímica

Dra. Norah Y. Barba Behrens
Representante del Departamento de Química Inorgánica y Nuclear

Dr. Miguel Costas Basín
Representante del Departamento de Fisicoquímica

Dra. Ma. del Pilar Cañizares Martínez
Representante del Departamento de Química Analítica

Dr. Guillermo Aguilar Osorio
Representante del Departamento de Alimentos y Biotecnología

García Ortega Héctor.
Dr. Héctor García Ortega
Representante del Departamento de Química Orgánica

Dr. A. Salvador Granados Aguilar
Representante del Departamento de Matemáticas

Dr. Víctor Manuel Luna Pabello
Representante del Departamento de Biología

Semblanza de la Dra. Ada Yonath

Ada Yonath estudió Química en la Universidad Hebrea de Jerusalén (1959-1962) y más tarde una maestría en Bioquímica, para posteriormente realizar estudios de doctorado en cristalografía de rayos X en el Instituto Weizmann (1964-1968). Realizó estancias posdoctorales en el Instituto Carnegie Mellon en Pittsburgh (1969) y en el Instituto Tecnológico de Massachusetts (1970), en USA. En 2009 se convirtió en la cuarta mujer en la historia y la primera israelí en recibir el Premio Nobel de Química, galardón que compartió con los estadounidenses Venkatraman Ramakrishnan y Thomas Steitz. Esta distinción les fue otorgada por sus estudios sobre la estructura tridimensional y la función del ribosoma, un complejo supramolecular donde ocurre la síntesis de proteínas en las células.

Para lograr cristalizar el ribosoma, Ada Yonath desarrolló la técnica de crio-bio-cristalografía, la cual consistió en la exposición de cristales de ribosomas a temperaturas de -185°C, lo que permitió minimizar la desintegración de la estructura cristalina debida al bombardeo de rayos X. Esta técnica detonó el estudio de la estructura del ribosoma en un número importante de laboratorios en el mundo. Gracias a esta metodología en los años 2000 y 2001, Ada publicó la primera estructura tridimensional del ribosoma bacteriano.

Una derivación de sus estudios, de la mayor relevancia para la humanidad, fue la co-cristalización de ribosomas bacterianos formando complejos con antibióticos, los cuales se unen en sitios muy cercanos a los centros funcionales del ribosomas, donde bloquean la síntesis de proteínas. La Dra. Yonath publicó estos resultados en la prestigiosa revista *Nature*, descubrimientos que han permitido entender los mecanismos moleculares de cómo los antibióticos actúan sobre bacterias patógenas. Posteriores investigaciones se han publicado en revistas de gran relevancia internacional como *Science, Nature* y *PNAS*.

En la actualidad, Ada es directora del Biomolecular Structure Centre en el Instituto Weizmann en Israel, donde es también profesora del Departamento de Biología estructural. Su intenso trabajo de investigación le ha hecho acreedora de relevantes múltiples doctorados Honoris Causa, entre ellos los otorgados por las Universidades de Hamburgo (Alemania), de Toulouse (Francia), de Oslo (Noruega), de Nueva York (EEUU), de Fujou (China), de la Universidad Hebrea (Israel), de la Universidad Abierta

(Israel), de la Escuela de Medicina Mount Sinai (EEUU). Es miembro activo de las academias Nacional de Ciencias de Estados Unidos, Israelí de las Ciencias y Humanidades, Europea de Ciencias y Artes, Americana de Ciencias y Artes, Coreana de Ciencia y Tecnología, Internacional de Astronáutica e Internacional de Microbiología, además de la Organización Europea de Biología Molecular.

ADA YONATH, CURRICULUM VITAE

Education

1959-1962 B.Sc. Chemistry, Hebrew University, Jerusalem, Israel
1962-1964 M.Sc. Biochemistry, Hebrew University, Jerusalem, Israel
1964-1968 Ph.D. X-ray crystallography, Weizmann Institute (WIS), Israel
1969 Post Doctoral Fellow, Mellon Inst. Pittsburgh, Pa., USA
1970 Post Doctoral Fellow, Dept. of Chemistry, MIT, Cambridge, MA, USA
Professional Experience
1989- Director, the Kimmelman Center for Biomolecular Assemblies, WIS
1988- Professor, Dept. of Structural Biology, WIS
1988-2004 Director, the Mazer Center for Structural Biology, WIS
1986-2004 Head, Max-Planck Research Unit, Hamburg, Germany
1992-1994 Chairperson, Dept. of Structural Biology, WIS
1989-1990 Chairperson, Dept. of Structural Chemistry, WIS
1984-1988 Associate Prof., Dept. of Structural Chemistry, WIS
1974-1983 Senior Scientist, Dept. of Structural Chemistry, WIS
1979-1983 Visiting Prof., Max-Planck Inst. for Mol. Genetics, Berlin, Germany
1978 summer Visiting Prof., Universidad Austral de Chile, Valdivia, Chile
1977-1978 Visiting Scientist, Biophysics, University of Chicago, IL, USA
1974 Visiting Scientist, Dental School, University of Alabama, USA
1971-1977 Consultant: The Open University, Israel
1971-1978 Lecturer, Tel-Aviv & Ben Gurion Uni, Israel
1970-1974 Scientist, Dept. of Chemistry, WIS

Member of the USA National Academy of Sciences
Member of the Israeli Academy of Sciences and Humanities
Member of the European Academy of Sciences and Art
Member of the Leopoldina – the German Academy for Sciences
Member of the European Molecular Biology Organization (EMBO)
Member of the American Academy of Art and Sciences
Member of the Korean Academy of Sciences and Technology
Member of the International Academy of Astronautics (IAA)
Member of the International Academy for Microbiology
Fellow of the UK Royal Society for Chemistry

Academic Honors:

2014 – Honorary Doctorate Baptist University, Hong Kong
2013 – Honorary Doctorate Cambridge University, UK
2013 – Honorary Doctorate Patras University, Greece
2012 – Honorary Doctorate Mount Sinai Medical University, NYC
2012 – Honorary Doctorate Hamburg University
2012 – Honorary Doctorate Toulouse University
2012– Honorary Guest Medical University, Baku, Azerbaijan
2011– Honorary Doctorate Oslo University
2011 – Honorary Doctorate NYU, USA
2011 – Honorary Doctorate Hebrew University

2011 – Honorary Doctorate Fujou University, China
2011 – Honorary Doctorate Open University, Israel
2010 – Eminent Scientists Award of JSPS (Japan Society for promotion of Science)
2010– Honorary Supreme Prof of KEK, Photon Factory, Tsukuba, Japan
2010 – Honorary Doctorate, Bar-Ilan Uni., Israel
2008 – Honorary Doctorate, Oxford University, UK
2003 – Honorary Doctorate, Tel-Aviv Uni. Israel
2002 – Honorary Doctorate, Ben-Gurion Uni., Israel
2001 – Honorary Member of the Israeli Crystallographic Society

Awards

2012 – Prakash S. Datta me
dal, FEBS, Sevilla 2012
2012 – Academia Sinica Award, Taiwan
2011 – Cite of Florence Award
2011– President of Panama Award
2011– Maria Sklodowska-Curie Medal of the Polish Chemical Society
2011 – Gold Medal of Distinction from India's Prime Minister
2011 – Erna Hamburger Prize EFEL-WISH Foundation, Lausanne
2010 – Wilhelm-Exner-Medaille, Vienna, Austria
2009 – The Golden DESY Pin, Hamburg, Germany
2009 – Nobel Prize for Chemistry, Stockholm, Sweden
2009 – Erice Prize for Peace, Rome, the Vatican
2008 – Albert Einstein World Award of science, Princeton University, NJ, USA.
2008 – The UNESCO-L'Oréal Award for European Woman in Life science, Paris
2008 – The George E. Palade Gold Medal, Wayne State U. Medical School, Detroit, USA
2008 – The Linus Pauling Gold Medal – Stanford, USA
2007 – The American Chemical Society Luncheon in honor the Wolf Prize, Boston, USA
2007 – The Wolf Prize, Jerusalem, Israel
2007 – The Paul Ehrlich-Ludwig Darmstaedter Medal, Germany
2006 – The Otto Loewy Lecture of the David Herzog Fund Medal, Graz, Austria
2006 – The Israel Prime Minister EMET award
2006 – The Rothschild Prize for Life Sciences
2005 – Louisa Gross Horwitz Prize of Columbia University, NYC
2005 – The Fritz Lipmann Lectureship, the German Biochemical Society, Berlin
2005 – The Datta Lectureship Award, IUBMB, Budapest Hungary
2004 – The Massry Foundation Internationa

Award and Medal for Ribosome Research

2004 – The Paul Karrer Gold Medal, Zurich, Switzerland
2003 – The Anfinsen Prize of the Protein Society, Boston, USA
2003 – Medal of distinction, Israeli Chemical Society
2002 – Harvey Prize for Natural Sciences, the Technion, Israel
2002 – The Israel Prize for Chemical Research
2002 – The F.A. Cotton Medal, the USA Chemical Society, USA
2000 – National Institutes of Health (NIH) Certificate of Distinction, USA
2000 – The Kilby International Award, USA

2000 – The First European Crystallography Prize, Nancy, France
1990 – Kolthof Award for outstanding research in Chemistry, Haifa, Israel
1989 – Holder of Martin A. Kimmel Professorial Chair, Weizmann Inst., Israel
1974 – Somach Sachs Award for Outstanding Work in Biochemistry
1967 – Miphal Hapais Prize for Outstanding Graduate Studies

Membership in National and International Committees:

The Scientific Advisory Board of the
UN Secretary-General, Mr. Ban Ki-moon.
The EC President's Science and Technology Advisory Council
The Center of Excellence (I-CORE), Israel
The Davidson Institute for Scientific Education
The RNA Institute, Albany, New York
The National Supreme Committee for High Education, MALAG 2002
The National Advisory Committee for Vision of Science, Israel
The Advisory Committee Life 2000, Academy of Finland
International Committees & Principal Users Groups at Synchrotron Radiation ESRF, France; APS/Argonne Nat
Lab, USA and of Cornell High Energy Synchrotron Source (CHESS), USA
The Israeli Academy Committees for Synchrotron Radiation, Microgravity and Bikura (First) Fund The advisory committee of the Austrian Academy of Sciences (Biophysics and Nanosystems)

Publications

L. Huang, M. Krupkin, A. Bashan, A. Yonath, and L. Massa **Protoribosome by quantum kernel energy method**. *Proc Natl Acad Sci U S A,* (2013) 110, 37, 14900-5

· Yonath, A. **Ribosomes: Ribozymes that Survived Evolution Pressures but Is Paralyzed by Tiny Antibiotics**. M.A. Carrondo, and P. Spadon, eds. In: NATO Science for Peace and Security Series A: Chemistry and Biology, Macromolecular Crystallography (2012) pp. 195-208.

· G.E. Fox, Q. Tran and A. Yonath. **An exit cavity was crucial to the polymerase activity of the early ribosome.** Astrobiology (2012) 12, 57-60

· H. Rozenberg, and A. Yonath. **Le rayonnement synchrotron et le ribosome**. L'Actualité Chimique (2011) 356-357

· A. Yonath. **Merging disciplines: chemical bases of life processes are revealed by X-ray crystallography**. Sci China Chem (2011) 54, 2021-2023

· M. Krupkin, D. Matzov, H.Tang, M. Metz, R. Kalaora, M. J. Belousoff, E. Zimmerman, A. Bashan and A.Yonath, **A vestige of a prebiotic bonding machine is functioning within the contemporary ribosome.** Philos Trans R Soc Lond B Biol Sci (2011) 366, 2972-2978

· A. Bashan and A.Yonath, **Ribosome crystallography: From early evolution to contemporary medical** In Ribosomes Structure, Function, and Dynamics, M.V. Rodnina, W. Wintermeyer, and R. Green, eds. (New York, Springer), .pp. 3-18 (2011)

· A.Yonath, **X-ray crystallography at the heart of life science.** Curr Opin Struct Biol (2011) 21, 622-626

· M. J. Belousoff, T. Shapira, A. Bashan, E. Zimmerman, H. Rozenberg, K. Arakawa, H. Kinashi and A. Yonath, **Crystal structure of the synergistic antibiotic pair, lankamycin and lankacidin, in complex with the large ribosomal subunit.** Proc Natl Acad Sci U S A, (2011) 108, 2717-2722

· M.J. Belousoff, C. Davidovich, A. Bashan and A. Yonath. **On the development towards the modern world: A plausible role of uncoded peptides in the RNA world. In Origins of life and evolution of biospheres** K. Ruiz-Mirazo, and P.L. Luisi, eds. (Springer), (2010) pp. 415-419.

· A. Bashan, E. Zimmerman, M. J. Belousoff, H. Rozenberg, C. Davidovich, I. Wekselman, T. Shapira, M. Krupkin and A. Yonath, **The ribosome as drug target: lessons from 3D structures**. Isr Chem Soc, (2010) 25, 10-18

· A. Bashan, M. J. Belousoff, C. Davidovich and A. Yonath, **Linking the RNA world to modern life: The proto-ribosome conception**. Orig Life Evol Biosph, (2010) 40, 425-429

· A. Yonath, **Polar bears, antibiotics, and the evolving ribosome (Nobel Lecture)**. Angew Chem Int Ed Engl, (2010) 49, 4341-4354

· C. Davidovich, M. J. Belousoff, I. Wekselman, T. Shapira, M. Krupkin, E. Zimmerman, A. Bashan, and A. Yonath, **The proto-ribosome: an ancient nano-machine for peptide bond formation.** Isr J Chem (2010) 50, 29-35

· M. J. Belousoff, C. Davidovich, E. Zimmerman, Y. Caspi, I. Wekselman, L. Rozenszajn, T. Shapira, O.Sade-Falk, L. Taha, A. Bashan, M. S. Weiss and A. Yonath, **Ancient machinery embedded in the contemporary ribosome**, Biochem Soc Trans, (2010) 38, 422-427

· T. Auerbach, I. Mermershtain, C. Davidovich, A. Bashan, M. Belousoff, I. Wekselman, E. Zimmerman, L. Xiong, D. Klepacki, K. Arakawa, H. Kinashi,, A. S. Mankin, and A. Yonath, **The structure of ribosome-lankacidin complex reveals ribosomal sites for synergistic antibiotics**. Proc Natl Acad Sci U S A, 107, 1983-1988 (2010).

· L. Massa, C.F. Matta, A. Yonath and J. Karle, **Quantum Transition State for Peptide Bond Formation in the Ribosome**. In Quantum Biochemistry, C.F. Matta, ed. (Weinheim Germany, Wiley-VCH Verlag GmbH & Co. KGaA), pp. 16, 501-515 (2010)

· C. Davidovich, M. Belousoff, A. Bashan, and A. Yonath, **The evolving ribosome: from non-coded peptide bond formation to sophisticated translation machinery**. Res Microbiol 160, 487-492 (2009)

· A. Yonath, **Large facilities and the evolving ribosome, the cellular machine for genetic-code translation**. J R Soc Interface 6 Suppl 5, S575-585 (2009)

· A. Yonath, **Can structures lead to better drugs? Lessons from ribosome research.** In: NATO Science for Peace and Security Series A: Chemistry and Biology, From Molecules to Medicines, J. L. Sussman, and P. Spadon, eds. (Springer), pp. 231-251(2009)

· A. Yonath, **Ribosome: an ancient cellular nano-machine for genetic code translation In Biophysics and the challenges of emerging threats**, In: NATO Science for Peace and Security Series B: Physics and Biophysics, Biophysics and the challenges of emerging threats, J. D. Puglisi, ed. (Springer) pp. 121-155 (2009)

· T. Auerbach, I. Mermershtain, A. Bashan, C. Davidovich, H. Rosenberg, D. H. Sherman, and A. Yonath, **Structural basis for the antibacterial activity of the 12-membered-ring mono-sugar macrolide methymycin,** Biotechnolog, 84, 24-35 (2009)

· E. Zimmerman and A. Yonath, **Biological Implications of the Ribosome's Stunning Stereochemistry**, ChemBioChem 10, 63-72 (2009)

· C. Davidovich, A. Bashan and A. Yonath, **Structural basis for cross-resistance to ribosomal PTC antibiotics,** Proc Natl Acad Sci U S A 105, 20665-70 (2008)

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