**CURRICULUM VITAE**

Nissim Garti, PhD

**Profesional Appointments**

PROFESSOR EMERITUS 2015

FULL PROFESSOR 2009-2015

 Ratner Family Chair of Chemistry 2010-2015

*Applied Chemistry, Jerusalem; Israel Department of Chemistry; The Hebrew University of Jerusalem*

PROFESSOR 1984–1990

*Applied Chemistry; The Hebrew University of Jerusalem*

SENIOR LECTURER 1980–1983

*Applied Chemistry; Jerusalem, Israel; The Hebrew University of Jerusalem*

LECTURER 1977–1980

*Applied Chemistry; Jerusalem, Israel; Casali Institute of Applied Chemistry; The Hebrew University of Jerusalem*

INSTRUCTOR 1977

*Casali Institute of Applied Chemistry; The Hebrew University of Jerusalem*

**EDUCATION**

**ACADEMIC APPOINTMENTS AND POSITIONS**

 Head of the Casali Institute of Applied Chemistry ( second term) 2012- 2016

Member of the Board of Governors and Member of the Management Committee 2011–2014

(Board of Directors) of the Hebrew University (HU)

Chairman of the Innovation Forum of the Israeli Food Association 2013–2016

Member **of the Board of Directors and Board of Governors of Hadassah Academic Institute, 2009–present**

Member of the HU Committee for Academic Programs Jerusalem, Israel 2013–2014

Member of the Governing Council of the Hebrew University of Jerusalem 2011–2014

Member of the Executive Committee of the Hebrew University of Jerusalem 2010–2014

**Incumbent of the Ratner Family Chair of Chemistry 2010- present**

Visiting Professor – Sabbatical leave at AgroParisTech, Massy, Paris, France 2010 (June–September)

Visiting Professor – University of Florence, Florence and University of Urbino, Orbino, Italy 2010 (October)

Visiting Professor – ETH, Zurich, Switzerland 2010 (November)

Visiting Professor, Trent University, Peterborough, Canada 2010-2011 (Dec-January)

Senior Officer and Visiting Professor – Sabbatical Leave, Faculty of Engineering, Columbia University, NY, USA 2006

Senior Visiting Scientist – Sabbatical Leave, Department of Engineering, University of Stony Brook, 2006

(SUNY), Stony Brook, Long Island, NY, USA

Scientific Consultant and Visiting Professor – Sabbatical Leave at Archer Daniel Midland (ADM), 2004

Research Center, Decatur, IL, USA

Visiting Professor and Sabbatical Leave at the Department of Chemical Engineering Oct 2003–Feb. 2004

and Biotechnology University of Hiroshima, Hiroshima, Japan

Senior Consultant and Visiting Scientist – Archer Daniels Midland (ADM), Research Center, Decatur, IL, USA 2003–present

Visiting Professor – Department of Chemical Engineering and Applied Chemistry, State University of 2001

New York (SUNY) at Stony Brook, Long Island, NY, USA.

Senior Visiting Scientist, Sabbatical Leave at Nestle Central Research Labs, Nestec, Lausanne, Switzerland 1998–1999

Member – Board of Directors of the Holon Academic Institute of Technology, Holon, Israel 1997–2008

Member – Advisory Board of Directors of the New York Polytechnic University, NY, NY, USA 1998–2000

Head – Graduate School of Applied Science and Technology, The Hebrew University of Jerusalem 1990–1993

Sabbatical leave, Visiting Senior Scientist, Eastman Kodak Research Laboratories, Rochester, NY, USA 1985–1986

Visiting Scientist, The Japanese Society for the Promotion of Scientists, University of Hiroshima, Japan 1984 (summer)

Visiting Scientist, University of Pretoria and the South Africa "Wheat Board", Pretoria, South Africa 1983, 1986 (summers)

**Member of editorial boards**

 MEMBER EDITORIAL BOARD OF FOOD & FUNCTION - THE ROYAL ACADEMY OF CHEMISTRY, CAMBRIDGE, ENGLAND 2011–present

 ASSOCIATE EDITOR OF THE JOURNAL FOOD & FUNCTION 2011–2014

ASSOCIATE EDITOR OF THE JOURNAL OF AMERICAN OIL CHEMISTS SOCIETY (JAOCS) 2008–2012

MEMBER OF THE EDITORIAL BOARD OF JOURNAL OF DISPERSION SCIENCE & TECHNOLOGY 2002-2006

MEMBER OF THE EDITORIAL BOARD OF COLLOIDS AND INTERFACES (B) 2008-2010

REGIONAL EDITOR AND EDITOR OF THE APPLICATION SECTION OF CURRENT OPINIONS. 2004–2009t

MEMBER OF THE ADVISORY BOARD OF THE JOURNAL OF CHEMISTRY AND MATERIALS SCIENCE 1998–2004

MEMBER OF THE ADVISORY COMMITTEE OF JOURNAL OF COLLOID AND AND MATERIALS SCIENCE 1996–2000

MEMBER OF THE ADVISORY BOARD OF THE JOURNAL OF DISPERSION SCIENCE AND TECHNOLOGY 1986–2000

MEMBER OF THE ADVISORY BOARD OF THE BRAZILIAN JOURNAL OF CHEMISTRY 1994–1998

MEMBER OF THE ADVISORY BOARD OF FOOD MICROSTRUCTURE 1992–1996

**Industrial Achievements**

**2013- Establishment of the start-up of**  Lyotropic Delivery Systems (LDS)- Novel Lyotropic Liquid Crystals (LLC) and nanodomains technology for drug delivery.

2016 **-** New set of products under the name of Hygia produced by Ananda Scientific (Colorado, USA) - Softgels , instant powders, and liquid formulation of CBD for fast adsorption and enhanced bioavalability .



2012- 2015 – Novel rich in DHA Omega-3 Fatty Acids for Enhanced Delivery by Enzymatic interfacial trans esterfication. The new product is the only supplement in Israel that contains real, pure and concentrated DHA. Product sold using the name of AXOM3**.**



 **2003-2008 NutraLease,** Founder of a new start-up - NutraLease - 'New Vehicles for Improved Bioavailability of Nutraceuticals' (with Yissum and ATI).



 **2000-2001 - Ganaspati-India,** Bought the technology for the production of Lysolecithin by enzymatic process in microemulsion as microreactor.

 **1998-2000- FenuPure-Adumim and Origin,** New Hydrocolloid for Lowering Glucose Levels for Diabetics'. New nutraceutical and food supplement extracted from fenugreek seeds. Sales started June 2000 by Adumim Chemicals and Origin.



 **1995- Green Clouds,** Founder of a new start-up company "Green Clouds" Ltd., for the development and manufacture of Electric Foggers, based on ultrasound technology for rupture of droplets.

**1995- Lycored,** Co-developer of new method of extraction and formulation of lycopene from tomatoes.



**1994**- **1997 - FDG-Odyssey**, Establisher of a new company, FDG (Fenugreek gum), together with Yissum and Odyssey Ltd., Boston, for R&D and production of Fenugreek gum to remove cholesterol from liquid foods and reduce sugar levels in humans.

**1994-1995,** Developer (with S. Ezrahi and A. Aserin) of "new fire resistant hydraulic fluids based on microemulsions", (evaluated with great success by IDF).

**1993, Developed new-epoxy-silicone,** water-borne, non-stick, lubricious coatings and signed an agreement with Decora Manufacturing for the production of these coatings.

**1993,** Developer (with A. Aserin) of "new cleaning system based on detergents solubilized within microemulsions" to replace trichloroethane (Pazclean 12). Process developed for Paz Oil Co.

**1993,** Developer of a new method for "removal of cholesterol from butter and milk-cream by natural occurring absorbents".



**1993- Dipol,** Founder of a new company, " Dipol.", for the development and manufacture of TDS (Time Domain Dielectric Spectrometer) for structure characterization if dispersed particles and droplets, and moisture matters.

**1991,** Signed three agreements with Eastman Chemicals, Kingsport, Tennessee, USA. for: (1) production of SSL of the products, (2) baking premixes in the USA and, (3) mutual marketing (Adumim and Eastman) in Europe.

**1991,** Developer of new "self-cleaning lubricating rifle oil" for the Israel Defense Forces. In production by Paz Oil Co. Ltd. (1991).

**1991,** Developer of new "water soluble cutting and lubricious oil" for the use by the Israel Defense Forces (manufactured by Paz Oil Co., Ltd.).

**1990,** Developer of new "water soluble mineral oils" and "forging oils" for Paz Oil Co. Ltd., Israel. Commercial formulations launched on the market (1992).

**1988-1990,** Developer of several new emulsion formulations: Water in oil emulsion - pan release - Adolease Oil in water - orange oil cloudy - Adocloud Wax-resin emulsion - Adocol (All manufactured by Adumim Chemicals).

**1988,** Developer of "Adolak" new technology for the encapsulation of unsaturated fatty acids by calcium salts. A new product designed to bypass Rumenous of lactating cows and to supply additional energy in order to increase milk production of cows after calving. Process

transferred to Koffolk - Animal Feed, Beer Sheva.



**1987,** Developed unique "new technique to determine levels of cholesterol in blood", process developed for IDL Ltd., Jerusalem (1988).

**1985-present,** The SSL technology was transferred to 14 companies whose construction of manufacturing plants for implementation of this technology was done under my direction, supervision and advise:

**1979- Adumin Food Ingredients, and Adumim Foods- Mishor Adumin , Israel**

**1985** - Mexico - Guadalajara, Arancia-Polibasicos

**1986** - South Africa - Johannesburg, Epic Oil;

 **1987-** Peru - Lima, Alpamayo**.**

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 **1988** - U.S.A. – Atlanta, USA , International Specialty Foods, Ltd.

**1988** - Brazil - Rio de Janeiro, Anpal **ltd**

**1988** - Argentina – Rio Tersero, Cordoba, Alpha ltd

**1988** - **Ecuador** - Quayaquil, Oleica ,Ltd

**1989** - USA. - North Carolina, ISP**, ltd**

**1990** - Colombia - Cali, Maizena

 **1992** - Serbia - Zrenjanin, D'jamant ,Ltd

**1993** - Chile- Santiago, Molypac, Ltd

**1995** - India, New Delhi, Bajaj – Anaccord, Ltd

**1979-2010,** Chief Scientist and establisher of Adumim Chemicals Ltd., a plant constructed on the basis of a unique original process developed by N. Garti and E. Pinthus (student) to produce sodium stearoyl lactylate (SSL), an advanced surfactant, bread improver and food conditioner. The plant produces at present over 10 additional products most of them based on innovative technologies developed at the Casali labs (annual sales of $6-8,000,000).

**CONSULTING POSITIONS**

 **Neoprol- Integra- Novel Intravenous delivery vehicles 2018- present**

 **Straus Salads - Karmiel. Israel 2019**

 **VICUT – Novel Device to Detect and Remove Flat Column Cancer Cells 2017-2018**

**Ingredion (National Starch) (New Jersey, USA) 2012-2013**

General Mills, USA – Israel Branch in Jerusalem. 2012–2014

Safta Gamilla Cosmetics, Tefen, Israel 2012–present

Zoar Dalia , Israel 2013- present

PureN Neutraceuticals, Tel Aviv, Israel 2011–2013

**Scientific Consultant to KRAFT (presently Mondelez), Saclay, France, Reading UK 2011–2013**

Felco-Ice creams, Rechovot, Israel 2013

BARAKE Foods, Alon Tavor, Israel 2010– present

Scientific Consultant to Marine Cosmetics and Buthai Cosmetics, Israel 2010–2011

**BioPhore Intrernational, Ltd. – USA-Israel-Japan 2008**

**Scientific Consultant to PepsiCo Inc. (Texas) 2008–2010**

[Soglowek Foods](http://www.soglowek.co.il/Text.asp?id=54), Israel 2007–2010

**Scientific Advisor to the** [**Regional Israeli Court House on Firms Disputes**](http://www.justice.gov.il/MOJHeb/NetzivutNEW/Psika/Avoda/) **2009–present**

**Scientific Advisor to** [**Archer-Daniels-Midland**](http://www.admworld.com/) **(ADM – the Supermarket of the World), Decatur, IL, USA 2009–2013**

Consultant to [Milouban](http://www.milouban.com/), Producers of Cotton Linters and Fibers, Haifa, Israel 2002–2005

**Founder, CEO and Member of the Board of Directors of** [**NutraLease**](http://www.nutralease.com/index.asp) **2001–2009**

Chief Scientist and Member of the Board of [Mempile](http://www.mempile.com/), Israel- Japan 3D Storage of Data 2001–2004

Chief Consultant to Shemen Edible Oil Industries, the largest vegetable oil producer in Israel, Haifa, Israel 2000–2010

Consultant to [Medisim-Health Devices](http://www.medisim-ltd.com/), Jerusalem, Israel 2000–2002

Consultant to Tet-Beit and [Vita Ltd.](http://www.vita.co.il/ENG/the_vision.phtml), Fats, Oils, and Margarine Producers 2000–2001

**Consultant, “**[**LycoRed Natural Products**](http://www.lycored.com/web/content/)**” Israel (producers of Lycopene and natural products) 1999–2011**

Advisor to [Enzymotec Biocatalysts](http://www.enzymotec.com/), Migdal Ha'Emek, Israel 1999–2000

Scientific Advisor to [Nestle](http://www.nestle.com/) (Nestec) Research Center, Lausanne, Switzerland 1998–2004

Advisory Board Member of the [Polytechnic University, Brooklyn](http://www.poly.edu/), New York, USA 1998–2001

Senior Advisor to [The Galilee Society for Health Research and Services](http://www.gal-soc.org/en/), Elabon, Israel 1997–1999

Scientific Advisor to the General Managing Director of the [Ministry of Industry and Commerce, Israel](http://www.tamas.gov.il/) 1997–1999

Chief Scientist and member of the board, Dipole Corp. 1995–1998

Consultant, [Quest International](http://www.questinc.com/), Naarden, Holland 1995–1998

Consultant, [Unilever Corp.](http://www.unilever.com/), Vlaardingen, Holland 1996

Chief Scientist and member of the board, [Green Clouds Ltd.](http://www.greenclouds.com/) 1996

Consultant on crystallization and polymorphis of drugs, [Teva Pharmaceuticals](http://www.tevapharm.com/), Israel 1993–2003

**Consultant, Scientific Steering Committee – Decora Manufacturing, Fort Edward, NY, USA. 1991–1996**

**Consultant, South Bakels Ltd., Johannesburg, South Africa 1986**

**Consultant and Visiting Senior Scientist – Research Labs,** [**Eastman Kodak**](http://www.kodak.com/)**, Rochester, NY 1985–1998**

[Consultant, member of the Steering Scientific Committee of International Diagnostic Labs (IDL) 1985–1987](http://www.bestfoods.com/)

Visiting Scientist, University of Pretoria and the South African Wheat Board, Pretoria, South Africa 1983–1986

[Consultant, Premier Milling and Epic Oil Ltd., Johannesburg, South Africa](http://www.up.ac.za/)  **1981–1982**