2023 Curriculum Vitae

Rony Seger, Ph.D.

Department of Biological Regulation
Weizmann Institute of Science
Rehovot 7610001, Israel

PERSONAL DETAILS:

Date and place of birth	:	June 26th, 1956, Beer Sheva, Israel.
Marital status	:	Married, two children.
Military service	:	1973-1977, final rank - Major.
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EDUCATION

1969 - 1973	:	Makif Gimel High School, Beer Sheva, Israel.
1977 - 1980	:	Ben Gurion University, Beer Sheva, Israel. B.Sc. in Biology, with distinction.
1980 - 1983	:	Dept. of Cell Biology, the Weizmann Institute of Science, Rehovot, Israel. M.Sc. on the subject: "Construction of defined nucleosome from DNA of prokaryotic origin". Under the supervision of Prof. G. Yagil.
1983 – 1989	:	Dept. of Chemical Immunology, the Weizmann Institute of Science, Rehovot Israel. Ph.D. on the subject: "A Kinase Splitting Membranal Proteinase". Under the supervision of Prof. S. Shaltiel.
1989 - 1994	:	Dept. of Pharmacology and Howard Hughes Medical Institute, University of Washington, Seattle, Washington, USA. Postdoc studies on “Identification and characterization of MEK1”. The research group of Prof. Edwin G. Krebs, Nobel Prize Laureate.

EMPLOYMENT HISTORY

1994 - 2000	:	Senior Investigator, Dept. of Biological Regulation, the Weizmann Institute of Science, Rehovot, Israel.
2000 – 2007	:	Associate Professor, Dept. of Biological Regulation, the Weizmann Institute of Science, Rehovot, Israel.
2001 - 2002	:	Chief Scientific Officer of Keryx Biopharmacuticals (on Sabbatical).

2007 - : Full Professor, Dept. of Biological Regulation that changed its name to Dept. of Immunology and Regenerative Biology, the Weizmann Institute of Science, Rehovot, Israel.

2011 - 2017 : Head, Dept. of Biological Regulation, the Weizmann Institute of Science, Rehovot, Israel.

ACADEMIC POSITIONS

1994 - 1997 : Scientific Advisor in charge of the Karin Kupcinet International Science School for Summer Students, the Weizmann Institute of Science.

1995 – 1999 : Member of the stirring committee of the Garden of science within the Weizmann Institute of Science

1996 - 2001 : Member of the Teaching committee of the Feinberg Graduate School of the Weizmann Institute of Science.

2000 - 2011 : Member of the Aharon Katzir Center's advisory committee.

2001 - 2009 : AfCS/Nature, editor of MEK's molecular pages.

2001 - 2003 : Editor of a book on "Methods in MAPK Signaling".

2001 - 2004 : Member of the Institutional Senior Scientist Appointments and Promotions committee (V-9).

2002-2004 : Editor of a book on "Methods in MAPK Signaling".

2002 - 2010 : Member and Chairperson of the Signal Transduction Grant committee of The German-Israel Foundation (GIF).

2002 - 2014 : Member/chairman of Israel Science Foundation (ISF) grant committees.

2006 - 2011 : Member of the Pasteur-Weizmann granting committee.

2007 -2008 : Member of several Israel-USA binational (BSF) grant committees.

2008 - 2015 : Member of the Editorial Board of "Molecular Endocrinology".

2008 - 2016 : Associate editor of "International Journal of Cell Biology".

2008 - 2011 : Member of the Institutional Staff Scientist Appointments and Promotions committee.

2008 - 2009 : Member of the Institutional Appointments and Promotions committee - Senior Research Fellow (V5).

2008 - 2010 : Editor of a book on "Methods in MAPK Signaling 2".

2009 - 2013 : Member of the Institutional Appointments and Promotions committee - Professorial Ranks (V12).

2009 - 2018 : Member of the Faculty of 1000.

2010 - 2013	:	Member of Life Sciences Professorial Promotions Committee (LSV7).
2011 - 2017	:	Head of the Willner Family Center for Vascular Biology.
2011 - 2012	:	Head of the Aharon Katzir Center.
2011 - 2013	:	Editorial board member of Encyclopedia of Signaling Molecules.
2012 - 2017	:	Member of the editorial board of J. Biol. Chem.
2013 -	:	Head of the HTS-INCPM user committee
2013 - 2018	:	Adviser of the national Tnuda center of non-ionizing radiation.
2014 - 2022	:	Editorial board member of Frontiers in Radiation and Health
2016 - 2017	:	Head of grant committees for the Ministry of Science, Technology and Space: Radiation-related and Indian-Israel collaboration on big datasets.
2017 - 2017	:	Head of the Life Sciences Professorial Promotions Committee (LSV7).
2019 -	:	Editorial board member of "International Journal of Molecular Sciences".
2022 -	:	Editorial board member of "Kinases and Phosphatases".

SCIENTIFIC ADVISORY BOARDS

1999 - 2002	:	Alidar LTD, Israel.
2004 - 2009	:	Targeted Molecular Diagnostics (TMD), USA.
2007 - 2008	:	Calisra Ventures, USA-Israel
2009 - 2015	:	Targeted Molecular Diagnostics (TMD)-Quintiles, USA.
2013 - 2017	:	National University of Singapore (NUS)-Hebrew University (HUJ) Cellular and molecular mechanisms of inflammation, Singapore.

PRIZES AND AWARDS

1993	:	Alon Fellowship.
1995	:	H.R. Lindner prize from the Israeli Endocrine Society.
1996	:	Prize from "Keren Naftali" Israel.
1996	:	Incumbent of the Samuel and Isabela Friedman career development chair.
1998	:	Young investigator award from the ISN/ESN.
2002	:	CaP-Cure award on the role of Lyn and MAPKs in prostate cancer.
2002	:	Teva establisher research prize, Israel.
2005	:	Incumbent of the Yale S. Lewine and Ella Miller Lewine professorial chair for cancer research.

2014 : Invitation as special guest lecturer by the students of Wake Forest University.

2023 : Honorary Chairmen of Cell Signaling and Molecular Biology (CSMB) Conference, Valencia Spain.

PATENTS

1. Seger, R., Seger, D., Ahn N. G., and Krebs, E.G.: Human signal transduction MAPK kinase. US Patent 5,663,314, 1997.
2. Maik-Rachline, G., and Seger, R.: Variants of pigment epithelium derived factor and uses thereof. US patent 8,173,591, 2012. Other countries as well.
3. Chuderland, D., and Seger, R.: Identification of a novel nuclear translocation signal (NTS). WO 2008/104979. US Patent 8,748,371, 2014.
4. Plotnikov, A and Seger, R.: ERK-derived peptides and uses, WO 2015/040609, US Patent 20,160,340,655, 2016. 2017-0233702-A1.
5. Chuderland, D., and Seger, R.: Nuclear Targeting Sequences. US patent 9,315,547. 2016; and US patent 10,000771, 2018.
6. Zehorai, E., and Seger, R.: Use of inhibitory peptides for the treatment of inflammatory diseases. US Patent 9,714,268, 2017; and US Patent 10,246,488, 2019.
7. Rand, A., Flores, K., Wainstein, E., Samuels, Y. and Seger, R. Combination therapy for the treatment of cancer. International patent number: US 11,471,504 B2
8. Flores, K, Galdeano, C., Barril X., Seger, R., Inhibitors of ERK nuclear translocation Filed November 2019.

TEACHING

SUPERVISION OF STUDENTS AND POSTDOCS

1994 - 1997 : Nurel L. Levi, Postdoc. Activation of MAPK cascades by GnRH.

1994-1996 : Ayelet Avraham Ph.D. student (HU) with Ben-Neriah. JNK in T cells.

1995 - 2000 : Hadara Rubinfeld, Ph.D. student. ERK translocation into the nucleus.

1995 - 1997 : Hanna Jaaro, M.Sc. student. Translocation of MEK into the nucleus.

1995 - 2002 : Yuval Yung, M.Sc./Ph.D. MAPK in oncogenic transformation.

1997 - 1998 : Michael Silverman, Postdoc. CPG16 downregulation of MAPKs.

1996 - 2003 : Zhong Yao, M.Sc./Ph.D. Translocation of MEK into the nucleus.

1997 - 2001 : Outhiriaradjou Benard, Postdoc. Activation of MAPKs by GnRH.

1999 - 2003 : Ziv Raviv, Ph.D. student. MEK5 in growth factor signaling.

1999 - 2001 : Ido Wolf, Basic MD + MSc from TAU. Nuclear ERK translocation.
2000 - 2004 : Sarah Kraus, Postdoc. GnRH signaling.
2000 - 2002 : Daniel Abersold, Postdoc. Activation of ERK1b by radiation.
2000 - 2002 : Inbal Flash, M.Sc. student. Structure-function relationships of MEK1.
2000 - 2002 : Goldie Marmor, M.Sc. student. ERK2-interacting proteins.
2001 - 2002 : Nirit Yarom, Basic for MD. Human ERK1b.
2002 - 2008 : Yoav Shaul, Ph.D./Postdoc. Human ERK1b.
2002 - 2009 : Sarit Bendetz-Nezer, Ph.D./Postdoc MEK regulation.
2002 - 2003 : Eyal Kalie, M.Sc. student. MEK5 localization and regulation.
2002 - 2006 : Galia Maik-Rachline, Ph.D./Postdoc. Characterization of PEDF.
2003 - 2008 : Dana Chuderland, Ph.D. student. ERK nuclear translocation.
2004 - 2005 : Yana Butenko, M.Sc. student. GnRH to PKB signaling.
2004 - 2015 : Einav Cohen, M.Sc./Ph.D. with Prof. Naim, Taste signaling.
2004 - 2006 : Seunghee Yoon, Postdoc. Calcium and ERKs.
2005 - 2008 : Ido Ben Ami, Ph.D. student. Granulosa signaling.
2005 - 2006 : Michal Reiss, M.Sc. student. Subcellular localization of MEK.
2005 – 2007 : Leah Armon, M.Sc. student with A. Amsterdam. Granulosa signaling.
2006 - 2010 : Alexander Konson, Postdoc. PEDF phosphorylation.
2006 - 2009 : Gilad Gibor, Postdoc. ERK1c function.
2007 - 2010 : Sunila Pradeep, Postdoc. PEDF phosphorylation.
2007 - 2008 : Nir Rubins, Postdoc. PEDF phosphorylation.
2008 - 2014 : Eldar Zehorai, Ph.D./Postdoc. JNK/p38 translocation to the nucleus.
2008 - 2010 : Yonat Keshet, M.Sc student. PS-GAP in AKT signaling.
2008 - 2011 : Zhong Yao, Postdoc. GqPCR-induced apoptosis.
2009 - 2012 : Alex Plotnikov, Postdoc. ERK translocation to the nucleus.
2009 - 2013 : Shiri Procaccia , Ph.D. student. MEK-AKT interaction.
2009 - 2017 : Inbal Wortzel, Ph.D./Postdoc. ERK1c substrates and regulation.
2010 - 2011 : Walter D'aconto, Postdoc. PEDF in osteosarcoma.
2011 - 2012 : Smadar Levi, Postdoc. The receptor for PEDF.
2011 - 2012 : Amir Schajnovitz, Postdoc. Studies on the PP2A switch.
2011 - 2015 : Einat Kapri-Pardes, Postdoc. Activation of MAPKs by ELF radiation.
2012 - 2015 : Guy Nadel, Postdoc. The PP2A switch.
2012 - 2017 : Karen Flores, Ph.D. student. Nuclear ERK translocation in cancer.
2012 - 2014 : Shira Herlich-Wexler. PhD student (stopped), MEK in CFC.
2013 - 2015 : Denise Berti, Postdoc. Nuclear translocation of PKC and MAPKs.
2014 - 2016 : Merav Ordan, Postdoc. MEK interactions.
2015 - 2020 : Ehud Wainstein, Ph.D. student. MAPKs in cancer and inflammation.

2016 -2017	:	Izel-Yitzhak Cohen – PhD student (stopped)
2016 - 2018	:	Avital Hacohen, M.Sc. student. ERK in stem cells.
2018 -	:	Suresh Yadav, Postdoc. Importin7 structure-function.
2018 - 2019	:	Bryan Krief, MSc student - Université Paris Descartes. Smad-Importin7.
2022 -	:	Satish Kumar, PostDoc - Importin7 structure-function.

COURSES GIVEN

July 1983, 1984	:	Head Counselor in the Dr. Bessy F. Lawrence International Summer Science Institute in the Weizmann Institute of Science.
Spring 1995	:	Seminar on "MAPK signaling cascades", Feinberg Graduate School of the Weizmann Institute of Science.
Spring 1996	:	Laboratory course on "Advanced methods in signaling research", Feinberg Graduate School of the Weizmann Institute of Science.
Spring 1997	:	Laboratory course on "Advanced methods in signaling research", Feinberg Graduate School of the Weizmann Institute of Science.
Winter 1998	:	Frontal course on "Signal Transduction", Feinberg Graduate School of the Weizmann Institute of Science.
Summer 1998	:	EMBO practical course on signal transduction.
Spring 1999	:	Laboratory course on " Advanced methods in signaling research", in the Feinberg Graduate School of the Weizmann Institute of Science.
Winter 2000	:	Frontal course on "Signal transduction", Feinberg Graduate School of the Weizmann Institute of Science.
Spring 2000	:	Laboratory course on "Advanced methods in signaling research", Feinberg Graduate School of the Weizmann Institute of Science.
Winter 2001	:	Lectures in the course "Molecular basis of growth control", Feinberg Graduate School of the Weizmann Institute of Science.
Spring 2002	:	Lectures in the course "Signal Transduction", Feinberg Graduate School of the Weizmann Institute of Science.
Winter 2003	:	Lectures in the course "Molecular basis of growth control", Feinberg Graduate School of the Weizmann Institute of Science.
Spring 2003	:	Laboratory course on " Advanced methods in signaling research", Feinberg Graduate School of the Weizmann Institute of Science.
Winter 2005	:	Frontal course on "Signal transduction", Feinberg Graduate School of the Weizmann Institute of Science.
Spring 2007	:	Laboratory course on " Advanced methods in signaling research", Feinberg Graduate School of the Weizmann Institute of Science.

Winter 2008	:	Frontal course on "Signal transduction", Feinberg Graduate School of the Weizmann Institute of Science.
Winter 2010	:	Frontal course on "Signal transduction", Feinberg Graduate School of the Weizmann Institute of Science.
Winter 2012	:	Frontal course on "Signal transduction", Feinberg Graduate School of the Weizmann Institute of Science.
Spring 2015	:	Signaling lectures in the course “Colon Cancer” at Tel Aviv University.
Spring 2016	:	Frontal course on "Signal transduction", Feinberg Graduate School of the Weizmann Institute of Science.
Fall 2018	:	Signaling lectures in the course “Colon Cancer” at Tel Aviv University.

CONFERENCES – ORGANIZATION, CHAIRMANSHIP, AND TALKS

ORGANIZATION OF CONFERENCES

1994 - 1994	:	Departmental Conference in Kiryat Anavim (October, 1994).
1996 - 1996	:	Treasurer of the Yoav Citri Memorial Conference on “The molecular basis of brain function”.
1996 -1997	:	Member of the organizing committee of the special conference on "Signal transduction in health and disease (STADY I)”.
1995 - 1998	:	Treasurer of the 10th International Conference on "Second messengers and phosphoproteins".
1998 - 1998	:	organizer of the Departmental Retreat in Zichron Yaakov.
1998 - 1998	:	EMBO practical course on "Signal transduction".
1998 - 2000	:	Member of the organizing committee of the special conference on "Signal transduction in health and disease (STADY 2000)".
1999 - 2000	:	Vice Chairperson of a special meeting, "Proteins that talk: how signals are heard" A Symposium on protein phosphorylation and degradation to honor Prof. Shmuel Shlatiel on the occasion of his 65th birthday.
1999 - 2000	:	A member of the organizing committee of the Life Science-Open Day, the Weizmann Institute of Science.
2001 - 2002	:	Member of the organizing committee of the special conference on "Signal transduction in health and disease (STADY III)”.
2002 - 2003	:	Chairman of the organizing committee of the special conference on “Regulation of biological systems by kinases and protreinases.” A symposium in memory of Prof. Shmuel Shaltiel.
2003 - 2003	:	Member of the organizing committee of the Korea-Israel meeting 2003.

2003 - 2007	:	Member of the steering committee of the Festival of Science in the Weizmann Institute of Science.
2004 – 2005	:	Member of the organizing committee of the special conference on "Signal transduction in health and disease (STADY IV)".
2006 - 2008	:	Member of the organizing committee of the special conference on "Signal transduction in health and disease (STADY V)".
2007 - 2009	:	Member of the organizing committee of "Spatial 2009 workshop" Maaele Hachmisha, Israel.
2008 - 2008	:	Treasurer of the special meeting : "System Biology of Cancer, Signaling Networks Modeling & Clinical Implications".
2008 - 2009	:	Chairman of the meeting "Phospholipid signaling and transport" in memory of Prof. Moti Liscovitch.
2009 - 2009	:	Member of the organizing committee of the Weizmann Institute 60th anniversary open day.
2009 - 2011	:	Member of the organizing committee of "Nuclear Trafficking" 11/2011, Maaele Hachamisha, Israel.
2010 - 2012	:	Co-chair of the organizing committee: "The Biochemistry, Biology and Pathology of MAP Kinases" 10/2012, Maale Hachamisha, Israel.
2011 - 2014	:	Treasurer of the 2014 FISEB/Ilanit, Eilat, Israel.
2012 - 2013	:	Brazil-Weizmann meetings. First on Angiogenesis in Sao-Paulo, Brazil and the second on Signal Transduction, Rehovot Israel.
2012 - 2014	:	Member of the organizing committee of: "The Biochemistry, Biology and Pathology of MAP Kinases" 9/2014, Vilnius, Lithuania.
2013 - 2014	:	Member of the organizing committee of "The First Nancy and Stephen Grand Workshop on Proteomics, Metabolomics and Cancer Drug Discovery" 1/2014 Rehovot, Israel.
2014 – 2014	:	Chair of the Weizmann/FAPESP Brazil workshop October 2014.
2015 – 2016	:	Member of the organizing committee of "The Second Nancy and Stephen Grand workshop on core technologies of the INCPM 4/2016 Rehovot, Israel.
2016 - 2017	:	Member of the organizing committee on Signaling and Endomembranes, Sardinia, Italy, 2017.
2017 - 2018	:	Head of organizing committee on "Fertilization" to honor Tsafriri's 80th birthday, Rehovot Israel.
2018 - 2019	:	Head of organizing committee on "Signal Transduction in Health and Disease", Rehovot, Israel.

2019 - 2020 : Member of the organizing committee of 4th Zavalkoff McGill-Weizmann Symposium

2019 - 2020 : Member of organizing committee of iCancer 2020, 4th International Conference and expo; September 2020 Baltimore.

2021 : Organizer of the Israeli MAPK meeting at the Weizmann Institute of Science.

2022 : Organizer of the Israeli MAPK meeting at the Weizmann Institute of Science.

2022-2023 : Member of organizing committee of the 7th Cancer World Congress, Palermo Sicily.

LECTURES AND CHAIRMANSHIP IN MEETINGS (partial list)

Apr. 1994 : Special conference: phosphorylation - structural aspects. Rehovot, Israel: Studying the role of MAPKK using point mutations.

Oct. 1995 : 7th meeting of the European Neuroendocrine Association. Jerusalem, Israel: Differential activation of MAPK signaling cascades - role in the determination of extracellular signal specificity.

Nov. 1997 : International symposium on signal transduction in health and disease, (STADY I). Tel Aviv, Israel: Mechanism of Jun kinase and MAP kinase Activation by GnRH.

Nov. 1998 : Chairman and speaker: the 10th International conference on second messengers & phosphoproteins. Jerusalem, Israel: Mechanism of Jun kinase and MAP kinase activation by GnRH.

Aug. 1999 : 17th ISN/ESN joint meeting. Berlin, Germany: Mechanism of Jun kinase and MAP kinase activation by GnRH.

Oct. 1999 : 6th IUBMB meeting. Seoul, Korea: Translocation of ERK into the nucleus.

Oct. 1999 : International meeting on stress proteins. Kwangju, Korea: The role of stress activated protein kinases in G-protein signaling.

June 2000 : The 17th Pasteur-Weizmann symposium. The Weizmann Institute of Science, Israel: Activation of MAPKs by GnRH.

Sept. 2000 : 25th Anniversary symposium on Hormones and Cell Regulation. Mont Sainte Odile, France: The cytoplasmic-nuclear translocation of ERK.

Sept. 2000 : International symposium on signal transduction in health and disease (STADY II). Tel Aviv, Israel: The subcellular localization of ERK2: implications for the mechanisms of ERK regulation.

May 2001 : Plenary lecture at the departmental day of the Department of Biology. Ben Gurion University, Beer Sheva, Israel: Subcellular localization of kinases in the regulation of signaling cascades.

May 2002 : International IRA-science talks on therapeutic drug targets. Boston, USA: Protein kinases as therapeutic drug targets.

Aug. 2002 : 2ND Korea-Israel joint symposium on biotechnology. Seoul, Korea: ERK1b - a novel ERK isoform with a unique mode of regulation.

Oct. 2002 : International symposium on signaling in health and disease (STADY III). Tel Aviv, Israel: The Kinace technology platform.

Jan. 2003 : The 18th Pasteur-Weizmann meeting. Strasbourg, France: MAPK signaling cascades: regulation by subcellular localization.

May 2003 : Plenary lecture at the annual Korean Biochemical Society meeting. Seoul, Korea: MAPK signaling cascades: regulation by localization.

June 2003 : The joint meeting of the Israeli Societies of Cell Biology and Developmental Biology. Eilat, Israel: Induction of apoptosis in prostate cancer cell lines, role of the PI3K-PKB signaling pathway.

July 2004 : Plenary lecture at the annual meeting of the Israeli Society of Nephrology and Hypertension. Zefat, Israel: MAPK signaling in health and disease.

Oct. 2004 : Chairman and lecturer at the 7th international symposium on molecular medicine. Crete, Greece: ERK1b, ERK1c and ERK1d, a family of alternative spliced forms of ERK1.

Jan. 2005 : Plenary lecture at the annual meeting of the Israeli Society of Pathology. Tel Aviv, Israel: MAPK signaling in health and disease.

Feb. 2005 : FISEB 2005, the signaling network session. Eilat, Israel: ERK1b, ERK1c and ERK1d, a family of alternative spliced forms of ERK1.

Oct. 2005 : International symposium “Signaling in health and disease” (STADY-IV). Tel Aviv, Israel: A family of alternative spliced forms of ERK1.

Feb. 2006 : Keynote speaker at the GIF meeting on endocrinology. Ein Bokek, Israel: GnRH-a induced apoptosis of prostate cancer.

April 2006 : Annual ASBMB meeting, signaling symposium. San Francisco CA: Calcium involvement in activation of ERK5 through Lad-MEKK2.

March 2007 : EMBO FEBS/ISF Workshop on System dynamics of intracellular communication. Ma’ale Hachamisha, Israel: Alternatively spliced forms expend the specificity of the ERK signaling cascade.

April 2007 : LSI-Weizmann Institute of Science Joint Symposium, Ann Arbor, MI, USA: A novel nuclear translocation signal (NTS) - a general

mechanism for stimulus-dependent nuclear shuttling.

July 2007 : Receptor Tyrosine Kinases meeting, Hinxton, England: Identification of a novel nuclear translocation signal (NTS) in signaling proteins.

Sept. 2007 : Special lecture in the Israeli parliament (Knesset, Jerusalem): The mechanism of MAPK activation by cellular phone irradiation.

Jan. 2008 : Plenary lecture at ISCORT (Israeli clinical oncology and radiation therapy conference), Eilat, Israel: Cellular signaling: from oncogenic stimulation to nuclear translocation.

Jan 2008 : FISEB (Ilanit) 2008, the signaling network session. Eilat, Israel: The ERK signaling cascade: nuclear shuttling on the way to proliferation.

May 2008 : Special meeting: Swiss NRP57 Workshop: "Towards a mechanism-based framework in EMF research", Zurich, Switzerland. Lecture on: Activation of MAPKs by cellular phone radiation.

June 2008 : World Cancer Congress, Shanghai China: Identification of a nuclear translocation signal in signaling molecules.

Sept. 2008 : Special meeting: System Biology of Cancer, Signaling Networks Modeling & Clinical Implications, Rehovot, Israel: Identification of a nuclear translocation signal in signaling molecules.

Oct. 2008 : International symposium on signal transduction in health and disease (STADY-V). Tel Aviv, Israel: Identification of an NTS in signaling molecules. Chairman of the signal transduction session.

Nov. 2008 : Workshop on “Open Questions in the Research on Biological & Health Effects of Low-Intensity RF-EMF”, Stuttgart, Germany: Mechanism of short-term ERK activation by EF at mobile phone frequencies.

Feb. 2009 : Special division (Faculty) seminar - Imperial College, London, UK: The subcellular localization of ERKs and MEKs - NTS and importin7 pave the way to the nucleus.

March 2009 : SPATIAL 2009 - Overcoming distance in signaling networks - Maale HaChamisha, Israel. Chairperson of session on Spacing and Patterning.

July 2009 : FASEB Conference on Protein Kinases and Protein Phosphorylation, Aspen CO, USA: The Subcellular Localization of ERK: Nuclear Translocation Signal (NTS) and Imp7 Pave the Way to the Nucleus.

Aug. 2009 : 21th IUBMB meeting, Shanghai, China: Gq protein-coupled receptors as apoptosis-inducers: PI3K and AKT inhibition by PP2A leads to JNK activation. Co-chairperson of the signaling/metabolism session.

Aug. 2009 : 2009 Mechanisms of Nuclear Transport Meeting, Banff Canada: A nuclear translocation signal (NTS) interaction with importin-7 mediates

the nuclear translocation of MAPKs.

July 2010 : The 15th meeting of the Brazilian Society for Cell Biology Sao Paolo, Brazil. The Subcellular Localization of ERK: Nuclear Translocation Signal (NTS) and importin7 pave the way to the Nucleus.

July 2010 : Invited lecture at the Institute of Cancer (INCA), Rio De Janeiro, Brazil: Identification and characterization of a general nuclear translocation signal in signaling proteins.

Aug. 2010 : The 3rd Encontro International de Pathologia Investigativa and the 8th Jordana de Patologia do Hospital, Sao Paulo, Brazil: Phosphomimetic mutants of PEDF as anti-angiogenic, anti-cancer drugs.

Oct. 2010 : Invited lecture at the Oral and Pharyngeal Cancer Branch, the NIH, Bethesda, MD, USA: The subcellular localization of ERK: Nuclear Translocation Signal (NTS) and importin7 pave the way to the nucleus.

July 2011 : FASEB Summer Research Conference on Protein Kinases and Protein Phosphorylation, Aspen, CO, USA: The NTS of ERK as a target for CK2 phosphorylstion and anti cancer therapy.

Aug. 2011 : XI Brazilian symposium on extracellular matrix and VI international symposium on extracellular matrix (SIMEC), Búzios Brazil: Phospho-mimetic mutants of PEDF as anti-angiogenic, anti-cancer drugs.

Aug. 2011 : The 26th meeting of the Brazilian Federation of Experimental Biology Societies (FeSBE) Rio De Janeiro, Brazil: The ERK signaling cascade: a relay race on the way to cancer.

Nov. 2011 : 2011 Mechanisms of Nuclear Transport Meeting, Maale Hachamisha, Israel: Importin 3,7,9-mediated nuclear translocation of MAPKs.

Aug. 2012 : 1st Symposium on Angiogenesis, Sao Paulo Brazil: Phosphomimetic mutants of PEDF as anti-angiogenic, anti-cancer drugs.

Oct. 2012 : International meeting on the Biochemistry, Biology and Pathology of MAP Kinases conference, Maale Hachamisha, Israel: Distinct mechanisms of ERK, JNK, and p38 translocation into the nucleus by importins 3/7/9.

Oct. 2012 : 2012 EMF and Health Risk Research workshop, Monte Verità, Switzerland: EMF-induced activation of ERK/MAPK.

Feb. 2013 : Special lecture at NSW University, Sydney, Australia: The nuclear translocation of MAPKs as a novel target for anti-cancer therapy.

June 2013 : Plenary lecture at the annual BioEM meeting of BEMS Thessaloniki Greece: MAPK activation as a readout for cellular response to non-ionizing radiation.

Oct. 2013 : 2013 Mechanisms of Nuclear Transport Meeting, Massachusetts, USA: Nuclear translocation of MAPKs as a novel target for an anti-cancer and anti-inflammatory therapies.

Jan. 2014 : The First Nancy and Stephen Grand Workshop on Proteomics, Metabolomics and Cancer Drug Discovery, Weizmann Institute of Science, Rehovot, Israel: The nuclear translocation of ERK: a novel cancer drug target.

Feb. 2014 : FISEB (Ilanit) 2014, the signaling network session. Eilat, Israel: The nuclear translocation of MAPKs: a novel layer of transcriptional regulation and drug target.

Feb. 2014 : ESPCA - São Paulo School of Advanced Sciences on Oncogenesis and Translational Medicine. Ribeirão Preto - São Paulo – Brazil. The nuclear translocation of MAPKs is a novel drug target for signaling-related diseases.

March 2014 : EMBO workshop on Signaling to and from Endomembranes, Konstanz Germany: CDK-1-induced transport of ERK1c to the Golgi in the regulation of mitotic fragmentation.

April 2014 : MAPK/ERK Workshop, Barcelona, Spain: Open questions in the subcellular localization of components of the ERK cascade.

June 2014 : Plenary lecture invited by the students of Wake Forest NC, USA: The nuclear translocation of MAPKs: a novel therapeutic target for cancer and inflammation.

June 2014 : Gordon Research Conference on G Proteins and Phosphorylation (selected): PP2A switch in the regulation of the PI3K-AKT pathway.

July 2014 : Research Innovation in Inflammation *&* Disease Symposium *by* NUS-HUJ-CREATE, Singapore: The nuclear translocation of MAPKs: a novel therapeutic target for cancer and inflammation.

Sept. 2014 : The Biochemistry, Biology and Pathology of MAP Kinases II, Vilnius, Lithuania: The nuclear translocation of MAPKs as drug targets for signaling related diseases.

Sept. 2014 : Plenary lecture at the inauguration of TNUDA site Tel Hashomer Israel: Cellular antennas: absorption of electromagnetic radiations by living cells. In Hebrew.

Feb. 2015 : I-CORE PTM meeting, Technion Haifa, Israel. The Gαq-dependent PP2A switch: Identification of phosphorylation sites and interactions that regulate PI3K/AKT inactivation.

March 2015 : Keynote talk at the conference: International Meeting on Protein Kinases in parasites, Haifa, Israel: The alternative ERK route MEK1b-ERK1c and its role in Golgi fragmentation.

April 2015 : IEEE EMC Conference, Holon, Israel: Activation of ERK by ELF-MF is mediated by cryptochrome.

July 2015 : FASEB Summer Research Conference on Protein Kinases and Protein Phosphorylation, Chicago, USA. The nuclear translocation of MAPKs: a novel drug target for signaling related diseases.

Aug. 2015 : IUBMB satellite meeting Sao Paulo Brasil: The GalphaQ-dependent PP2A switch: Regulation of PI3K/AKT inactivation by phosphorylation and dynamic interactions.

Aug. 2015 : IUBMB 2015 meeting Iguasso falls Brasil: The nuclear translocation of MAPKs: a novel drug target for signaling related diseases.

Sept. 2015 : 2015 Mechanisms of Nuclear Transport Meeting, Sant Feliu de Guixols (Costa Brava) Spain: The nuclear translocation of MAPKs: a novel drug target for cancer and inflammation.

Oct. 2015 : Invited lecture, University of Cape-town, South Africa. The nuclear MAPKs translocation: a novel drug target for cancer and inflammation.

Oct. 2015 : Weizmann Institute – Australia symposium on cancer research, Melbourne Australia: The nuclear translocation of MAPKs - a novel drug target for cancer and inflammation.

Nov. 2015 : GMU postgraduate student conference 2015, Guilin China: The nuclear translocation of ERK: a novel drug target for cancer.

Nov. 2015 : WIS-Hong Kong's PolyU Joint Workshop on "Chemical Biology and Drug Discovery" Hong Kong, China. The nuclear translocation of MAPKs: a novel drug target for cancer and inflammation.

Dec. 2015 : The Second Zavalkoff symposium on "Signaling pathways regulating metabolism in health and disease" WIS, Rehovot Israel: GqPCR-induced inactivation of AKT is mediated by a PP2A switch.

Jan. 2016 : The Leibniz Institute of Molecular Pharmacology (FMP Berlin, Germany) Special Seminar "The nuclear translocation of MAPKs - a novel drug target for cancer and inflammation."

March 2016 : Cornell Medical School (NY USA) Special Seminar on "The nuclear translocation of MAPKs - drug target for cancer and inflammation."

March 2016 : Department of Pharmacology, Yale (New Haven, USA), Departmental Seminar - "The nuclear translocation of MAPKs - a novel drug target for cancer and inflammation."

April 2016 : The second Nancy and Stephen Grand INCPM Workshop, Weizmann Institute of Science, Rehovot, Israel. Chairman of the HTS session.

Aug. 2016 : The 7th Annual Global Pharma Summit" New Orleans, USA. "The nuclear translocation of MAPKs, a novel drug target for cancer and inflammation".

Nov. 2016 : Emerging concepts in cancer progression and therapeutics in the fifth McGill – Weizmann joint symposium; Montreal, Canada. "Targeting the nuclear translocation of MAPKs as a novel anti-inflammatory and anti-cancer therapy".

Jan. 2017 : IIAS/EHT Conference Expert Forum on Wireless Radiation and Environmental Health Hebrew University Jerusalem Israel. "Activation of signaling pathway by Electromagnetic fields" – Plenary lecture.

Feb. 2017 : FISEB (Ilanit) 8 Eilat Israel. "Targeting the nuclear translocation of MAPKs as a novel anti-inflammatory and anti-cancer therapy".

May 2017 : Signaling and Endomembranes 2, Cagliari, Italy "HOOK3 is a central mediator of ERK1c-induced mitotic Golgi fragmentation. Also, a chairman of the session on "signaling and the endosomal system".

June 2017 : 14th annual meeting of the Medicinal Chemistry Section of the Israel Chemical Society. "Targeting the nuclear translocation of ERK1/2 as an anti-cancer treatment".

June 2017 : Proteostasis in Health and Disease, Korea-Israel collaborative Workshop, Rehovot, Israel. "The nuclear translocation of MAPKs: A novel drug target for cancer and inflammation".

Sept. 2017 : 2017 Mechanisms of Nuclear Transport Meeting, Sant Feliu de Guixols (Costa Brava) Spain: The nuclear translocation of MAPKs as a drug target for cancer and inflammation".

March 2018 : Cornell Medical School (NY USA) Special Seminar on "The nuclear translocation of MAPKs as a therapeutic target for cancer and inflammation".

Oct. 2018 : Michigan-Israel partnership, Ann Arbor, Michigan. "Targeting the nuclear translocation of MAPKs as a therapeutic target for cancer and inflammation".

Oct. 2018 : G-INCPM lecture series Rehovot, Israel. "Targeting the nuclear translocation of MAPKs as a novel anti-inflammatory and anti cancer therapy".

Nov. 2018 : IDDST-China 2018 Jinan, China. "The nuclear translocation of MAPKs as a therapeutic target for cancer and inflammation".

Nov. 2018 : SPARC of Sun Pharma special lecture, Baroda, India. “The nuclear translocation of MAPKs as a therapeutic target for cancer and inflammation”.

Jan. 2019 : Special lecture at the Institute of Organic Chemistry and Biochemistry of the Academy of Sciences of the Czech Republic. “The nuclear translocation of MAPKs as a therapeutic target for cancer and inflammation”.

March 2019 : International Conference on Cancer Research & Treatment 2019, Bangkok, Thailand “Targeting the nuclear translocation of MAPKs as a novel anti-inflammatory and anti-cancer therapy”. Keynote speaker and session chair.

April 2019 : Special International Conference on Signal Transduction in Health and Disease. Rehovot Israel. Chair of conference and four sessions.

Aug. 2019 : Special lecture in the university of Utah at Salt Lake City. “The nuclear translocation of MAPKs as a therapeutic target for cancer and inflammation”.

Aug. 2019 : Mechanisms of Nuclear Transport Meeting, Peebles, Scotland. “The role of importin 9 in the stimulated nuclear translocation of MAPKs”.

Sept. 2019 : Advances in Cancer Research, Joint MICC-CNIO symposium Rehovot Israel. “The nuclear translocation of MAPKs as a therapeutic target for cancer and inflammation”.

Nov. 2019 : The first ISR-Open screen Workshop on “Bringing Together Small Molecules and Biology”, Rehovot Israel. Session Chairman.

Dec. 2019 : Special Seminar on: “Signal Transduction: From Molecules to Disease. Safed, Israel. “The nuclear translocation of MAPKs as a therapeutic target for cancer and inflammation”.

Jan. 2020 : The 4th Zavalkoff Symposium on: Players and Pathways Regulating Metabolism in Health and Disease, Rehovot, Israel. “Beta-like Importins mediate the nuclear translocation of MAPKs”.

Feb. 2020 : 2020 Expert Forum: Wireless and Cellphone Radiation and Public Policy; Tel Aviv Israel. “Cell-signaling in response to radio-frequency electromagnetic field.”

Dec. 2020 : Virtual meeting: Cell and Experimental Biology (CEB, 2020), Boston USA. “Targeting the nuclear translocation of MAPKs as a novel anti-inflammatory and anti-cancer therapy”. Session chairman and speaker.

Feb. 2021 : Annual Israeli MAPK Zoom meeting. “Regulation of Mitotic Golgi fragmentation by ERK1c-mediated HOOK3 phosphorylation”.

Aug. 2021 : 7th International Conference on Biological Sciences (ABS/ABB-Zoom conference). The nuclear translocation of ERK as a therapeutic target for cancer.

Dec. 2021 : Keynote speaker at the 3rd Annual summit on Cell Signaling and Cancer Therapy, Zoom meeting. "The nuclear translocation of ERK as a therapeutic target for cancer".

Feb. 2022 : Lecture for Protai company. "Signal transduction inhibition and resistance mechanisms in cancer".

June 2022 : FASEB-SRC on The Protein Kinases and Phosphorylation Conference: Mechanisms to Therapeutics. "AKTs do not translocate to the nucleus, but AKT3 can constitutively signal from the nuclear envelope".

Aug. 2022 : Lecture for Protai company. "AKT Resistance & Response mechanisms".

Sept. 2022 : Lecture at the Israel MAPK symposium "AKTs do not translocate to the nucleus but AKT-3 can constitutively signal from the nuclear envelope".

Sept. 2022 : Keynote speaker at the 6th Cancer Word Congress, Lisbon Portugal. "The nuclear translocation of ERK as a therapeutic target for cancer".

Nov. 2022 : Special guest seminar in the Medical Faculty Mannheim University Heidelberg: "The nuclear MAPK translocation as a target for anti-cancer and inflammation therapy."

Nov. 2022 : Keynote speaker at International Conference on Chronic Disease and Oncology Research. "Targeting the nuclear translocation of MAPKs as a novel anti-inflammatory and anti-cancer therapy."

Apr. 2023 : Plenary lecture and Honorary Chairmen of Cell Signaling and Molecular Biology (CSMB) Conference, Valencia Spain: "The nuclear translocation of ERK as a therapeutic target for cancer."

May 2023 : Keynote speaker and chairman at the Global Summit of Cancer Frontier Tokyo, Japan: "The nuclear translocation of ERK as a therapeutic target for cancer."

May 2023 : Keynote speaker and chairman at the 7th cancer Word Congress, Palermo Italy: "Development of MAPK translocation inhibitors as Anti-Cancer drugs."

June 2023 : Guest lecture in UT Southwestern Medicine in Dallas, Texas, USA: "Stimulated nuclear shuttling of ERK/MAPK as a drug target for cancer and inflammation"

REFEREE FOR RESEARCH GRANTS AND JOURNALS

Grants: (A*STAR)-Singapore; AICR; Austrian Science Fund (FWF). Boost Fund Aachen AACHEN; Cancer Research UK; DKFZ-Israel fund; Cancer Biology Research Center (Dotan) of TAU; Czech Science Foundation (CSF); Deutsche Forschungsgemeinschaft (DFG): European Research Council (ERC). Germany-Israel Foundation (GIF); Hebrew University internal grants; Horizen (EU); Human Frontiers (HFSP); INCa France; India–Israel collaborative grant; Israel Cancer Association; Israel Ministry of Health; Israel Ministry of Science; Israel Science Foundation; Ministry of Science, Technology and Space. National Institute for Psychobiology in Israel; National Science Foundation (NSF-US); Science Foundation Ireland (SFI); NUS collaborative grants; Swiss National Foundation (SNF); Technion internal grants; Teva research grants; US-Israel Binational Science Foundation (BSF); Welcome Trust, UK. Worldwide Cancer Research (WWCR).

Journals: Acta Pharmaceutica Sinica B; American J. of Physiology; Annual Reviews of Biochemistry; Biochem. Biophys. Res. Comm. (BBRC); Biochem and Cell Biol (BCB); Biochimica et Biophysica Acta (BBA) General Subjects; BBA reviews on cancer; BBA genetics; BBA MCR; Biochimie; Biochemical J; Biomedical material; BMC Biol; BMC Chemical Biology; BMC Endocrine Disorders; Cancer Communications; Cancer Gene Therapy Journal; Cancer Letters; Cancer Research; Cancers; Cardiovascular Research; Cell Biology International; Cell Death and Differentiation; Cell Mol. Biol. Lett.; Cell Physiol. Biochem.; Cell Proliferation; Cell Reports; Cells; Clinical Cancer Research; Current Drug Targets; Current Issue in Molecular Biology (CIMB); Cytokines; Digestion; eLife; Electromagnetic Biology and Medicine. Electrophoresis; EMBO J.; EMBO Reports; Endocrinology; Eur. J. Biochem.; Eur. J. Can.; Eur. J. Pharm.; Experimental Hematology; FASEB, J: FEBS J.; FEBS Letters; FEBS Open Biol; Food and Chemical Toxicology; Frontiers in Systems Physiology; Frontier in public health; Gene; Genes and Development; Immuno; International Archives of Medicine; International Journal of Radiation Biology; International Journal of Cell Biology; International Journal of Molecular Sciences; iScience; IUBMB Life; J. Biol. Chem.; J. Biomol. Struct & Dyn.; J. Cell Biol.; J. Cell. Physiol.; J. Cell Sci.; J. Clin. Endo & Metab.; J. Clin. Invest.; J. Exp. Clin. Cancer Res; J. Neuroscience; J. Proteom Res; Life Sciences, Mol. Biol Cell; Molecular Cancer Research; Mol. Cell; Mol Cell Biol.; Mol. Cell Endo.; Molecules; Mol. Endo.; Nature; Nature/AfCS; Nature Cell Biol.; Nature

Communications; Nature Medicine; Neuroscience Letters; Oncogene; Oncotarget; Pediatric Research; PeerJ; Pharmaceutics; Pharmacological Reviews; Physical Biology; Placenta, PLoS Computational Biology; PNAS-USA; Proteomics; Reproductive Sciences, Science; Science Advances; Science Signaling; Scientific Reports; Small GTPases; Toxicology in Vitro; Trends in Biochemical Sciences; Trends in Genetics; Trends in Molecular Medicine.

CITATIONS (Career H factor -83 in Google scholar, 70 in Scopus)

Five most cited reviews (Google Scholar)

1. Seger, R., and Krebs, E.G. (1995) The MAP kinase signaling cascade. *FASEB J.,* 9, 726-735. - **4819 citations.**
2. Yoon, S., and Seger, R. (2006) The extracellular signal-regulated kinase: multiple substrates regulate diverse cellular functions. *Growth Factors*, 24, 21-44. – **1716 citations.**
3. Shaul, Y.D., and Seger, R. (2007) The MEK/ERK cascade: from signaling specificity to diverse functions. *Biochim. Biophys. Acta - Molecular Cell Research,* 1773, 1213–1226. – **1134 citations.**
4. Plotnikov, A., Zehorai, E. Procaccia, S., and Seger, R. (2011) The MAPK cascades: signaling components, nuclear roles and mechanisms of nuclear translocation. *Biochim. Biophys. Acta - Molecular Cell Research*., 1813, 1619-1633. – **1041 citations.**
5. Keshet, Y. and Seger, R. (2010) The MAPK signaling cascades: a system of hundreds components regulates a diverse array of physiological function. *Methods Mol. Biol.* (*MAPK Protocols, second edition. Seger, R. editor)*, 661, 3-38. - **677 citations.**

Five most cited experimental publications from my group

1. Bacus, S.S., Gudkov, A., Lowe, M., Lyass L. Yung, Y., Komarov, A.P., Keyomarsi, K., Yarden, Y., and Seger, R. (2001) Taxol-induced apoptosis depends on MAP kinase pathways (ERK and p38) and is independent of p53. *Oncogene,* 20*,* 147-155. - **436 citations.**
2. Friedman, J., Kraus, S., Hauptman, Y., Schiff, Y., and Seger, R. (2007) Mechanism of a short-term ERK activation by electromagnetic fields at mobile phone frequency. *Biochem. J.,* 405, 559-568. - **423 citations.**

3. Cohen-Armon, M., Visochek, L. Rosensal, D., Kalal, A., Klein, R. Bendetz-Nezer, S. Yao, Z., and Seger, R. (2007) Activation of PARP-1 by phosphorylated ERK2: A link to histone acetylation. *Mol. Cell*, 25, 297-308. - **384 citations.**
4. Chuderland, D., Konson, A., and Seger, R. (2008) Identification and characterization of a general nuclear translocation signal in signaling proteins. *Mol. Cell,* 31**,** 850-861. - **305 citations.**
5. Jaaro, H., Rubinfeld, H., Hanoch, T., and Seger, R. (1997) Nuclear translocation of mitogen-activated protein kinase kinase (MEK1). *Proc. Natl. Acad. Sci. USA*, 94, 3742-3747. - **233 citations.**

PUBLICATIONS

1) **Seger, R.,** Yarden, Y., Kashles, O., Goldblatt, D., Schlessinger, J., and Shaltiel, S. (1988) The epidermal growth factor receptor as a substrate for the kinase splitting membranal proteinase. *J. Biol. Chem.*, **263**, 3496-3500.

2) Shaltiel, S., **Seger, R.,** and Goldblatt, D. (1988) A kinase splitting membranal proteinase: use in the study of receptors involved in the cellular response to hormones. *The Roots of Modern Biochemistry*, Kleinkauf, Van Dohern and Jaenicke eds., Walter de Guyter & Co. Press, pp. 781-789.

3) Shaltiel, S., **Seger, R.,** and Goldblatt, D. (1989) A kinase splitting membranal proteinase as a conformation recognizing probe of hormone receptor kinases. *Mechanism and Regulation of Intracellular Proteolysis*; Katunuma, N. and Kominami, E. eds., Spinger -Verlag and Japan Scientific Societies Press, pp 188-198.

4) **Seger, R.,** Zick, Y., and Shaltiel, S. (1989) Studying the structure of intracellular moiety of the insulin receptor with kinase splitting membranal proteinase. *EMBO J.,* **8**, 435-440.

5) Weiel, J.E., Ahn, N.G., **Seger, R.,** and Krebs, E.G. (1990) Communication between protein tyrosine and protein serine/threonine phosphorylation. *Adv. Second Messenger Phosphoprotein Res.,* **24**, 182-195.

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8) **Seger, R.,** Ahn, N.G., Boulton, T.G., Yancopoulos, G.D., Panayotatos, N., Radziejewska, E., Ericsson, L., Bratlien, R.L., Cobb, M.H., and Krebs, E.G. (1991) Microtubule-associated protein 2 kinases, ERK1 and ERK2, undergo autophosphorylation on both tyrosine and threonine residues: implication for their mechanism of activation. *Proc. Natl. Acad. Sci. USA*, **88**, 6142-6146.

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10-) Ahn, N.G., Robbins, D.J., Haycock, J. W., **Seger, R.,** Cobb, M.H., and Krebs, E.G. (1992) Identification of an activator of the MAP kinases ERK1 and ERK2 in PC12 cells. *J. Neurochem.,* **58**, 147-156.

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