

CURRICULUM VITAE

NICHOLAS HARRIS PhD, DipEd

**Professor Ephraim Katzir Department of Biotechnology Engineering
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EDUCATION

- PhD 1990** Department of Cell Biology, Weizmann Institute of Science, Rehovot, Israel. *“A study of the molecular basis of human p53 heterogeneity and expression of heterogeneous human p53 proteins”*
- MSc 1985** Department of Cell Biology, Weizmann Institute of Science, Rehovot, Israel. *“p53 tumor antigen: reconstitution of expression and characterization in a non-producer cell line”*
- DipEd 1980** Department of Education, University of Glasgow, Scotland
- BSc 1979** Department of Biochemistry, University of Stirling, Scotland
Biochemistry (Hons)

PROFESSIONAL EXPERIENCE

- 2011-** **Head of the MSc (Biotechnology) Program** Management of faculty and external lecturers of an advanced professional program oriented to industrial personnel, bio-medical researchers and clinical trial practitioners. Biotechnology product and process development are taught by seasoned industrialists and senior faculty of the Biotechnology Engineering and Industrial Management Departments of the College. Bio-medical research and clinical trial design and execution are taught both by College personnel and experts from the pharmaceutical and medical devices industries. Responsibility for program accreditation (2013), The Council for Higher Education, The Ministry of Education, Israel.

- 2010-2013** **Head of Department, Biotechnology Engineering, ORT Braude Academic College of Engineering, Karmiel, Israel** Management of sixteen faculty, ten external lecturers, six laboratory technicians, three administrators and two hundred and fifty undergraduate students. Department confers a BSc (Biotechnology Engineering) degree that includes basic sciences, engineering, advanced science courses, specializations (Food Biotechnology, Environmental Science, Pharmaceutical Science, Biomaterials, Cell and Molecular Biology) and an internship of seven months full-time employment in industry or a research university in Israel or the USA (University of Rochester, MIT).
- Professional responsibilities included management of the department, appointment and promotion of faculty, teaching advanced science courses (Immunology, Diagnostics, Eukaryotic Cell Gene Expression), supervision of internship students, liaison and collaboration with biotechnology industry companies.
- 2006-2010** **Co-Founder and VP R&D, Symthera (ProtAgonists) Ltd, Weizmann Science Park, Ness Ziona, Israel** Symthera is a privately owned biopharmaceutical start-up established to discover and develop peptide drugs for the treatment of inflammatory diseases. Symthera developed a proprietary drug discovery algorithm, recombinant phage display system and an HTP screen of phage-displayed peptides. Algorithm-generated peptides, active in animal models of human diseases, are candidates for pre-clinical development.
- 2000-2005** **Co-Founder and VP R&D, Rimonyx Pharmaceuticals Ltd, Weizmann Science Park, Ness Ziona, Israel** Rimonyx is a privately owned biopharmaceutical start-up established to discover and develop small molecule drugs for the treatment of inflammatory diseases, infectious diseases and amyloidoses. Rimonyx developed a proprietary drug discovery algorithm and discovery platform and has a portfolio of drug leads at various stages of pre-clinical development. The drug lead, RX-111, an orally active compound in an animal model of IBD, was out-licensed to Bioline-RX, Israel in 2005.
- 1999-2000** **Laboratory Manager, Blood and Bone Marrow Transplantation Unit, Tel-Aviv Medical Center, Tel-Aviv, Israel** The laboratory of the Transplantation Unit was responsible for evaluating donor and recipient blood and marrow samples by Fluorescence Activated Cell Sorting (FACS) and the cryopreservation of donors' samples. The laboratory developed molecular biological tests for the early detection of engraftment, graft rejection and disease relapse.

- 1997-1999** **Laboratory Manager, Laboratory of Molecular Biology, Department of Gastroenterology, Tel-Aviv** Studies on the influence of pro- and anti-apoptotic gene expression on transformed and primary cell proliferation and the molecular basis for the cytostatic effects of non-steroidal anti-inflammatory drugs (NSAIDs) on transformed enterocytes. Applied research included the application of established genetic markers and the development of novel markers for the diagnosis of colon cancer.
- 1995-1997** **Senior Scientist, QBI Enterprises Ltd, Ness Ziona, Israel** Study of translational control of eukaryotic gene expression: (1) adaptation of a viral translational control element (2A protease, Polio) to a cellular gene expression system, (2) polysome fractionation for the identification of stress-induced, translationally-active mRNA, (3) identification of new genes induced by oxidative stress in retinopathy, myocardial ischemia and acute renal failure.
- 1993-1995** **Visiting Associate, Laboratory of Viral Diseases, National Institute of Allergy and Infectious Diseases (NIAID), NIH, MD, USA** Purification of vaccinia virus transcription factors by classical chromatographic techniques. *in vitro* functional characterization of purified transcription factors. Studies of viral pathogenesis, specifically, the inhibition of DNA replication by nitric oxide (NO). Demonstration of the anti-viral activity of gamma interferon-induced NO and virus-induced NO
- 1990-1993** **Visiting Fellow, Laboratory of Viral Diseases, NIAID, NIH, USA** Molecular genetic study of vaccinia viral gene expression: reconstitution of vaccinia virus gene-specific transcription from virus-infected cell extracts
- 1980-1982** **Research Assistant, Department of Cardiovascular Pharmacology, University of Strathclyde, Glasgow, Scotland** Studies on the effects of environmental stress and anti-arrhythmic drugs on the severity of coronary artery ligation-induced arrhythmias in rats

PUBLICATIONS

- 1 **Harris N**, et al. 2014. Small Molecule Inhibitors of Protein Interaction with Glycosaminoglycans (SMIGs), a Novel Class of Bioactive Agents with Anti-Inflammatory Properties, *Biochimical Biophysica Acta* 1840, 245-254.
- 2 Ezerzer C, Dolgin M, Skovorodnikova J. and **Harris N** 2009. Chemokine receptor-derived peptides as multi-target drug leads for the treatment of inflammatory diseases. *Peptides* 30, 1296-1305.
- 3 Ezerzer C and **Harris N** 2007. Physiological immunity or pathological autoimmunity – A question of balance. *Autoimmunity Reviews* 6, 488-496.
- 4 Karupiah G and **Harris N**. Nitric Oxide-mediated inhibition of virus replication induced by gamma interferon: a pleiotropic cytokine with antiviral activity (Editor: Gunasegaran Karupiah; 1997 R.G. Landes Company, Texas, USA).
- 5 Karupiah G, and **Harris N** 1995. Inhibition of viral replication by nitric oxide and its reversal by ferrous sulfate and tricarboxylic acid cycle metabolites. *J Exp. Med.* 181, 2171-2179.
- 6 **Harris N**, Buller RML and Karupiah G 1995. Interferon-gamma induced, nitric oxide-mediated inhibition of vaccinia virus replication. *J Virol.* 69, 910-915.
- 7 Baldick CJ, Cassetti MC, **Harris N** and Moss B 1994. Ordered assembly of a functional pre-initiation transcription complex, containing vaccinia virus early transcription factor and RNA polymerase, on an immobilized template. *Journal of Virology* 68, 6052-6056.
- 8 Rosales R, **Harris N**, Ahn B-Y and Moss B 1994. Purification and identification of a vaccinia virus encoded intermediate stage promoter specific transcription factor that has homology to eukaryotic transcription factor SII (TFIIS) and an additional role as a viral RNA polymerase subunit. *J. Biol. Chem.* 269, 14260-14267.
- 9 **Harris N**, Rosales R and Moss B 1993. Transcription initiation factor activity of vaccinia virus capping enzyme is independent of mRNA guanylation. *Proc. Natl. Acad. Sci. USA* 90, 2860-2864.
- 10 Tamir M, **Harris N**, Trainin N, Toledo J and Zipori D 1989. Multilineage hemopoiesis induced by cloned stromal cells. *Int. J. Cell Clon.* 7, 373-384.

- 11 Prokocimer M, **Harris N**, Brill E and Rotter V 1987. Expression of p53 in human leukemia and lymphoma. In: Recent Advances in Leukemia and Lymphoma, pp. 143-164.
- 12 **Harris N**, Brill E, Shohat O, Prokocimer M, Wolf D, Arai N and Rotter V 1986. The molecular basis for heterogeneity of the human p53 protein. Mol. Cell. Biol. 6, 4650-4656.
- 13 Wolf D, **Harris N**, Goldfinger N and Rotter V 1985. Isolation of a full-length mouse cDNA clone coding for an immunologically distinct p53 molecule. Mol. Cell. Biol. 5, 127-132.
- 14 Wolf D, **Harris N** and Rotter V 1984. Reconstitution of p53 expression in a non-producer Ab-MuLV-transformed cell line by transfection of a functional p53 gene. Cell 38, 119-126.
- 15 Delbressine L, **Harris N**, Kane KA, Muir AW and Winslow E 1992. Antiarrhythmic, electrophysiological and hemodynamic effects of prolonged oral dosing with Org7797 in the anaesthetized rat. J. Pharmacol. 44(12), 996-1000.
- 16 **Harris N**, Kane KA, Muir AW and Winslow E 1982. Influences of hypothermia, cold and isolation stress on the severity of coronary artery ligation-induced arrhythmias in rats. J. Pharmacol. Methods 7(2), 161-171.

PATENTS

- 1 Methods of Screening for Anti-inflammatory Drugs and Use Thereof (Israel Patent Application No. 153762; December 31, 2002)
- 2 Pharmaceutical Compositions Comprising Thieno [2, 3-C] Pyridine Derivatives and Use Thereof (Israel Patent Application No. 154306; February 5, 2003)
- 3 Methods of Screening for Anti-inflammatory Drugs and Use Thereof (PCT Patent Application No. PCT/IL 2003/001116 [Publication number WO 2004/059278]; December 30, 2003)
- 4 Pharmaceutical Compositions Comprising Thieno 2 [2,3-C] Pyridine Derivatives and Use Thereof (PCT Patent Application No. PCT/IL 2004/000121 [Publication number WO 2004/069149]; February 5, 2003)
- 5 Screening of Anti-Viral Drugs and Pharmaceutical Compositions containing Thiazolidinone Derivatives (PCT Patent Application No. PCT/IL 2005/000335)

- 6 Pharmaceutical Compositions Comprising Anti-inflammatory Quinazolinecarboxamide Derivatives (PCT Patent Application No. PCT/IL 2005/000336)
- 7 Combination of Cytokine and Cytokine Receptor For Altering Immune System Functioning (Publication Number: WO/2007/105224; International Application No: PCT/iL2007/000350; Publication Date: 20.9.2007; International Filing Date: 18.03.2007)
- 8 Antibodies Against Human Chemokine and Chemokine Receptor Sequences and Their Use In The Treatment of Immune System Dysfunctions (USA Provisional Application No. 60/931,151)
- 9 Pharmaceutical Compositions Comprising The Human Chemokine Fractalkine and Uses Thereof (USA Provisional Application No.61/010,067)
- 10 Pharmaceutical Peptides For The Treatment Of Inflammatory Diseases (International Application Number: PCT/US09/60165)