
BIOGRAPHICAL SKETCH

NAME	POSITION TITLE
Michael N. Alexis	Research Director, Molecular Endocrinology Program Institute of Biological Research and Biotechnology (IBRB), National Hellenic Research Foundation (NHRF)

EDUCATION/TRAINING *(Begin with baccalaureate and include postdoctoral training.)*

INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
Leontio Lykeio, Patissia, Athens, Greece	Apolytirion - 1969	1963-69	General education
University of Athens, Greece	Diploma - 1973	1969-73	Chemistry
Centre for Scientific Res 'Demokritos', Greece	(Postgraduate study)	1973-74	Biochemistry
University of London, King's College, UK	PhD - 1978	1974-78	Biochemistry

Positions and Employment

1980-84	Research Fellow, IBRB, NHRF
1984-92	Assistant Researcher, Molecular Endocrinology Program, IBRB, NHRF
1992-96	Associate Researcher and Head of Molecular Endocrinology Program, IBRB, NHRF and Adjunct Professor of Biochemistry, Foundation for Technical Education, Athens, Greece
1996-	Research Director and Head, Molecular Endocrinology Program, IBRB - NHRF.

Honors and Awards

1974:	1 st prize of the pan-Hellenic contest in chemistry of the National Scholarship Foundation (I.K.Y.) for doctoral studies abroad
1988:	Organizer, NATO Advanced Research Workshop on "Molecular mechanisms and consequences of activation of hormone and growth factor receptors" at Nafplion, Greece.
1997:	President of the 48 th Congress of the Hellenic Society of Biochemistry & Molecular Biology.
1999-2001	Member of the National Advisory Research Council, GSRT – Ministry of Development

Expert Evaluator for EU and National Research-Funding Agencies.
Corresponding editor, Hormone Molecular Biology and Clinical Investigation (new journal)
Reviewer in several peer-reviewed scientific journals (PLoS ONE, Endocrine-Related Cancer, Molecular and Cellular Endocrinology, Planta Medica, Journal of Agricultural and Food Chemistry other)

Current Research Interests

Dr. Michael N. Alexis' research aims at elucidating the prognostic and therapeutic significance of steroid receptors in endocrine-related degenerative disease, endocrine cancer in particular, understanding the molecular determinants of breast cancer resistance to anti-estrogens, developing endocrine-related cancer diagnostics and using breast cancer models for developing tissue-specific estrogens, anti-estrogens and neuroprotective agents of high breast and endometrial safety. His research has been funded by the Hellenic General Secretariat of Research and Technology (GSRT), the EUREKA office and the EU. He has collaborated with several Hellenic and European research labs and held several joint projects with Hellenic pharmaceutical industry (sf. competitively funded projects).

Peer-reviewed publications

1. Rao NRA, McCalman MT, Moulos P, Francoijs KJ, Chatziioannou A, Kollis FN, Alexis MN, Mitsiou DJ, Stunnenberg HG. Co-activation of GR and NFkB alters the repertoire of their binding sites and target genes. **Genome Research** 2011 Jul 12.
2. Koufaki M, Tsatsaroni A, Alexi X, Guerrand H, Zerva S, Alexis MN. Isoxazole substituted chromans against oxidative stress-induced neuronal damage. **Bioorg Med Chem.** 2011 Jun 29.
3. Chantzi NI, Meligova AK, Dhimolea E, Petrou CC, Mitsiou DJ, Pechtelidou A, Florentin I, Kitraki E, Cordopatis P, Tiniakos DG, Alexis MN. Insights into ectopic estrogen receptor expression,

nucleocytoplasmic distribution and interaction with chromatin obtained with new antibodies to estrogen receptor α and β . **Steroids** 2011 Sep-Oct;76(10-11):974-85.

4. Koukoulitsa C, Durdagi S, Siapi E, Villalonga-Barber C, Alexi X, Steele BR, Micha-Screttas M, Alexis MN, Tsantili-Kakoulidou A, Mavromoustakos T. Comparison of thermal effects of stilbenoid analogs in lipid bilayers using differential scanning calorimetry and molecular dynamics: correlation of thermal effects and topographical position with antioxidant activity. **Eur Biophys J**. 2011 Jul;40(7):865-75.
5. Villalonga-Barber C, Meligova AK, Alexi X, Steele BR, Kouzinou CE, Screttas CG, Katsanou ES, Micha-Screttas M, Alexis MN. New hydroxystilbenoid derivatives endowed with neuroprotective activity and devoid of interference with estrogen and aryl hydrocarbon receptor-mediated transcription. **Bioorg Med Chem**. 2011 Jan 1;19(1):339-51.
6. Koufaki M, Theodorou E, Alexi X, Alexis MN. Synthesis of a second generation chroman catechol hybrids and evaluation of their activity in protecting neuronal cells from oxidative stress-induced cell death. **Bioorg Med Chem**. 2010 Jun 1;18(11):3898-909.
7. Koufaki M, Theodorou E, Alexi X, Nikoloudaki F, Alexis MN. Synthesis of tropolone derivatives and evaluation of their in vitro neuroprotective activity. **Eur J Med Chem**. 2010 Mar;45(3):1107-12.
8. Tchokouaha RF, Alexi X, Chosson E, Besson T, Skaltsounis AL, Seguin E, Alexis MN, Wandji J. Erythrina mildbraedii A and B, two novel cytotoxic dimethylpyrano-isoflavones from the stem bark of Erythrina mildbraedii: evaluation of their activity toward endocrine cancer cells. **J Enzyme Inhib Med Chem**. 2010 Apr;25(2):228-33.
9. Calogeropoulou T, Avlonitis N, Minas V, Alexi X, Pantzou A, Charalampopoulos I, Zervou M, Vergou V, Katsanou ES, Lazaridis I, Alexis MN, Gravanis A. Novel dehydroepiandrosterone derivatives with antiapoptotic, neuroprotective activity. **J Med Chem**. 2009 Nov 12;52(21):6569-87.
10. Alexi X, Kasiotis KM, Fokialakis N, Lambrinidis G, Meligova AK, Mikros E, Haroutounian SA, Alexis MN. Differential estrogen receptor subtype modulators: assessment of estrogen receptor subtype-binding selectivity and transcription-regulating properties of new cycloalkyl pyrazoles. **J Steroid Biochem Mol Biol**. 2009 Nov;117(4-5):159-67.
11. Djiogue S, Halabalaki M, Alexi X, Njamen D, Fomum ZT, Alexis MN, Skaltsounis AL. Isoflavonoids from Erythrina poeppigiana: evaluation of their binding affinity for the estrogen receptor. **J Nat Prod**. 2009 Sep;72(9):1603-7.
12. Koufaki M, Kiziridi C, Alexi X, Alexis MN. Design and synthesis of novel neuroprotective 1,2-dithiolane/chroman hybrids. **Bioorg Med Chem**. 2009 Sep 1;17(17):6432-41.
13. Ioannou E, Abdel-Razik AF, Alexi X, Vagias C, Alexis MN, Roussis V. 9,11-Secosterols with antiproliferative activity from the gorgonian Eunicella cavolini. **Bioorg Med Chem**. 2009 Jul 1;17(13):4537-41.
14. Halabalaki M, Alexi X, Aligiannis N, Alexis MN, Skaltsounis AL. Ebenfurans IV-VIII from Onobrychis ebenoides: Evidence that C-Prenylation is the Key Determinant of the Cytotoxicity of 3-Formyl-2-arylbenzofurans. **J Nat Prod**. 2008 Nov 6.
15. Ioannou E, Abdel-Razik AF, Zervou M, Christofidis D, Alexi X, Vagias C, Alexis MN, Roussis V. 5 α ,8 α -Epidioxysterols from the gorgonian Eunicella cavolini and the ascidian Trididemnum inarmatum: isolation and evaluation of their antiproliferative activity. **Steroids**. 2009 Jan;74(1):73-80.
16. Ioannou E, Abdel-Razik AF, Alexi X, Vagias C, Alexis MN, Roussis V. Pregnanes with antiproliferative activity from the gorgonian Eunicella cavolini. **Tetrahedron** 2008; 64:11797-11801.
17. Tenta R, Pitulis N, Tiblalex D, Consoulas C, Katopodis H, Konstantinidou E, Manoussakis M, Kletsas D, Alexis MN, Poyatzis A, Koutsilieris M. Mechanisms of the action of zoledronic acid on human MG-63 osteosarcoma cells. **Horm Metab Res**. 2008 Nov;40(11):737-45.
18. Bakas P, Liapis A, Vlahopoulos S, Giner M, Logotheti S, Creatsas G, Meligova AK, Alexis MN, Zoumpourlis V. Estrogen receptor alpha and beta in uterine fibroids: a basis for altered estrogen responsiveness. **Fertil Steril**. 2008 Nov;90(5):1878-85.
19. Voutsas IF, Gritzapis AD, Alexis MN, Katsanou ES, Perez S, Baxevanis CN, Papamichail M. A novel quantitative flow cytometric method for measuring glucocorticoid receptor (GR) in cell lines: correlation with the biochemical determination of GR. **J Immunol Methods**. 2007 Jul 31;324(1-2):110-9.
20. Skretas G, Meligova AK, Villalonga-Barber C, Mitsiou DJ, Alexis MN, Micha-Screttas M, Steele BR, Screttas CG, Wood DW. Engineered chimeric enzymes as tools for drug discovery: generating reliable bacterial screens for the detection, discovery, and assessment of estrogen receptor modulators. **J Am Chem Soc**. 2007 Jul 11;129(27):8443-57.
21. Koufaki M, Kiziridi C, Nikoloudaki F, Alexis MN. Design and synthesis of 1,2-dithiolane derivatives and evaluation of their neuroprotective activity. **Bioorg Med Chem Lett**. 2007 Aug 1;17(15):4223-7.
22. Katsanou ES, Halabalaki M, Aligiannis N, Mitakou S, Skaltsounis AL, Alexi X, Pratsinis H, Alexis MN. Cytotoxic effects of 2-arylbenzofuran phytoestrogens on human cancer cells: modulation by adrenal and gonadal steroids. **J Steroid Biochem Mol Biol**. 2007 May;104(3-5):228-36.

23. Lambrinidis G, Halabalaki M, Katsanou ES, Skaltsounis AL, Alexis MN, Mikros E. **Environ Chem Lett**. 2006; 4:159-174. Review.
24. Apostolopoulos V, Pietersz GA, Tsibanis A, Tsikkinis A, Drakaki H, Loveland BE, Piddlesden SJ, Plebanski M, Pouniotis DS, Alexis MN, McKenzie IF, Vassilaros S. Pilot phase III immunotherapy study in early-stage breast cancer patients using oxidized mannan-MUC1 [ISRCTN71711835]. **Breast Cancer Res**. 2006;8(3):R27.
25. Halabalaki M, Alexi X, Aligiannis N, Lambrinidis G, Pratsinis H, Florentin I, Mitakou S, Mikros E, Skaltsounis AL, Alexis MN. Estrogenic activity of isoflavonoids from *Onobrychis ebenoides*. **Planta Med**. 2006 May;72(6):488-93.
26. Koufaki M, Theodorou E, Galaris D, Nousis L, Katsanou ES, Alexis MN. Chroman/catechol hybrids: synthesis and evaluation of their activity against oxidative stress induced cellular damage. **J Med Chem**. 2006 Jan 12;49(1):300-6.
27. Kasiotis KM, Mendrou C, Haroutounian SA, Alexis MN. High affinity 17alpha-substituted estradiol derivatives: synthesis and evaluation of estrogen receptor agonist activity. **Steroids**. 2006 Mar;71(3):249-55.
28. Roberts ML, Drosopoulos KG, Vasileiou I, Stricker M, Taoufik E, Maercker C, Guialis A, Alexis MN, Pintzas A. Microarray analysis of the differential transformation mediated by Kirsten and Harvey Ras oncogenes in a human colorectal adenocarcinoma cell line. **Int J Cancer**. 2006 Feb 1;118(3):616-27.
29. Mitsiou DJ, Florentin I, Baki L, Georgakopoulos A, Alexis MN. Pronounced enhancement of glucocorticoid-induced gene expression following severe heat shock of heat-conditioned cells hints to intricate cell survival tactics. **J Steroid Biochem Mol Biol**. 2005 Feb;94(1-3):209-17.
30. Siriani D, Mitsiou DJ, Alexis MN. Heat-induced degradation of overexpressed glucocorticoid receptor. Separate protective roles of hsp90 and hsp70. **J Steroid Biochem Mol Biol**. 2005 Feb;94(1-3):93-101.
31. Kitraki E, Kremmyda O, Youlatos D, Alexis M, Kittas C. Spatial performance and corticosteroid receptor status in the 21-day restraint stress paradigm. **Ann N Y Acad Sci**. 2004 Jun;1018:323-7.
32. Fokialakis N, Lambrinidis G, Mitsiou DJ, Aligiannis N, Mitakou S, Skaltsounis AL, Pratsinis H, Mikros E, Alexis MN. A new class of phytoestrogens; evaluation of the estrogenic activity of deoxybenzoins. **Chem Biol**. 2004 Mar;11(3):397-406.
33. Kitraki E, Kremmyda O, Youlatos D, Alexis MN, Kittas C. Gender-dependent alterations in corticosteroid receptor status and spatial performance following 21 days of restraint stress. **Neuroscience**. 2004;125(1):47-55.
34. Siriani D, Mitsiou DJ, Alexis MN. Overexpressed glucocorticoid receptor negatively regulates gene expression under conditions that favour accumulation of non-hormone-binding forms of the receptor. **J Steroid Biochem Mol Biol**. 2003 Feb;84(2-3):171-80.
35. Mitsiou DJ, Siriani D, Katsanou ES, Florentin I, Georgakopoulos A, Alexis MN. Maintenance of glucocorticoid receptor function following severe heat-shock of heat-conditioned cells. **Mol Cell Endocrinol**. 2003 Mar 28;201(1-2):97-108.
36. Gritzapis AD, Baxevanis CN, Missitzis I, Katsanou ES, Alexis MN, Yotis J, Papamichail M. Quantitative fluorescence cytometric measurement of estrogen and progesterone receptors: correlation with the hormone binding assay. **Breast Cancer Res Treat**. 2003 Jul;80(1):1-13.
37. Baki L, Alexis MN. Regulation of tyrosine aminotransferase gene expression by glucocorticoids in quiescent and regenerating liver. **Biochem J**. 1996 Dec 15;320 (Pt 3):745-53.
38. Kitraki E, Alexis MN, Papalopoulou M, Stylianopoulou F. Glucocorticoid receptor gene expression in the embryonic rat brain. **Neuroendocrinology**. 1996 Apr;63(4):305-17.
39. Mitsiou DJ, Alexis MN. Temporary loss of glucocorticoid receptor-mediated regulation of gene expression in heat-shocked cells. **FEBS Lett**. 1995 Apr 10;362(3):309-15.
40. Kitraki E, Alexis MN, Stylianopoulou F. Glucocorticoid regulation of glycerolphosphate dehydrogenase expression in the developing rat brain. **Neurochem Res**. 1995 Mar;20(3):285-90.
41. Baki L, Alexis MN. The efficiency of nuclear processing of the tyrosine aminotransferase mRNA transcript increases after partial hepatectomy. **Eur J Biochem**. 1994 Nov 1;225(3):797-803.
42. Alexis MN, Mavridou I, Mitsiou DJ. Subunit composition of the untransformed glucocorticoid receptor in the cytosol and in the cell. **Eur J Biochem**. 1992 Feb 15;204(1):75-84.
43. Alexis MN, Kitraki E, Spanou K, Stylianopoulou F, Sekeris CE. Ontogeny of the glucocorticoid receptor in the rat brain. **Adv Exp Med Biol**. 1990;265:269-76. Review.
44. Alexis MN, Baki L, Eleftheriou C, Sekeris CE. Glucocorticoid receptor structure as probed by endogenous proteases. **J Steroid Biochem**. 1988;30(1-6):225-31.
45. Alexis MN. Glucocorticoids – New insights into their molecular mechanisms. **Trends Pharmacol Sci**. 1987; 8:10-11. View.
46. Kitraki E, Alexis MN, Stylianopoulou F. Glucocorticoid receptors in developing rat brain and liver. **J Steroid Biochem**. 1984 Jan;20(1):263-9.

47. Kitraki E, Alexis MN, Stylianopoulou F. Ontogeny of rat brain and liver glucocorticoid receptors. **Acta Endocrinol Suppl** (Copenh). 1984;265:5-6.
48. Alexis MN, Djordević-Marković R, Sekeris CE. Activation and changes in the sedimentation properties of rat liver glucocorticoid receptor. **J Steroid Biochem**. 1983 Jun;18(6):655-63.
49. Alexis MN, Stylianopoulou F, Kitraki E, Sekeris CE. The distribution and properties of the glucocorticoid receptor from rat brain and pituitary. **J Biol Chem**. 1983 Apr 25;258(8):4710-4.
50. Alexis M, Stylianopoulou F, Kitraki E, Manz B. Glucocorticoid receptors in rat brain and pituitary. **Prog Clin Biol Res**. 1982;102 pt A:207-17.
51. Kardami E, Alexis M, de la Paz P, Gratzer W. Phosphorylation and the binding of calcium and magnesium to skeletal myosin. **Eur J Biochem**. 1980 Sep;110(1):153-60.
52. Alexis MN, Gratzer WB. Interaction of skeletal myosin light chains with calcium ions. **Biochemistry**. 1978 Jun 13;17(12):2319-25.
53. Alexis MN, Gratzer WB. Homo-dimers in rabbit skeletal myosin. **FEBS Lett**. 1976 Aug 1;67(1):119-21.

Patents

1. Fokialakis N, Aligiannis N, Mitakou S, Skaltsounis AL, Pratsinis H, Alexis MN. Onobrychis and Genista products for the prevention and treatment of hormone-dependent disorders. **O.B.I. 1004825**
2. Alexis MN, Dimolea E, Florentin I, Pechtelidou A and Sekeris CE. Monoclonal and polyclonal antibodies to glucocorticoid and estrogen receptors as immunodiagnostics for cancer prognosis. **O.B.I. 1005417**
3. Micha-Screttas M, Steele BR, Villalonga-Barber C, Alexis MN. New substituted stilbenoid derivatives with neuroprotective activity. **O.B.I. 1005435**
4. Alexis MN, Papahatjis D, Sekeris CE, Assimomitis N, Siriani D. Tissue specific antiestrogens selective for estrogen receptor alpha. **O.B.I. 1005694**
5. Gravanis A, Calogeropoulou T, Kastanas E, Margioris A, Charalambopoulos I, Avlonitis N, Minas V, Alexaki VI, Tsatsanis C, Alexis MN, Remboutsika E, Vergou B, Neophytou C. Neurosteroid compounds. **W02008155534 A2**. AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, FF, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.
6. Calogeropoulou T, Alexis MN, Koini E, Avlonitis N, Alexi X. 1,4-Benzoxazine Derivatives. **O.B.I. 1007084**.

Competitively Funded Projects

1. EU Initial Training Network (ITN) Research Programme, "A European Research Training Site for the Design and Synthesis of Novel Neuroprotective and Hypoglycaemic Agents through a Multi-disciplinary approach", MTKD-CT-2006-020575, 2006-2010.
2. EU Network of Excellence "ECNIS – Environmental Cancer risks, Nutrition and Individual Susceptibility", FOOD-CT-2005-513943, 2005-2010.
3. Greek Framework Programme Competitiveness- Research Network PENED, "In search of a role for estrogen receptor beta in breast cancer", 03EΔ644, 2006-2009.
4. EU Transfer of Knowledge (TOK) Research Programme, "Macromolecular assemblies involved in regulated gene expression", MTKD-CT-2004-509836, 2004-2008.
5. Greek Framework Programme Competitiveness - Research Network DSBEPRO, "Assessment of the estrogenic activity of natural compounds and derivatives thereof", 02DSBEPRO32, 2006-2008.
6. Greek Framework Programme Competitiveness - Research Network EUREKA, "Novel Selective Estrogen Receptor Modulators: Synthesis and evaluation of biological activities", EUREKA E!3060-SERMS, 2004-2007.
7. Greek Framework Programme Competitiveness- Research Network PENED, "Neurosteroids; Investigation of the mechanism of action of neurosteroids as neuroprotective agents; Development of new neurosteroids of high neuroprotective and marginal hormonal activity", 01EΔ258, 2002-2006.
8. Greek Framework Programme Competitiveness - funding scheme PRAKSE, "Tissue-specific antiestrogens", 02PRAKSE97, 2003-2005.
9. Greek Framework Programme Competitiveness - funding scheme PRAKSE, "Immunodiagnostics for breast cancer prognosis", 02PRAKSE98, 2003-2005.
10. Greek Framework Programme Competitiveness - research network PAVET, "Immunochemical tools for breast cancer prognosis", PAVET2000-00BE199, 2001-2004.

11. EU Marie Curie Development Host (HD) Research Programme, "Regulation of transcription and mRNA processing by oncogenic signals", HPMD-CT-2001-00116, 2002-2005.
12. EU Marie Curie Training and Mobility Programme, "Effect of glucocorticoid receptor beta isoform on glucocorticoid signaling", HPMF-CT-2000-00904, 2001-2002.
13. Greek Framework Programme EPET-II – research network EKVAN, "Development of new methods for prognosis and treatment of hormone-dependent cancer", EKVAN66, 1998-2001.
14. Greek Framework Programme EPET-II – funding scheme EPY, "Development of New Diagnostic Methods and Analysis Products for Hormone-dependent neoplasias", 96EPY39, 1997-2000.
15. Greek Framework Programme EPET-II – funding scheme PENED, "The Thermotolerant Human Cell as a Protein Production System", 95ED784, 1996-1997.
16. Greek Framework Programme EPET-I – funding scheme 1.4, "Steroid Receptors as Biological Markers of Tumor Responsiveness to Endocrine Therapy", 14EIE5, 1990-1993.

Abstracted Work in Progress

1. Oikonomou P, Petraki C, Dimosthenous K, Alexis MN. The estrogen receptor beta status and prognosis of human prostate cancer. **JOURNAL OF ANDROLOGY** Volume: 30 Page: 78 Supplement: Suppl. S Published: MAR-APR 2009.
2. Halabalaki M, Roumeliotis IT, Giannopoulou E, Alexi X, Meijer L, Alexis MN, Skaltsounis AI, Garbis DS. Pharmacoproteomic and toxicogenomic study of the natural product Ebenfuran III in DU-145 prostate cancer cells using iTRAQ with 2D LC and tandem mass spectrometry. **PLANTA MEDICA** Volume: 74 Issue: 9 Page: 916 Published: JUL 2008.
3. Tsiripillou P, Alexi X, Aligiannis N, Alexis MN, Mitaku S. In vitro investigation of estrogenic activity of extracts and pure compounds obtained from the aerial parts of *Glycyrrhiza glabra*. **PLANTA MEDICA** Volume: 74 Issue: 9 Page: 1025 Published: JUL 2008.
4. Gouedard C, Vidali YM, Mitsiou Dj, Alexis MN. Effects of ErbB2/HER2 over-expression on breast cancer cell growth and on the regulation of the cyclin D1 and IEX-1 genes: implication for tamoxifen resistance. **FEBS JOURNAL** Volume: 275 Page: 137 Supplement: Suppl. 1 Published: JUN 2008