PERSONAL INFORMATION	
SURNAME	GEORGATOS
NAME	SPYROS
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TEL.	6973361249

POSITIONS	
2002-present	Professor of Cell and Molecular Biology, The University of Ioannina, School of Medicine, Ioannina, Greece
2003-present	***Associate Member/Group Leader***, Biomedical Research Division, Institute of Molecular Biology & Biotechnology, Foundation of Research & Technology, Ioannina, Greece
1995 - 2002:	Associate Professor of Cell and Molecular Biology, The University of Crete, School of Medicine, Heraklion, Greece.
1990 - 1995:	Group Leader, Program of Cell Biology, European Molecular Biology Laboratory (EMBL), Heidelberg, Germany.
1988 - 1989:	Assistant Professor, The Rockefeller University, Laboratory of Cell Biology, New York, USA
1987:	Research Associate of Cell Biology, The Rockefeller University, Laboratory of Cell Biology, New York, USA.
1984 - 1986:	Post-Doctoral Fellow, The Rockefeller University, Laboratory of Cell Biology, New York, USA.
1980 - 1981:	Research Fellow, The California Institute of Technology, Division of Biology, Pasadena, California, USA.

EDUCATION	
1981 – 1984:	Graduate student, Yale University, Department of Biology, New Haven, Connecticut, USA (Ph. D. awarded in 1985)
1974 - 1980:	Medical student, The National and Kapodistrian University of Athens, School of Medicine (M.D.)

PUBLICATIONS

1. Soupsana K, Karanika E, Kiosse F, Christogianni A, Sfikas Y, Topalis P, Batistatou A, Kanaki Z, Klinakis A, Politou AS, **Georgatos S**. (2021): Distinct roles of haspin in stem cell division and male gametogenesis. *Sci Rep.*, **11**:19901.

2. Papamokos GV, Tziatzos G, Papageorgiou DG, **Georgatos S**, Kaxiras E, Politou AS. (2021): Progressive Phosphorylation Modulates the Self-Association of a Variably Modified Histone H3 Peptide. *Front Mol Biosci.*, **8**:698182.

3. Karanika E, Soupsana K, Christogianni A, Stellas D, Klinakis A, Politou AS, **Georgatos S**. (2020): Haspin-dependent and independent effects of the kinase inhibitor 5-Iodotubercidin on self-renewal and differentiation. *Sci Rep*., **10**:232.

4. Giannios I, Chatzantonaki E, **Georgatos S**. (2017): Dynamics and Structure-Function Relationships of the Lamin B Receptor (LBR). *PLoS One*. **12**(1):e0169626.

5. Christogianni A, Chatzantonaki E, Soupsana K, Giannios I, Platania A, Politou AS, **Georgatos S**. (2017): Heterochromatin remodeling in embryonic stem cells proceeds through stochastic de-stabilization of regional steady-states. *Biochim Biophys Acta*.

6. S. Liokatis, C. Edlich, K. Soupsana, I. Giannios, P. Panagiotidou, K. Tripsianes, M. Sattler, **S.D. Georgatos** and A.S. Politou (2012): Solution structure and molecular interactions of lamin B receptor Tudor domain. *J. Biol. Chem.*, **287**:1032-1042.

7. G. V. Papamokos, G. Tziatzos, D.G. Papageorgiou, **S.D. Georgatos**, A.S. Politou and E. Kaxiras (2012): Structural Role of RKS Motifs in Chromatin Interactions: A Molecular Dynamics Study of HP1 Bound to a Variably Modified Histone Tail. *Biophys. J.*, **102**:1926-1933 (*cover page*).

8. Y. Markaki, A. Christogianni, A.S. Politou, **S.D. Georgatos** (2009): Phosphorylation of histone H3 at threonine-3 is part of a combinatorial pattern that marks and configures mitotic chromatin. J. Cell Sci., 122:2809-2819.

9. T. Akoumianaki, D. Kardassis, H. Polioudaki, **S.D. Georgatos**, P.A. Theodoropoulos (2009) Nucleocytoplasmic shuttling of soluble tubulin in mammalian cells. J Cell Sci., 122:1111-1118.

10. **S.D. Georgatos**, Y. Markaki, A. Christogianni, A.S. Politou. (2009) Chromatin remodeling during mitosis: a structure-based code? Front Biosci., 14:2017-2027 (invited review).

11. G.K. Dialynas, S. Terjung, J.P. Brown, R.L. Aucott, B. Baron-Luhr, P.B. Singh, **S. D. Georgatos** (2007) Plasticity of HP1 proteins in mammalian cells. J Cell Sci., 120:3415-24.

12. E. Ritou, M. Bai, **S.D. Georgatos**. (2007) Variant-specific patterns and humoral regulation of HP1 proteins in human cells and tissues. J Cell Sci., 120:3425-35.

13. J. Michalakis, **S.D. Georgatos**, E. de Bree, H. Polioudaki, J. Romanos, V. Georgoulias, D.D. Tsiftsis, P.A. Theodoropoulos (2007). Short-Term Exposure of Cancer Cells to Micromolar Doses of Paclitaxel, with or without Hyperthermia, Induces Long-Term Inhibition of Cell Proliferation and Cell Death In Vitro. Ann Surg Oncol. 14:1220-1228.

14. Dialynas GK, Makatsori D, Kourmouli N, Theodoropoulos PA, McLean K, Terjung S, Singh PB, **Georgatos SD**. (2006) Methylation-independent binding to histone H3 and cell cycle-dependent incorporation of HP1beta into heterochromatin. J Biol Chem., 281:14350-60.

15. Michalakis J, **Georgatos SD**, Romanos J, Koutala H, Georgoulias V, Tsiftsis D, Theodoropoulos PA. (2005). Micromolar taxol, with or without hyperthermia, induces mitotic catastrophe and cell necrosis in HeLa cells. Cancer Chemother Pharmacol., 56:615-22.

16. D. Makatsori, N. Kourmouli, H. Polioudaki, L.D. Shultz, K. McLean, P.A. Theodoropoulos, P.B. Singh and **S. D. Georgatos** (2004). The inner nuclear membrane protein LBR forms distinct microdomains and links epigenetically marked chromatin to the nuclear envelope. J Biol Chem., 279:25567-25573.

17. H. Polioudaki, G. Markaki, N. Kourmouli, G Dialynas, P.A. Theodoropoulos, P.B. Singh and **S. D. Georgatos** (2004). Mitotic phosphorylation of histone H3 at threonine 3. FEBS Lett. 560:39-44.

18. P.B. Singh and **S.D. Georgatos** (2002). HP1: facts, open questions, and speculation. J. Struct. Biol. 140:10-16 (invited review).

19. H. Polioudaki, N. Kourmouli, V. Drosou, A. Bakou, P.A. Theodoropoulos, P.B. Singh, T. Giannakouros and **S. D. Georgatos** (2001). Histones H3/H4 form a tight complex with the inner nuclear membrane protein LBR and heterochromatin protein 1. EMBO Rep. 2:920-925.

20. **S. D. Georgatos** (2001): The inner nuclear membrane: simple, or very complex? EMBO J., 20:2989-2994 (invited review).

21. N. Kourmouli, G. Dialynas, C. Petraki, A. Pyrpasopoulou, P. B. Singh, **S. D. Georgatos**, and P. A. Theodoropoulos (2001): Binding of Heterochromatin Protein 1 to the nuclear envelope is regulated by a soluble form of tubulin. J. Biol. Chem., 276:13007-1314.

22. N. Kourmouli, P. A. Theodoropoulos, G. Dialynas, A. Bakou, A. S. Politou, I.G. Cowell, P. B. Singh, and **S. D. Georgatos** (2000): Dynamic associations of Heterochromatin Protein 1 with the nuclear envelope. EMBO J., 19: 6558-6568.

23. P. A. Theodoropoulos, H. Polioudaki, O. Kostaki, S. Derdas, V. Georgoulias, C. Dargemont, and **S. D. Georgatos** (1999): Taxol affects nuclear lamina and pore complex organization and inhibits import of karyophilic proteins into the cell nucleus. Cancer Res., 59: 4625-4633.

24. **S. D. Georgatos**, and P. A. Theodoropoulos (1999): Rules to assemble by: what drives nuclear envelope reformation at the end of mitosis? Critical Reviews in Eukaryotic Gene Expression, 9: 373-381 (invited review).

25. P. A. Theodoropoulos, H. Polioudaki, M. Koulentaki, E. Kouroumalis, and **S. D. Georgatos** (1999): PBC68: a nuclear pore complex protein that associates reversibly with the mitotic spindle. J. Cell Sci., *112:* 3049-3059.

26. F. Gounari, N. Karagianni, A. Mincheva, P. Lichter, **S. D. Georgatos** and V. Schirrmacher (1997): The mouse filensin gene: structure and relation to other intermediate filament genes. FEBS Lett., 413: 371-378.

27. C. Maison, A. Pyrpasopoulou, P. A. Theodoropoulos and **S. D. Georgatos** (1997): The inner nuclear membrane protein LAP1 forms a native complex with B-type lamins and partitions with spindle-associated mitotic vesicles. EMBO J., 16: 4839-48550.

28. E. Nikolakaki, J. Meier, G. Simos, **S. D. Georgatos** and T. Giannakouros (1997): Mitotic phosphorylation of the lamin B receptor by a serine/arginine kinase and p34/cdc2. J. Biol. Chem., 272: 6208-6213.

29. **S. D. Georgatos**, A. Pyrpasopoulou and P. A. Theodoropoulos (1997): Nuclear envelope breakdown in mammalian cells involves stepwise lamina disassembly and microtubule-driveen deformation of the nuclear membrane. J. Cell Sci., 110: 2129-2140.

30. A. Pyrpasopoulou, J. Meier, C. Maison, G. Simos and **S. D. Georgatos** (1996): The lamin B receptor (LBR) provides essential chromatin-docking sites at the nuclear envelope. EMBO J., 15:7108-7119.

31. G. Simos, C. Maison and **S. D. Georgatos** (1996): Characterization of p18, a component of the lamin B receptor complex and a new integral membrane protein of the avian erythrocyte nuclear envelope. J. Biol. Chem., 271: 12617-12625.

32. E. Nikolakaki, G. Simos, **S. D. Georgatos** and T. Giannakouros (1996): A nuclear envelope-associated kinase phosphorylates arginine-serine motifs and modulates interactions between the lamin B receptor and other nuclear proteins. J. Biol. Chem, 271: 8365-8372.

33. **S. D. Georgatos**, F. Gounari, G. Goulielmos and U. Aebi (1997): To bead or not to bead? Lens-specific intermediate filaments revisited. J. Cell Sci., 110: 2629-2634 (review).

34. G. Goulielmos, F. Gounari, S. Remington, S. Mueller, M. Haener, U. Aebi and **S. D. Georgatos** (1996): Filensin and phakinin form a novel type of beaded intermediate filaments and co-assemble de novo in cultured cells. J. Cell Biol., 132: 643-655.

35. G. Goulielmos, S. Remington, F. Schwesinger, **S. D. Georgatos** and F. Gounari (1996): Contribution of the structural domains of filensin in polymer formation and filament distribution. J. Cell Sci., 109: 447-455.

36. **S. D. Georgatos** and C. Maison (1996): Integration of intermediate filaments into cellular organelles. Int. Rev. Cytol. 164: 91-123 (invited review).

37. C. Maison, A. Pyrpasopoulou and **S. D. Georgatos** (1995). Vimentin-associated mitotic vesicles capture chromosomes in a lamin B and phosphorylation-dependent manner. EMBO J. 14: 3311-3324.

38. **S.D. Georgatos**, J. Meier and G. Simos (1994): Lamins and lamin-associated proteins. Curr. Opin. Cell Biol., 6: 347-353 (invited review).

39. **S. D. Georgatos** (1994): Towards an understanding of nuclear morphogenesis.

    J. Cell. Biochem. 55: 69-76 (invited review).

40. G. Simos and **S. D. Georgatos** (1994): The lamin B receptor-associated protein p34 shares sequence homology and antigenic determinants with the splicing factor 2-associated protein p32. FEBS Lett., 346: 225-228.

41. J. Meier and **S. D. Georgatos** (1994): Type B lamins remain associated with the integral nuclear envelope protein p58 during mitosis: implications for nuclear reassembly. EMBO J., 13: 1888-1898.

42. **S. D. Georgatos**, F. Gounari and S. Remington (1994): The beaded intermediate filaments and their potential functions in the eye lens. BioEssays, 6: 413-418 (invited review).

43. F. Gounari, A. Merdes, R. Quinlan, J. Hess, P. G. FitzGerald, C. Ouzounis and **S. D. Georgatos** (1993): Bovine filensin possesses primary and secondary structure similarity to intermediate filament proteins J. Cell Biol., 121: 847-853.

44. A. Merdes, F. Gounari and **S. D. Georgatos** (1993): The 47kDa lens-specific protein phakinin is a tailless intermediate filament protein and an assembly partner of filensin. J. Cell Biol., 123: 1507-1516.

45. P. D. Kouklis, M. Hatzfeld, M. Brunkener, K. Weber and **S. D. Georgatos** (1993): In vitro assembly properties of vimentin mutagenized at the □-site tail motif. J. Cell Sci., 106: 919-928.

46. K. Djabali, A. Zissopoulou, M. J. de Hoop, **S. D. Georgatos** and C. G. Dotti (1993): Peripherin expression in hippocampal neurons induced by muscle soluble factors. J. Cell Biol., 123: 1197-1206.

47. **S. D. Georgatos** (1993): Dynamics of intermediate filaments: recent progress and unanswered questions. FEBS Lett. 318: 101-107 (review).

48. P. D. Kouklis, A. Merdes, T. Papamarcaki and **S. D. Georgatos** (1993): Transient arrest of 3T3 cells in mitosis and inhibition of nuclear lamin reassembly around chromatin induced by anti-vimentin antibodies. Eur. J. Cell Biol., 62: 224-236.

49. C. Maison, H. Horstmann and **S. D. Georgatos** (1993): Regulated docking of nuclear membrane vesicles to vimentin filaments during mitosis. J. Cell Biol., 123: 1491-1505.

50. **S. D. Georgatos** (1993): Anti-idiotypic antibodies: methods, applications and critique. Methods in Cell Biology, 37: 407-440 (invited review) (Academic Press, D. Asai editor).

51. G. Simos and **S. D. Georgatos** (1992): The inner nuclear membrane protein p58 is in vivo associated with a p58-kinase and the nuclear lamins. EMBO J., 11: 4027-4036.

52. P. D. Kouklis, P Traub and **S. D. Georgatos** (1992): Involvement of the consensus sequence motif at coil 2b in the assembly and stability of vimentin intermediate filaments. J. Cell Sci., 102: 31-41.

53. M. Brunkener and **S. D. Georgatos** (1992): Membrane-binding properties of filensin, a cytoskeletal protein of the lens fiber cells. J. Cell Sci., 103: 709-718.

54. J. Yuan, G. Simos, G. Blobel and **S. D. Georgatos** (1991): Binding of lamin A to polynucleosomes. J. Biol. Chem. 266: 9211-9215.

55. K. D. Radsak, K. H. Brucher and **S. D. Georgatos** (1991): Focal nuclear envelope lesions and specific nuclear lamin A/C dephosphorylation during infection with human cytomegalovirus. Eur. J. Cell Biol. 54: 299-304.

56. T. Papamarcaki, P. D. Kouklis, T. E. Kreis and **S. D. Georgatos** (1991): The "lamin B-fold". J. Biol. Chem. 266: 21247-21251.

57. K. Djabali, M-M. Portier, F. Gros, G. Blobel and **S.D. Georgatos** (1991): Network antibodies identify nuclear lamin B as a physiological attachment site for peripherin intermediate filaments. Cell 64: 109-121.

58. P. D. Kouklis, T. Papamarcaki, A. Merdes and **S. D. Georgatos** (1991): A potential role of the COOH-terminal domain in the lateral packing of type III intermediate filaments. J. Cell Biol. 114: 773-786.

59. A. Merdes, M. Brunkener, H. Horstmann and **S. D. Georgatos** (1991): Filensin: a new vimentin-binding, polymerization-competent and membrane-associated protein of the lens fiber cell. J. Cell Biol. 115: 397-410.

60. J. Appelbaum, G. Blobel and **S. D. Georgatos** (1990): In vivo phosphorylation of the lamin B receptor. J. Biol. Chem. 265: 4181-4184.

61. **S. D. Georgatos**, I. Maroulakou and G. Blobel (1989): Lamin A, lamin B, and lamin B receptor analogues in Yeast. J. Cell Biol. 108: 2069-2082.

62. H. J. Worman, J. Yuan, G. Blobel and **S. D. Georgatos** (1988): A lamin B receptor in the nuclear envelope. PNAS 85: 8531-8534.

63. H.J. Worman, I. Lazaridis and **S. D. Georgatos** (1988): Nuclear lamina heterogeneity in mammalian cells. J. Biol. Chem. 263: 12135-12141.

64. **S. D. Georgatos**, C. Stournaras and G. Blobel (1988): Heterotypic and homotypic associations between the nuclear lamins: site-specificity and control by phosphorylation. PNAS 85: 4325-4329.

65. **S. D. Georgatos** and G. Blobel (1987): Two distinct attachment sites for vimentin along the plasma membrane and the nuclear envelope in avian erythrocytes: a basis for a vectorial assembly of intermediate filaments. J. Cell Biol. 105: 105-115.
66. **S. D. Georgatos**, K. Weber, N. Geisler and G. Blobel (1987): Binding of two desmin derivatives to the plasma membrane and the nuclear envelope of avian erythrocytes: evidence for a conserved site-specificity in intermediate filament-membrane interactions. PNAS 84: 6780-6784.
67. **S. D. Georgatos** and G. Blobel (1987): Lamin B constitutes an intermediate filament attachment site at the nuclear envelope. J. Cell Biol. 105: 117-125.
68. **S. D. Georgatos** (1987): Current approaches to study receptors of biological substances. Iatriki 51: 141-149 (review).
69. **S. D. Georgatos,** D.C. Weaver and V.T. Marchesi (1985): Site-specificity in vimentin-membrane interactions: intermediate filament subunits associate with the plasma membrane via their head domains. J. Cell Biol. 100: 1962-1967.
70. **S. D. Georgatos** and V.T. Marchesi (1985): The binding of vimentin to human erythrocyte membranes: a model system for the study of intermediate filament-membrane interactions. J. Cell Biol**.** 100: 1955-1961.
71. **S. D. Georgatos** (1984): The red cell membrane-skeleton. Iatriki 45: 8-13 (review).

MEMBERSHIPS & REVIEWING ACTIVITIES

1985-present:	Evaluator of research grants for EC, USA, Canada, Israel; reviewer for many scientific journals (EMBO J., EMBO Rep., J Cell Science, PLoS Genetics, J Cell Biology, J Biol Chem. and other).
1999-present:	Member of the European Molecular Biology Organization (EMBO).

TEACHING ACTIVITIES

2003-now:	Regular Faculty (professor), graduate and undergraduate courses in Cell and Molecular Biology, University of Ioannina, School of Medicine, Ioannina, Greece.
1996 – 2002:	Regular Faculty (associate professor), graduate and undergraduate courses in Cell and Molecular Biology, University of Crete, School of Medicine, Heraklion, Greece.
1990-1995:	Regular Faculty (group leader), graduate courses and practical courses in Cell and Molecular Biology, EMBL, Heidelberg, Germany.

SUPERVISION OF GRADUATE STUDENTS & POSTODOCTORAL FELLOWS *(if applicable)*

1988-1990:	2 post-docs, 2 Ph.D students.
1990-1995:	9 post-docs, 4 Ph. D students
1996-2002:	3 post-docs, 4 Ph. D students, 2 master students.
203-now:	7 post-docs, 11 Ph.D students, 4 master students.

FELLOWSHIPS, AWARDS, GRANTS

1979:	State award for academic excellence, State Scholarship Foundation (IKY), Athens University S Medicine, Athens, Greece.
1989:	Irma T. Hirsch/Monique Weil-Caulier Career Scientist Award, Rockefeller University, New York, USA (1989).
1998:	Distinguished Scientist Visiting Award, Curie Institute, France.

Project Title	*Funding source*	*Period*	**Role of the PI**
Establishment of "capacity building" infrastructures in Biomedical Research (BIOMED-20)	Operational Programme "Competitiveness, Entrepreneurship and Innovation" (NSRF 2014-2020)	2020-2023	PI
The New Biology of Intrinsically Disordered Proteins: A Targeted, Multidisciplinary Analysis of IDP Structure, Function and Properties in Real Time and True Cellular Conditions	Programme Thalis, co-financed by ESF and Greek national funds- "Education and Lifelong Learning"	2012-2015	PI
Novel models for studies of gene regulation and epigenetics	Programme PENED 2003, GSRT	2006-2009	PI
Modelling the histone code: Computational study and biophysical analysis	Programme PENED 2003, GSRT	2006-2009	PI
Modelling and Experimental validation of the histone code	Programme Pythagoras II-GSRT	2005-2007	Partner
Nuclear chaperones: Structural/Functional Characterization	Programme Pythagoras II-GSRT	2005-2007	PI
KRIPIS II	GSRT	2017	Partner
EPAN	GSRT	2003	PI

Research interests

Long-term interest in multimeric cellular structures, such as the nuclear lamina and the chromatin network. Current research focuses on chromatin remodeling during self-renewal and differentiation of embryonic stem cells.

Major achievements

- Discovery of the Lamin B Receptor (LBR or p58), the first example of an integral membrane protein of the nuclear envelope; demonstration that LBR is associated with the nuclear lamina and peripheral heterochromatin.
- Discovery of a new, mitosis-specific modification of histone H3 (H3T3ph); demonstration that H3T3ph is part of a combinatorial epigenetic mark (PMM) that configures mitotic chromatin.
- Identification of a multicomponent complex that contains heterochromatin protein 1 (HP1), LBR and core histones.
- Demonstration that the three forms of HP1 (HP1α,β,γ) are differentially recruited to heterochromatin and exhibit distinct dynamic properties.
- Demonstration that chromatin and HP1 dynamics in embryonic stem cells fluctuate in a stochastic fashion.
- First demonstration that nuclear envelope rupture during mitosis occurs independently of lamin depolymerization.
- Expression profile of embryonic stem cells that either lack or over-express the kinase Haspin (which is responsible for H3T3ph)
- Expression profile of embryonic stem cells that either lack or over-express LBR and pathogenic LBR mutants.

Impact of research

Published work (**68** publications in peer-reviewed journals) has collected **5,880** citations with an H-index of **44** (according to Google Scholar).

Invited presentations to international conferences and/or advanced schools

- Invited speaker in several Gordon Conferences (1980's).
- Invited speaker to Euro-conferences (1990's).
- Instructor to EMBO courses (1990's).
- Invited speaker at Cambridge University, MRC Mill-Hill, University of Toulouse (2000's).

Organization of international conferences

Organized 2 Euro-conferences on Cell Dynamics in Heraklion Crete (1997 and 1998).

Affiliations and awards

- Received the Irma T. Hirsch/Monique Weil -Caulier Career Scientist Award in 1989.
- Election as a regular member in the European Molecular Biology Organization (EMBO) in 1999.

Building of infrastructures

- Established the first Confocal Microscopy Facility in the country at the Medical School of the University of Crete.
- After joining the University of Ioannina School of Medicine and the Division of Biomedical Research (IMBB, FORTH-ITE), established a Stem Cell Facility and helped organize the first Super-resolution Light Microscopy Facility.
- Established Institute of Biosciences of the University Research Center, University of Ioannina, Member of the Managing Committee

Contributions to National Science Policy

In 2015-2016, worked (on leave) in the Greek Ministry of Education and Research and helped establish the Hellenic Foundation of Research and Innovation (H.F.R.I.).

2018-todate: Vice-Rector for Research, University of Ioannina

Major contributions to the early careers of excellent researchers

Collaborated with more than 80 students, young scientists and academics during stay in the US, Germany and Greece. Several of these people are now Faculty or Staff in European and American Institutions. These include: Fotini Gounari (The University of Chicago, Chicago, USA), Howard Worman (Columbia University, New York, USA), Christele Maison (Institute Curie, Paris, France); Andreas Merdes (CBI, Toulouse, France), George Dialynas (University of Southern California, USA), Yolanda Markaki (University of California, Los Angeles, USA), George Simos (University of Thessaly, Larissa, Greece), George Goulielmos (University of Crete, Heraklion, Greece), Thomais Papamarcaki (University of Ioannina, Ioannina, Greece), Panos Kouklis (University of Ioannina, Ioannina, Greece).