CURRICULUM VITAE

June 2019

Susan Margaret GASSER

Present position: Director emeritus and Senior group leader,
Professor of Molecular Biology, University of Basel
Friedrich Miescher Institute for Biomedical Research;
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Date of birth: 29 March 1955

Civil status: Married to James Gasser; son, Marc (b. 1986)

Citizenship: Swiss (Lungern, Obwalden)

Higher education:

St John's College, USA	1974 - 1976
University of Freiburg, Freiburg, Germany	1976 - 1977
University of Chicago, Chicago, USA	1977 - 1979
B.A. with Honors in Biological Sciences (thesis in Biophysics; M. Makinen)	
University of Basel, Basel, Switzerland	1979 - 1982
Ph.D., Magna cum laude (thesis in Biochemistry; G. Schatz, Biozentrum)	

Research positions:

University of Basel, Postdoctoral assistant, Dept. of Biochemistry (G. Schatz)	1982
University of Geneva, Maître assistante, Molecular Biology Department (U. Laemmli)	1983 - 1986
Swiss Institute for Experimental Cancer Research (Jr Group leader, Lausanne, Switzerland	1986 - 1990
Swiss Institute for Experimental Cancer Research (Sr Group leader), Lausanne, Switzerland	1991 - 2001
University of Geneva, Professor of Molecular Biology, Geneva, Switzerland	2001 - 2004
University of Basel, Professor of Molecular Biology, Basel, Switzerland	since Jan 2005
Friedrich Miescher Institute for Biomedical Research, Director	2004 - 2019
Friedrich Miescher Institute for Biomedical Research, Group leader	2004 - present

Honors :

National Latsis Prize (Swiss)	1991
Election to EMBO	1993
Friedrich Miescher Prize (Swiss Biochemical Society)	1994
Election to Academia Europaea	1998
Medal of Honor from the 3rd Medical Faculty of Charles University (Prague)	1999
Elected to the Académie de France, Institut de science	2005
Otto Naegeli Prize for Medical Research (Swiss)	2006
Gregor Mendal Medal of the Czech Academy of Science	2006
Elected to the Swiss Academy of Medical Sciences	2006
Elected to the German Academy of Sciences, Leopoldina	2007
Fellow of the American Association for the Advancement of Science (USA)	2008
Nucleic Acid Award of the British Royal Academy of Chemistry	2009
Prix International de l'INSERM, France	2011
EMBO/FEBS Women in Science Award	2012
Weizmann Institute Women in Science Award, Rehovot, Israel	2013
Doctorat honoris causa in Molecular Biology, University of Lausanne, Switzerland	2014
Lee Hartwell Award, Genetics Society of America	2016
Doctorat med. honoris causa, Charles University of Prague, Czech Republic	2016

Visiting professorships :

Institute of Protein Science, Osaka University, Japan, Prof A. Shinohara, host	Apr-May 2011
Graduate School of Adv Integration Science, Chiba University, Japan, Prof A. Matsuura, host	2012-2013
Institute of Protein Science, Osaka University, Japan, Prof A. Shinohara, host	2014-2016

Research or advisory boards, community service:

Member, Research Council of the Swiss National Science Foundation, Bern	1993-2002
Member, Career Development Committee of European Life Sciences Organization	2000-2003
Member, Selection Committee, SNF Career Professorship Program, Bern	2000-2009
Member, Selection Jury, Institut Universitaire de France (IUF), Paris	2002-2003
Member, Search Committee, Körber-Foundation, Hamburg	2004-2007
Review Board, DFG-Sonderforschungsbereich "Chromatin", Heidelberg/Munich	2004-2008
Board of Directors, Gebert Rüf Foundation, Basel	2006-2016
Advisory Board Cancer Research UK, London Research Institutes, London	2005-2010
Advisory Group on Health Research FP7, European Commission, Brussels	2006-2012
Advisory Board, Max Planck Institute for Dev. Biology, Tübingen	2006-2008
Advisory Board, Center for Integrative Genomics, Lausanne	2006-2011
European Research Council "Starting Grants" review panel Chairwoman, Brussels	2007
Advisory Board for Wellcome Trust Centre for Research, Dundee, Scotland	2007-2015
Advisory Board for Max Planck Institute for Immunology, Freiburg	2007-2014
Scientific Executive Board of the SystemsX.ch initiative, Switzerland	2007-2009
Member of the Nestlé Nutrition Council, Nestlé SA, Vevey, Switzerland	2008-2018
Coordinator, Swiss EuroBioimaging Initiative, Switzerland	2009-2014
Member of Foundation Board, Brupbacher Foundation, Zürich, Switzerland	2010-2014
Member, Scientific Committee of BioSysNet, Munich	2010-2014
Member, Wissenschafliches Beirat of the Institute of Advanced Study, Berlin	2012-2017
Member, Crick Institute Review Board, Scientific Advisory Board, London	2012, since 2016
Advisory Board for Max Planck Institut for Biophysical Chemistry, Göttingen, German	2012-2016
President's Science and Technology Advisory Council (STAC) of the European Commission	2013-2014
Selection committee for the Royal Netherlands Academy of Arts and Science Prize	2012-2015
Scientific Review Board of Netherlands Cancer Institute, Amsterdam, NL	2014
Member, Scientific Advisory Board for IGBMC, Strasbourg	2014-2016
Member, Swiss National Science Foundation Board, Bern	2016-2017
Member, Grant Review Committee, Career Development Committee, HFSPO	2003-2005, 2014-2018
Member, Executive Board, Genomics Institute of the Novartis Research Foundation	2014-2018
Chairwoman, Gender Commission of the Swiss National Science Foundation, Bern	2014-2020
Member, Scientific Advisory Council, EMBL, Heidelberg, Germany	since 2015
Member, Gairdner Prize Award committee, Toronto, Canada	since 2015
Member, Swiss Wissenschaftsrat (Swiss Science Council, SSC), Bern	since 2016
Member, Swiss Tropical and Public Health Institute Advisory Board, Basel	since 2016
Member, ETH Board (Governing Board of the ETH Domain), Switzerland	since 2018

Selected past responsibilities and research networks :

Chair person, EMBO Course Committee, Heidelberg, Germany	1994-1998
Staff representative, ISREC Executive Board, Epalinges s/Lausanne, Switzerland	1995-2001
Organizer, Gordon Research Conf. "Chromatin Structure and Function", New Hampshire, USA	1998-2000
Vice-chair and Chairman of the EMBO Council, Heidelberg, Germany	2000-2005
Chair person of the organizing committee, USGEB Meeting, Basel, Switzerland	2006-2007
Co-organizer of the EMBO Nuclear structure and dynamics meeting series, Avignon, France	2005-2011
Organizing committee, ASCB meeting, San Franscisco 2008	2007-2008
Commencement address "Rektorsrede" Dies academicus, University of Basel, Basel	2013
Co-organizer, Keystone meeting "DNA damage response", Banff, Canada	2013
Co-organizer, Joint FEBS/EMBO 50th anniversary conference, Paris, France	2014
Organizer, EMBO workshop "Cell and Developmental Systems" Arolla, Switzerland	2015
Organizer, Basel Life conference, Basel, Switzerland (Vice-chair of Executive board, EALS)	since 2017
SNF National Centre for Competence in Research "Frontiers in Genetics"	2001-2012
EU Network of Excellence "Epigenome", Member of Executive board	2003-2010
Swiss SystemsX RTD, "Cell Plasticity in Health and Disease", Coordinator	2009-2014
EU Network of Excellence, "Epigenesys", Associate member	2011-2016

Editorial Boards:

J. Cell Biology; J. Cell Science; Faculty of 1000, Genes to Cells, BioMedCentral, Trends in Cell Biology; Trends in Genetics, Molecular Cell, *EMBO Journal/ EMBO Reports*, P*LOS Biology, Epigenetics and Chromatin*, *The Nucleus*, *Current Opinion in Genetics and Development*

Original Publications (most highly cited papers are in bold):

1. Wilson, S.M. and Makinen, M.W. (1980)
"An Electron Microscope Study of the Fiber-to-crystal Transition of Sickle Cell Hemoglobin"
Proc. Natl. Acad. Sci. USA, *77,* 944 - 948.

2. Gasser, S.M., Ohashi, A., Daum, G., Böhni, P., Gibson, J., Reid, G., Yonetani, T. and Schatz, G. (1982)
"The Imported Mitochondrial Proteins Cytochrome b_2 and Cytochrome c_1 are processed in Two Steps"
Proc. Natl. Acad. Sci. USA, *79,* 267 - 271.

3. **Gasser, S.M., Daum, G. and Schatz, G. (1982) "Import of Proteins into Mitochondria: Energy-dependent Uptake of Precursors by Isolated Mitochondria"**
J. Biol. Chem. *257,* 13034 - 13041.

4. Daum, G., Gasser, S.M. and Schatz, G. (1982) "Import of Proteins into Mitochondria: Energy-dependent Two-step Processing of the Intermembrane Space Enzyme Cytochrome b_2 by Isolated Mitochondria"
J. Biol. Chem. *257,* 13075 - 13080.

5. Gasser, S.M. and Schatz, G. (1983) "Import of Proteins into Mitochondria: *In vitro* Studies on the Biogenesis of the Outer Membrane"
J. Biol. Chem. *258,* 3427 - 3431.

6. Riezman, H., Hay, R., Gasser, S.M., Daum, G., Schneider, G., Witte, C. and Schatz, G. (1983)
"The Outer Membrane of Yeast Mitochondria: Isolation of Outside-out Sealed Vesicles"
EMBO J. *2,* 1105 - 1112.

7. Van Loon, A.P.G.M., Kreike, J., DeRonde, A., Van der Horst, G.T.J., Gasser, S. and Grivell, L.A. (1983)
"Biosynthesis of the Ubiquinone:Cytochrome-bc1 Complex in Yeast"
Eur. J. Biochemistry, *135,* 457 - 463.

8. Gasser, S.M. and Laemmli, U.K. (1986)
"The Organization of Chromatin Loops: Characterization of a Scaffold Attachment Site"
EMBO J. *5*, 511 - 518.

9. **Gasser, S.M., Laroche, T., Falquet, J., Boy de la Tour, E. and Laemmli, U.K. (1986)**
"Metaphase Chromosome Structure: Involvement of Topoisomerase II"
J. Molecular Biology, *155*, 613 - 629.

10. **Gasser, S.M. and Laemmli, U.K. (1986) "Cohabitation of Scaffold Binding Regions with Upstream/Enhancer Elements of Three Developmentally Regulated Genes of *D. melanogaster.*"**
Cell, *46*, 521 - 530.

11. Gasser, S.M. and Laemmli, U.K. (1987)
"Improved Methods for the Isolation of Individual and Clustered Mitotic Chromosomes"
Exp. Cell Research,, *173*, 85 - 98.

12. Mirkovitch, J., Gasser, S.M. and Laemmli, U.K. (1987) "Relationship of Chromosome Structure and Gene Expression" **Phil. Trans. Royal Soc. (London)**, B *317*, 563 - 574.

13. Mirkovitch, J., Gasser, S.M. and Laemmli, U.K. (1988) "Scaffold Attachment of DNA Loops in Metaphase Chromosomes" **J. Molecular Biology,** *200*, 101 -109.

14. **Amati, B.B. and Gasser, S.M. (1988)**
"Chromosomal ARS and CEN Elements Bind Specifically to the Yeast Nuclear Scaffold"
Cell, *54*, 967 - 978.

15. Hofmann, J.F-X., Laroche, T., Brand, A.H. and Gasser, S.M. (1989)
"RAP-1 is necessary for DNA loop formation *in vitro* at the silent mating type locus, *HML*."
Cell, *57*, 725 - 737.

16. Karwan, R.M., Laroche, T., Wintersberger, U., Gasser, S.M. and Binder, M. (1990)
"Ribonuclease H(70) Is a Component of the Yeast Nuclear Scaffold"
J. Cell Science, *96*, 451 - 458.

17. Cardenas, M.E., Laroche, T. and Gasser, S.M. (1990)
"The Composition and Morphology of Yeast Nuclear Scaffolds"
J. Cell Science, *96*, 439 -450.

18. Amati, B. and Gasser, S.M. (1990) "*Drosophila* Scaffold-Attached Regions Bind Nuclear Scaffolds and Function as ARS Elements in Both Budding and Fission Yeast."
Mol. Cell. Biol. *10*, 5442 - 5454.

19. Amati, B., Pick, L., Laroche, T. and Gasser, S.M. (1990) "Nuclear scaffold attachment stimulates but is not necessary for ARS activity in *S. cerevisiae*: Analysis of the *Drosophila ftz* SAR"
EMBO J. *9*, 4007 - 4017.

20. Verdier, J.-M., Stalder, R., Roberge, M., Amati, B., Sentenac, A.and Gasser, S.M. (1990)
"Preparation and Characterization of Yeast Nuclear Extracts for Efficient RNA Polymerase B(II)-Dependent Transcription *in vitro*"
Nucl. Acids Research, *18*, 7033 - 7039.

21. Hofmann, J.F-X. and Gasser, S.M. (1991) "Identification and Purification of a Protein that Binds the Yeast ARS Consensus Sequence" **Cell**, *64*, 951 - 960.

22. Raska, I., Michel, L.S., Jarnik, M., Dundr, M., Fakan, S., Gasser, S., Gassmann, M., Hübscher, U., Izaurralde, E., Martinez, E., Richter, A., Dubochet, J. (1991) "Ultrastructural cryo-immunocyto-chemistry is a convenient tool for the study of DNA replication in cultured cells."
J. Electron Micr. Techniques, *18*, 91 - 105.

23. Klein, F., Laroche, T., Cardenas, M.E., Hofmann, J.F.X., Schweizer, D. and Gasser, S.M. (1992)
"Localization of RAP1 and Topoisomerase II in Nuclei and Meiotic Chromosomes of Yeast"
J. Cell Biology, *117*, 935 - 948.

24. Cardenas, M.E., Dang, Q., Glover, C.V.C and Gasser, S.M. (1992)
"Casein kinase II phosphorylates the eukaryote-specific C-terminus of topoisomerase II *in vivo*."
EMBO J. *11*, 1785 - 1796.

25. Roberge, M. and Gasser, S.M. (1992)
"DNA Loops: Structural and Functional Properties of Scaffold-attached Regions"
Mol. Microbiology, *6*, 419 - 423.

26. Cardenas, M.E., Walter, R., Hanna, D.E. and Gasser, S.M. (1993) "Casein kinase II Co-purifies with Yeast DNA Topoisomerase II and Re-activates the Dephosphorylated Enzyme"
J. Cell Science, *104*, 533 - 543.

27. Gilson, E., Roberge, M., Giraldo, R., Rhodes, D. and Gasser, S.M. (1993)
"Distortion of the DNA Double Helix by RAP1 at Silencers and Multiple Telomeric Binding Sites"
J. Molecular Biology, *231*, 293 - 310.

28. **Palladino, F., Laroche, T., Gilson, E., Axelrod, A., Pillus, L. and Gasser, S.M. (1993)**
"SIR3 and SIR4 proteins are required for the positioning and integrity of yeast telomeres"
Cell, *75,* 543 - 555.

29. Palladino, F., Laroche, T., Gilson, E., Pillus, L. and Gasser, S.M. (1993)
"The positioning of yeast telomeres depends on SIR3, SIR4, and the integrity of the nuclear membrane."
Cold Spring Harbor Symp. Quant. Biol. *58*, Cold Spring Harbor Press, New York, 733 - 746.

30. Cockell, M., Frutiger, S., Hughes, G. J. and Gasser, S.M. (1994)
"The yeast protein encoded by PUB1 binds T-rich single-stranded DNA"
Nucl. Acids Research, *22*, 32 - 40.

31. Vassetzky. Y.S., Dang, Q., Benedetti, P. and Gasser, S.M. (1994) "Topoisomerase II forms multimers *in vitro*: effects of metals, β-glycerophosphate and phosphorylation of its C-terminal domain"
Mol. Cell. Biol. *14*, 6962 - 6974.

32. Dang, Q., Alghisi, G.-C. and Gasser, S.M. (1994) "Phosphorylation of the C-terminal domain of yeast topoisomerase II by casein kinase II affects DNA-protein interaction"
J. Molecular Biology, *243*, 10 - 24.

33. Müller, T., Gilson, E., Schmidt, R., Giraldo, R., Sogo, J., Gross, H. and Gasser, S.M. (1994) "Imaging an Asymmetric DNA bend induced by Repressor Activator Protein 1 with Scanning Tunnelling Microscopy" **J. Struct. Biology,** *113,* 1 - 12.

34. Gilson, E., Müller, T., Sogo, J., Laroche, T. and Gasser, S.M. (1994) "RAP1 promotes single- to double-strand association of yeast telomeric DNA: implications for telomere-telomere interactions" **Nucl. Acids Research,** *22*, 5310 - 5320.

35. Alghisi, G.-C., Roberts, E., Cardenas, M.E. and Gasser, S.M. (1994) **"**The regulation of DNA topoisomerase II by casein kinase II" **Cell. Mol. Biol. Research,** *40*, 563 - 571.

36. Cockell, M., Palladino, F., Laroche, T., Kyrion, G., Liu, C., Lustig, A.J. and Gasser, S.M. (1995) "The carboxy-termini of SIR4 and RAP1 affect SIR3 localization: Evidence for a multi-component complex required for yeast telomeric silencing" **J. Cell Biology,** *129,* 909 - 924.

37. **Hecht, A., Laroche, T., Strahl-Bolsinger, S., Gasser, S.M. and Grunstein, M. (1995) "Histone H3 and H4 N-termini interact with SIR3 and SIR4 proteins: a molecular model for the formation heterochromatin in yeast." Cell, *80*, 583 - 592.**

38. Grunstein, M., Hecht, A., Fisher-Adams, G., Wan, J., Mann, R.K., Strahl-Bolsinger, S., Laroche, T. and Gasser, S.M. (1995) "The regulation of euchromatin and heterochromatin by histones in yeast." **J. Cell Science,** *19,* 29 - 36.

39. Vassetzky, Y.S., Alghisi, G-C., Roberts, E. and Gasser, S.M. (1996) "Ectopic expression of inactive forms of yeast DNA topoisomerase II confers resistance to the anti-tumor drug, etoposide." **British J. Cancer,** *73,* 1201 - 1209.

40. Boscheron, C., Maillet, L., Marcand, S., Tsai-Pflugfelder, M., Gasser, S.M. and Gilson, E. (1996) "Cooperation at a distance between silencers and proto-silencers at the yeast *HML l*ocus" **EMBO J.** *15*, 2184 - 2195.

41. Bilaud, T., Binet-Brasselet, E., Koering, C., Ancelin, K., Pollice, A., Gasser, S.M. and Gilson, E. (1996) "The "Telobox, a Myb-related telomeric DNA binding motif found in proteins from yeast, plants and human" **Nucl. Acids Research,** *24,* 1294 - 1303.

42. Maillet, L., Boscheron, C., Gotta, M., Marcand, S., Gilson, E. and Gasser, S.M. (1996) "Evidence for silencing subcompartments within the yeast nucleus: a role for telomere proximity and Sir protein concentration in silencer-mediated repression" **Genes & Dev.** *10,* 1796 - 1811.

43. Gotta, M., Laroche, T., Formenton, A., Maillet, L., Scherthan, H. and Gasser, S.M. (1996) "The clustering of telomeres and colocalization with Rap1, Sir3 and Sir4 proteins in wild-type *S. cerevisiae."* **J. Cell Biology,** *134,* 1349 - 1363.

44. Kennedy, B.K., Gotta, M., Sinclair, D.A., Mills, K., McNabb, D.S., Murthy, M., Pak, S.M., Laroche, T., Gasser, S.M. and Guarente, L. (1997) "Redistribution of silencing proteins from telomeres to the nucleolus is associated with extension of life span in *S. cerevisiae*." **Cell,** *89,* 381 - 391.

45. Pasero, P., Braguglia, D. and Gasser, S.M. (1997) "ORC-dependent and Origin-specific initiation of DNA replication at defined foci in isolated yeast nuclei**."** **Genes & Dev.** *11,* 1504 - 1518.

46. Gotta, M., Strahl-Bolsinger, S., Renauld, H., Kennedy, B.K., Laroche, T., Grunstein, M. and Gasser, S.M. (1997) "Localization of Sir2p: the nucleolus as a compartment for Silent Information Regulators." **EMBO J.** *16,* 3243 - 3255.

47. Braguglia, D., Heun P., Pasero, P., Duncker, B. and Gasser, S.M. (1998) "Semi-conservative replication in yeast nuclear extracts requires Dna2 helicase and supercoiled template." **J. Molecular Biology,** *281*, 631 - 649.

48. Tsai-Pflugfelder, M., Gasser, S.M. and Wahli, W. (1998) "Functional Interaction Between the Estrogen Receptor and CTF1: Analysis of Vitellogenin B1 Promoter in Yeast." **Mol. Endocrinology,** *12,* 1525 - 1541.

49. **Laroche, T., Martin, S.G., Gotta, M., Gorham, H.C., Pryde, F.E., Louis, E.J. and Gasser, S.M. (1998) "Mutation of yeast Ku genes disrupts the subnuclear organization of telomeres." Current Biol. *8,* 653 - 656.**

50. Gotta, M., Palladino, F. and Gasser, S.M. (1998) "A functional characterization of the Silent Information Regulator 3 N-terminus." **Mol. Cell. Biol.** *18*, 6110 - 6120.

51. Cockell, M., Renauld, H., Watt, P. and Gasser, S.M. (1998) "Sif2p interacts with Sir4p N-terminal domain and antagonizes telomeric silencing in yeast." **Current Biol.** *8,* 787 - 790.

52. Akhmedov, A.T., Frei, C., Tsai-Pflugfelder, M., Kemper, B., Gasser, S.M. and Jessberger, R. (1998) "SMC protein C-terminal Domains Bind Preferentially to DNA with Secondary Structure." **J. Biol. Chem.** *273*, 24088 - 24094.

53. Hayashi, A., Ogawa, H., Kohno, K., Gasser, S.M. and Hiraoka, Y. (1998) "Meiotic behaviors of chromosomes and microtubules in budding yeast: relocalization of centromeres and telomeres during meiotic prophase." **Genes to Cells,** *3*, 587 - 600.

54. Cockell, M., Gotta, M., Palladino, F., Martin, S.G. and Gasser, S.M. (1998) "Targeting SIR proteins to nuclear domains: a general mechanism for transcriptional repression." **Cold Spring Harbor Symp. Quant. Biology**, *63*, Cold Spring Harbor Press, New York, 401 - 412.

55. Duncker, B.P., Pasero, P., Braguglia, D., Heun. P., Weinreich, M. and Gasser, S.M. (1999) "Cyclin B/Cdk1 stimulates ORC- and Cdc6-independent steps of semiconservative plasmid replication in yeast nuclear extracts." **Mol. Cell Biol.** *19,* 1226 - 1241.

56. Leroy, D., Alghisi, C-A., Roberts, E., Filhol-Cochet, O. and Gasser, S.M. (1999) "Mutations in the C-terminal domain of topoisomerase II affect meiotic function and interaction with casein kinase 2β subunit." **Mol. Cell. Bioch.** *191,* 85 -95.

57. Soltermann, A., Ernst, A.I., Leroy, D., Stahel, R.A. and Gasser, S.M. (1999) "The cytochrome b_5 tail can anchor and stabilize subdomains of human DNA topoisomerase IIα in the cytoplasm of retrovirally infected mammalian cells." **Exp. Cell Research,** *248,* 308 - 319.

58. **Martin, S.G., Laroche, T., Suka, N., Grunstein, M. and Gasser, S.M. (1999) "Relocalization of telomeric Ku and SIR proteins in response to DNA strand breaks in yeast." Cell, *97,* 621 - 633.**

59. Pasero, P., Duncker, B.P., Schwob, E. and Gasser, S.M. (1999) "A role for the Cdc7 kinase regulatory subunit Dbf4p in the formation of initiation competent origins of replication." **Genes & Dev.** *13*, 2159 - 2176.

60. Vassetzky, N.S., Gaden, F., Brun, C., Gasser, S.M. and Gilson, E. (1999) "Taz1p and Teb1p, two telo-box proteins in *Schizosaccharomyces pombe*, recognize different telomeric-related DNA sequences." **Nucl. Acids Research,** *27,* 4687 – 4694.

61. Frei, C. and Gasser, S.M. (2000) "The yeast Sgs1 helicase acts upstream of Rad53p in the DNA replication checkpoint and colocalizes with Rad53p in S-phase specific foci." **Genes & Dev.** *14,* 81 - 96.

62. Cockell, M., Perrod, S. and Gasser, S.M. (2000) "Analysis of Sir2p domains required for rDNA and telomeric silencing." **Genetics,** *154,* 1069 - 1083.

63. Stone, E.M., Heun, P., Laroche, T., Pillus, L. and Gasser, S.M. (2000) "MAP kinase signaling induces nuclear reorganization in budding yeast." **Current Biol.** *10,* 373 – 382.

64. Laroche, T., Martin, S.G., Tsai-Pflugfelder, M. and Gasser, S.M. (2000) "The Dynamics of Yeast Telomeres and Silencing Proteins through the Cell Cycle." **J. Struct. Biology,** *129,* 159 - 174.

65. Ernst, A.I., Soltermann, A., Sigrist, J.A., Widmer, L., Gasser, S.M. and Stahel, R.A. (2000) "Ectopic "expression of human topoisomerase II□ fragments and etoposide resistance in mammalian cells." **Int. J. Cancer**, *88*, 99 - 107.

66. Perrod, S., Cockell, M.M., Laroche, T., Renauld, H., Ducrest, A., Bonnard, C. and Gasser, S.M. (2001) "A cytosolic NAD-dependent deacetylase, Hst2p, can modulate nucleolar and telomeric silencing in yeast." **EMBO J.** *20*, 197 - 209.

67. Leroy, D., Kajava, A.V., Frei, C. and Gasser, S.M. (2001) "Analysis of etoposide binding to subdomains of human DNA topoisomerase IIα in the absence of DNA." **Biochemistry**, *40,* 1624 - 1634.

68. Heun, P., Laroche, T., Raghuraman, M. K. and Gasser, S.M. (2001) "The positioning and dynamics of origins of replication in the budding yeast nucleus." **J. Cell Biology,** *152,* 385 - 400**.**

69. Maillet, L., Gaden, F., Brevet, V., Fourel, G., Martin, S.G., Dubrana, K., Gasser, S.M. and Gilson, E. (2001) "Ku deficient strains exhibit alternative states of silencing competence." **EMBO Reports**, *2,* 203 - 210.

70. **Heun, P., Laroche, T., Shimada, K., Furrer, P., and Gasser, S.M. (2001) "Chromosomal dynamics in the yeast interphase nucleus." Science, *293,* 2181 - 2186.**

71. **Gasser, S.M. (2002)** "Visualizing Chromatin Dynamics in Interphase Nuclei." **Science**, *296*, 1412 – 1416.

72. Teixeira, M.T., Forstemann, K., Gasser, S.M. and Lingner, J. (2002) "Intracellular trafficking of yeast telomerase components." **EMBO Reports,** *3,* 652 - 659.

73. Hediger, F., Neumann, F.R., Van Houwe, G., Dubrana, K. and Gasser, S.M. (2002) "Live imaging of yeast telomeres: yKu and Sir mutations define independent but redundant anchoring pathways." **Current Biol.** *12,* 2076 - 2089.

74. Duncker, B., Shimada, K., Tsai-Pflugfelder, M., Pasero, P. and Gasser, S.M. (2002) "An N-terminal domain of Dbf4p mediates interaction with both ORC and Rad53p and can deregulate late origin firing." **Proc. Natl. Acad. Sci. USA**, *99*, 16087 - 16092.

75. Hediger, F., Dubrana, K. and Gasser, S.M. (2002) "Myosin-like proteins 1 and 2 are not required for silencing or telomere anchoring but act in the Tel1 pathway of telomere length control." **J. Struct. Biology,** *140,* 79 - 91.

76. Shimada, K., Pasero, P. and Gasser, S.M. (2002) "ORC and the intra-S phase checkpoint: a threshold regulates Rad53p activation in S phase." **Genes & Dev**. *16,* 3236 - 3252

77. **Cobb, J.A., Bjergbaek, L., Shimada, K., Frei, C. and Gasser, S.M.(2003) "DNA polymerase stabilization at stalled replication forks requires Mec1 and the RecQ helicase Sgs1." EMBO J. *22,* 4325 - 4336.**

78. Vilain, N., Tsai-Plugfelder, M., Benoit, A., Gasser, S.M. and Leroy, D. (2003) "Modulation of drug sensitivity in yeast cells by the ATP-binding domain of human DNA topoisomerase IIα." **Nucl. Acids Research,** *31,* 5714 - 5722.

79. Taddei, A., Hediger, F., Neumann, F.R., Bauer, C. and Gasser, S.M (2004) "Separation of silencing from perinuclear anchoring functions in yeast Ku80, Sir4 and Esc1 proteins" **EMBO J.** *23*, 1301-1312.

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