

Publication list

Peer-Reviewed Research Articles

54. Tikhanovich, I. and **Nasheuer, H.P.** (2010) *Host-Specific Replication of BK Virus DNA in Mouse Cell Extracts Is Independently Controlled by DNA Polymerase α -Primase and Inhibitory Activities*. J Virol, 84: 6636-6644.
53. Fleming, R.M., Thiele, I., Provan, G. and **Nasheuer, H.P.** (2010) *Integrated stoichiometric, thermodynamic and kinetic modelling of steady state metabolism*. J Theor Biol 264: 683-692.
52. Fleming, R.M.T., Thiele, I. and **Nasheuer H.P.** (2009) *Quantitative assignment of reaction directionality in constraint-based models of metabolism: Application to Escherichia coli*. Biophysical Chemistry, 145: 47-56.
51. Stephan, H., Concannon, C., Kremmer, E., Carty, M.P. and **Nasheuer, H.P.** (2009) *Ionizing radiation-dependent and independent phosphorylation of the 32 kDa subunit of replication protein A during mitosis*. Nucleic Acids Res, 37: 6028-6041.
50. Mahon, C., Liang, B., Tikhanovich, I.S., Abend, J.R., Imperiale, M.J., **Nasheuer, H.P.*** and Folk, W.R.*. (2009) *Restriction of human polyomavirus BKV DNA replication in murine cells and extracts*, J. Virol. 83: 5708-5717. ***corresponding authors.**
49. Lévy, N., Oehlmann, M., Delalande, F., **Nasheuer, H.P.**, van Dorsselaer, A., Schreiber, V., de Murcia, G., Ménissier-de Murcia, J., Domenico, M. and Bresson A. (2009) *XRCC1 interacts with the p58 subunit of DNA Pol α -primase and may coordinate DNA repair and replication during S phase*. Nucl. Acids Res. 37: 3177-3188.
48. Taneja, P., **Nasheuer, H.P.**, Hartmann, H., Grosse, F., Fanning, E. and Weisshart, K. (2007) *Timed interactions between viral and cellular replication factors during the initiation of SV40 in vitro DNA replication*. Biochem J., 407: 313-320.
47. Taneja, P., Boche, I., Hartmann, H., **Nasheuer, H.P.**, Grosse, F., Fanning, E. and Weisshart, K. (2007) *Different activities of the largest subunit of replication protein A cooperate during SV40 DNA replication*. FEBS Lett. 581: 3973-3978.
46. Pollok, S., Bauerschmidt, C., Sanger, J., **Nasheuer, H.P.** and Grosse, F. (2007) *Human Cdc45 is a proliferation-associated antigen* FEBS J. 274: 3669-3684.
45. Bauerschmidt, C., Pollok, S., Kremmer, E., **Nasheuer, H.P.*** and Grosse F.* (2007) *Interactions of Human Cdc45 with the Mcm2-7 complex, the GINS complex and DNA polymerases α and δ during S phase*. Genes to Cells 12: 745-358. ***corresponding authors.**
44. Braet, C., Stephan, H., Dobbie, I. M., Togashi, D. M., Ryder, A. G., Foldes-Papp, Z., Lowndes N. and **Nasheuer, H.P.** (2007). *Mobility and distribution of replication protein A in living cells using fluorescence correlation spectroscopy*. Exp Mol Pathol. 82: 156-162

43. Rytönen, A. K., Hillukkala, T., Vaara, M., Sokka, M., Jokela, M., Sormunen, R., **Nasheuer, H.P.**, Nethanel, T., Kaufmann, G., Pospiech H. and Syväoja, J. E. (2006). *DNA polymerase epsilon associates with the elongating form of RNA polymerase II and nascent transcripts*. FEBS J. 273: 5535-5549.
42. Liu, P., Barkley, L.R., Day, T., Bi, X., Slater, D.M., Alexandrow, M.G., **Nasheuer, H.P.**, and Vaziri C. (2006) *The Chk1-mediated S-phase checkpoint targets initiation factor Cdc45 via a Cdc25a/Cdk2-independent mechanism*. J Biol Chem, 281: 30631-30644.
41. Rytönen, A. K., Vaara, M., Nethanel, T., Kaufmann, G., Sormunen, R., Läärä, E., **Nasheuer, H.P.**, Rahmeh, A., Lee, M. Y.W.T., Syväoja, J. and Pospiech, H. (2006) *Distinctive activities of DNA polymerases α , δ and ϵ during human DNA replication*. FEBS J. 273: 2984-3001.
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39. Weisshart, K., Friedl, S., Taneja, P., Nasheuer, H. P., Schlott, B., Grosse, F. and Fanning, E. (2004). *Partial proteolysis of SV40 T antigen reveals intramolecular contacts between domains and conformation changes upon hexamer assembly*. J. Biol. Chem. 279: 38943-38951.
38. Weisshart, K., Pestryakov, P., Smith, R. W., Hartmann, H., Kremmer, E., Lavrik, O. and **Nasheuer, H.P.** (2004). *Coordinated regulation of replication protein A activities by its subunits p14 and p32*. J. Biol. Chem. 279: 35368-35376.
37. Wilhelm, T., **Nasheuer, H.P.** and Huang, S. (2003) *Physical and functional modularity of the protein network in yeast*. Mol. Cell. Proteomics. 2: 292-298.
36. Pestryakov, P.E., Weisshart, K., Schlott, B., Khodyreva, S. N., Kremmer, E., Grosse, F., Lavrik, O.I. and **Nasheuer, H.P.** (2003) *Human Replication Protein A: The C-terminal RPA70 and the central RPA32 domains are involved in the interactions with the 3'-end of a primer-template DNA*. J. Biol. Chem. 278: 11515-115224.
35. Smith R.W.P. and **Nasheuer, H.P.** (2003) *Initiation of JC Virus DNA replication in vitro by human and mouse DNA polymerase α -primase*. Eur. J. Biochem. 270: 2030-2037.
34. Pollok, S., Stoepel, J., Bauerschmidt, C., Kremmer, E. and **Nasheuer, H.P.** (2003) *Regulation of eukaryotic DNA replication at the initiation step by Cdc45 and DNA polymerase α phosphorylation*. Biochemical Society Transactions 31: 266-269.
33. Smith, R.W.P. and **Nasheuer, H.P.** (2002) *Control of complex formation of DNA polymerase α -primase and cell-free DNA replication by the C-terminal amino acids of the largest subunit p180* FEBS Letters 527: 143-146.
32. Smith, R.W.P., Steffen, C., Grosse, F. and **Nasheuer, H.P.** (2002) *Species specificity of Simian Virus 40 DNA replication in vitro requires*

- multiple functions of human DNA polymerase α* J. Biol. Chem. 277: 20541-20548.
31. Melle, C. and **Nasheuer, H.P.** (2002) *Physical and functional interactions of the tumor suppressor protein p53 and DNA polymerase α -primase*. Nucl. Acids Res. 30: 1493-1499.
 30. Schub, O., Rohaly, G., Smith, R.W.P., Schneider, A., Dehde, S., Dornreiter, I. and **Nasheuer, H.P.** (2001) *Multiple phosphorylation sites of cellular DNA polymerase α -primase cooperate to regulate initiation of simian virus 40 DNA replication*. J. Biol. Chem. 276: 38076-38083.
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 25. Weisshart, K., F rster, H., Kremmer, E., Schlott, B., Grosse, F. and **Nasheuer, H.P.** (2000) *Protein-protein interactions of the primase subunits p58 and p48 with simian virus 40 T antigen are required for efficient primer synthesis in a cell-free system*. J. Biol. Chem. 275: 17328-17337.
 24. Kolpashchikov, D. M., **Nasheuer, H.P.**, Weisshart, K., Ivanova, T. M., Bogachev, V. S., Favre, A. and Lavrik, O. I. (2000) *Synthesis of base-substituted dUTP analogs carrying photoreactive 2-Nitro-5-azidobenzoyl group attached to 5'-position of uridine and its application to study human replication protein A by photoaffinity labeling*. Bioconjug. Chem. 11: 445-451.
 23. Lavrik O.I., Kolpashchikov D.M., Weisshart K., **Nasheuer, H.P.**, Khodyreva S. N. and Favre A. (1999) *RPA subunit arrangement near the 3'-end of the primer is modulated by the length of the template strand and cooperative protein interactions.* Nucl. Acids Res. 27: 4235-4240.
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Paper Impact Scopus: 26, ISI: 27; Journal Impact Factor: 7.2
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19. Lavrik, O.I., Kolpashchikov, D. M., **Nasheuer, H.P.**, Weisshart, K. and Favre, A. (1998). *Alternative RPA conformations are detected by crosslinks with primers carrying photoreactive group at 3'-end*. *FEBS Lett.* 441: 186-190.
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17. Dantzer, F., **Nasheuer, H.P.**, Vonesch, J.-L., de Murcia, G. and Ménissier-de Murcia, J. (1998). *Poly (ADP-ribose) polymerase links the DNA damage surveillance network to the DNA replication machinery*. *Nucl. Acids Res.* 26: 1891-1898.
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 4. **Nasheuer, H.P.** and Grosse, F. (1988). *DNA polymerase α -primase from calf thymus: Determination of the polypeptide responsible for primase activity. J. Biol. Chem. 263: 8981-8988.*
 3. **Nasheuer, H.P.** and Grosse, F. (1987). *Immunoaffinity-purified DNA polymerase α displays novel properties. Biochemistry 26: 8458-8466.*
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Reviews

5. Broderick, R., and **Nasheuer, H.P.** (2009) *Regulation of Cdc45 in the Cell Cycle and after DNA damage. Biochem. Soc. Trans. 37: 926-930*
4. **Nasheuer, H.P.**, Smith, R. W. P., Bauerschmidt, C., Grosse, F., and Weisshart, K. (2002) *Initiation of Eukaryotic DNA Replication - Regulation and Mechanisms. Prog. Nucl. Acid Res. Mol. Biol., 72: 41-94.*
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affinity labeling of RNA polymerases by autocatalysis. Biol. Chem. Hoppe Seyler 369: 775-788.

Book Chapters

8. Broderick, S, Rehmet, K., Concannon, C. and **Nasheuer H.P.** (2010) *Eukaryotic single-stranded DNA binding proteins: Central factors in genome stability.* In: Nasheuer, HP (Ed.), Genome Stability & Human Diseases, Subcell Biochem **50**: 143-163, Springer, Berlin, Germany.
7. Conmy, S. and **Nasheuer H.P.** (2010) *The use of transgenic mice in cancer and genome stability research.* In: Nasheuer, HP (Ed.), Genome Stability & Human Diseases, Subcell Biochem **50**: 325-336, Springer, Berlin, Germany.
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Conference Proceedings

1. Oehlmann, M., Mahon, C. and **Nasheuer, H.P.** (2007). *Comparison of DNA replication in Xenopus laevis and Simian Virus 40.* Adv Exp Med Biol 604: 3-16.