

**BIOGRAPHICAL SKETCH**

Provide the following information for the key personnel and other significant contributors in the order listed on Form Page 2.  
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NAME Rodin, Andrei S.	POSITION TITLE Assistant Professor		
eRA COMMONS USER NAME arodin			
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
Novosibirsk State University, Russia	B.S.	1992	Mathematical Genetics
University of Texas Health Science Center, School of Biomedical Sciences, Houston, TX	M.S.	1997	Genetics
University of Texas Health Science Center, School of Biomedical Sciences, Houston, TX	Ph.D.	1999	Genetics

**A. Positions and Honors.****Positions and Employment**

1992–1993 Research Assistant, Department of Complex Systems, Instituto de Physica, National Autonomous University of Mexico, Mexico City, Mexico  
 2000–2003 Research Fellow, Human Genetics Center, School of Public Health, University of Texas, Houston, TX  
 2003–present Assistant Professor, Human Genetics Center, School of Public Health, University of Texas

**Honors**

1994 Howard Hughes Medical Institute Predoctoral Fellowship, Honorable Mention List

**B. Selected Peer Reviewed Publications (in chronological order).**

Rodin S, Ohno S, Rodin A (1993) Transfer RNAs with complementary anticodons: Could they reflect early evolution of discriminative genetic code adaptors? Proc Natl Acad Sci USA 90:4723-4727

Rodin S, Ohno S, Rodin A (1993) On concerted origin of transfer RNAs with complementary anticodons. Orig Life Evol Biosph 23:393-418

Cocho G, Gelover-Santiago A, Martinez-Mekler G, Rodin A (1994) Nonlinear modeling of the AIDS virus genetic sequence evolution. Int J Mod Phys C 5:321-324

Rodin S, Rodin A, Ohno S (1996) The presence of codon-anticodon pairs in the acceptor stem of tRNAs. Proc Natl Acad Sci USA 93:4537-4542

Sun H, Rodin A, Zhou Y, Dickinson DP, Harper DE, Hewett-Emmett D, Li W-H (1997) Evolution of paired domains: Isolation and sequencing of jellyfish and hydra Pax genes related to Pax-5 and Pax-6. Proc Natl Acad Sci USA 94:5156-5161

Rodin SN, Holmquist GP, Rodin AS (1998) CpG transition strand asymmetry and hitch-hiking mutations as measure of tumorigenic selection in shaping the p53 mutation spectrum. Int J Mod Med 1:191-199

Rodin SN, Rodin AS (1999) Strand asymmetry of CpG transitions as indicator of G<sub>1</sub> phase-dependent origin of multiple tumorigenic p53 mutations in stem cells. Proc Natl Acad Sci USA 95:11927-11932

Rodin SN, Rodin AS (2000) Human lung cancer and *p53*: The interplay between mutagenesis and selection. Proc Natl Acad Sci USA 97:122244-122249

Rodin A, Li W-H (2000) A rapid heuristic for finding minimum evolution trees. Mol Phylogenet Evol 16:173-179

Rodin SN, Rodin AS (2002) On the origin of *p53* G:C→T:A transversions in lung cancers. Mutat Res 508:1-19

Rodin SN, Rodin AS, Juhasz A, Holmquist GP (2002) Cancerous hyper-mutagenesis in *p53* genes is possibly associated with transcriptional bypass of DNA lesions. Mutat Res 510:153-168

Rodin SN, Rodin AS (2004) On the excess of G→T transversions in the *p53* gene in lung cancer cell lines: Reply to Pfeifer and Hainaut. Mutat Res 545:141-144; 145-147

Williams E, Rodin A, Strobel HW (2004) Defining relationships between the known members of the cytochrome P450 3A subfamily, including five putative chimpanzee members. Mol Phylogenet Evol 33:300-308

Rodin SN, Rodin AS (2005) Origins and selection of *p53* mutations in lung carcinogenesis. Semin Cancer Biol 15:103-112

Rodin AS, Boerwinkle E (2005) Mining genetic epidemiology data with Bayesian networks. I. Bayesian networks and example application (plasma apoE levels). Bioinformatics 21:3273-3278

Rodin AS, Mosley TH Jr, Clark AG, Sing CF, Boerwinkle E (2005) Mining genetic epidemiology data with Bayesian networks application to *APOE* gene variation and plasma lipid levels. J Comp Biol 12:1-11

Rodin SN, Parkhomchuk DV, Rodin AS, Holmquist GP, Riggs AD (2005) Repositioning-dependent fate of duplicate genes. DNA Cell Biol 24:529-542

Rodin SN, Rodin AS (2006) Origin of the genetic code: first aminoacyl-tRNA synthetases could replace isofunctional ribozymes when only the second base of codons was established. DNA Cell Biol 25:365-375

Rodin SN, Rodin AS (2006) Partitioning of Aminoacyl-tRNA Synthetases in two classes could have been encoded in a strand-symmetric RNA world. DNA Cell Biol 25: Vol 11.

Rodin AS, Litvinenko A, Boerwinkle E (2006) Exploring genetic epidemiology data with Bayesian networks. In: Rao CR, Chakraborty R (eds) Handbook of Statistics. Elsevier, St. Louis, MO, vol. 30 [in press]

Rodin AS, Litvinenko A, Klos K, Morrison AC, Woodage T, Coresh J, Boerwinkle E (2006) Use of a Random Forests classifier for variable selection in large-scale genomic association studies. [submitted to ARIC; to be submitted to JCB]