

ANNA M. POPOVA

The Scripps Research Institute, Department of Integrative Structural and Computational Biology
10550 N. Torrey Pines Rd., SR-312, La Jolla, CA, 92037
Phone: (858) 784-8743; E-mail: popova@scripps.edu

Education:

2005 – 2011 Ph.D., Chemistry
University of Southern California (USC), Los Angeles, CA
2000 – 2005 B.S., Chemistry
Saint-Petersburg State University (SPbU), Saint-Petersburg, Russia

Employment:

since June 2011 Postdoctoral Research Associate, Department of Integrative Structural and Computational Biology, The Scripps Research Institute (TSRI), La Jolla, CA

Research experience:

June 2011– now Postdoctoral fellow with Dr. James Williamson at TSRI, developing quantitative Mass Spectrometry methodology for mechanistic investigations of ribosomal RNA modifications in prokaryotic and eukaryotic cells.

2006 – 2011 Research assistant with Dr. Peter Qin at USC developing and applying site-directed spin labeling technique to study nucleic acids structure and dynamics.
Thesis Title: Sensing sequence-specific DNA micro-environment with nucleotide-independent nitroxides.

2003 – 2005 Undergraduate research with Dr. Anna Kartsova at SPbU determining how thermodynamic stability of complexes with crown-ethers and β -cyclodextrin affects separation of analytes using gas chromatography, liquid chromatography, and capillary electrophoresis.
Thesis Title: Quantitative studies of interactions of organic compounds with 18-crown-ethers and β -cyclodextrin as components of chromatographic and electrophoretic phases.

Honors and Fellowships:

2014 RNA Society Travel Fellowship
2014-2015 Ruth L. Kirschstein NRSA Postdoctoral Fellowship, NIH
2010 USC College Final Summer Dissertation Fellowship
2010 Graduate Research Award in Chemistry, USC
2010 Biophysical Society Student Travel Award
2010 Graduate and Professional Student Senate Travel Grant, USC
2009 – 2010 Women in Science and Engineering (WiSE) Merit Fellowship, USC
2007, 2010 WiSE Travel Grant, USC

2007 – 2011 Department of Chemistry Predoctoral Scholarship, USC
2005 Diploma in Chemistry with honor, SPbU

Teaching experience:

Teaching Assistant for General Chemistry, Organic Chemistry, AIDS Drug Discovery and Development courses at USC

Publications:

Nguyen P.H., **Popova A.M.**, Hideg K., Qin P.Z., A nucleotide-independent cyclic nitroxide label for monitoring segmental motions in nucleic acids, *BMC Biophys.*, 2015, 8:6.

Popova A.M. and Williamson J.R., Quantitative analysis of rRNA modifications using stable isotope labeling and mass spectrometry, *J. Am. Chem. Soc.*, 2014, 136, 2058-2069.

Popova A.M., Hatmal M.M., Frushicheva M., Price E.A., Qin P.Z., Haworth I.S., Nitroxide Sensing of a DNA Microenvironment: Mechanistic Insights from EPR Spectroscopy and Molecular Dynamics Simulations, *J. Phys. Chem. B*, 2012, 116, 6387–6396.

Popova A.M. and Qin P.Z., A nucleotide-independent nitroxide probe reports on site-specific stereomeric environment in DNA, *Biophys. J.*, 2010, 99, 2180-2189.

Popova A.M., Kálai T., Hideg K., Qin P.Z., Site-specific DNA structural and dynamic features revealed by nucleotide-independent nitroxide probes, *Biochemistry*, 2009, 48, 8540-8550.

Grant G.P.G., **Popova A.**, Qin P.Z., Diastereomer characterizations of nitroxide-labeled nucleic acids, *Biochem. Biophys. Res. Commun.*, 2008, 371, 451-455.

Qin P.Z., Haworth I.S., Cai Q., Kusnetzow A.K., Grant G.P.G., Price E.A., Sowa G.Z., **Popova A.**, Herreros B., He H., Measuring nanometer distances in nucleic acids using a sequence-independent nitroxide probe, *Nature Protocols*, 2007, 2, 2354-2365.

Kartsova A.A., Makarov A.A., **Popova A.M.**, Quantitative evaluation of interactions of organic compounds with 18-crown ethers and β -cyclodextrin as components of stationary phases for Gas Chromatography, *J. Anal. Chem.*, 2007, 62, 245-250.

Kartsova A.A., **Popova A.M.**, Sidorova A.A., Markova O.I., Evaluation of the stability constants of acidic and basic organic substances with 18-crown-6 and β -cyclodextrin using Capillary Zone Electrophoresis, *J. Anal. Chem.*, 2007, 62, 179-183.

Posters and Lecture presentations:

Functional profiling of ribosomal RNA modifications using quantitative mass spectrometry, *Biophysical Society Meeting*, Los Angeles, CA, 2016

Quantitative mass spectrometry for analysis of ribosomal RNA modifications in bacteria and yeast, *Mass Spectrometry: Applications to the Clinical Lab Meeting*, San Diego, CA, 2015

Quantitative analysis of RNA modifications during bacterial ribosome assembly, *The RNA Society Meeting*, Quebec, Canada, 2014

Quantitative analysis of RNA modifications during bacterial ribosome assembly, *RNA club at Sanford Consortium*, San Diego, CA, 2014

Structural and dynamic signatures in DNA reported in a site- and stereo-specific fashion using a nucleotide-independent nitroxide probe, *Biopolymers Gordon Research Conference*, Newport, RI, 2010

Sequence-specific stereomeric environment in a DNA duplex revealed by a nucleotide-independent nitroxide probe, *Biophysical Society Meeting*, San Francisco, CA, 2010

Probing stereospecific environment in DNA using site-directed spin labeling and MD simulations, *Biophysical Society Meeting*, Long Beach, CA, 2008

Probing local DNA environment using sequence-independent nitroxide probes, *Biophysical Society Meeting*, Baltimore, MD, 2007

Studies of complex formation: aromatic compounds with –OH, –NH₂, –COOH functional groups and 18-crown ethers/ β -cyclodextrin by means of Gas, Liquid Chromatography and Capillary Electrophoresis, *Symposium «Chromatographic methods of investigating the organic compounds»*, Katowice-Szczyrk, Poland, 2005

β -cyclodextrin and crown-ethers as components of stationary phases for Gas Chromatography, *All-Russian Analytical Chemistry Meeting*, Moscow, Russia, 2004