

## ბუნის კანკიას ნაშრომების სრული სია:

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41. **B. Kankia**, “Quadruplex-and-Mg<sup>2+</sup> (QMC) connection of DNA” *Sci. Rep.* 5, 12996; doi: 10.1038/srep12996 (2015).

#### PATENTS:

1. **B. I. Kankia**, “Isothermal Amplification of Nucleic Acid”, US Application Serial No. 61/940,045, publication No. 20140051086.
2. **B. I. Kankia**, “Primers and Methods for Nucleic Acid Amplification Including Acute Inflammation“ US Application Serial No. 13/579,486, publication No. 20120315642.
3. **B. I. Kankia**, “Primers and Methods for Nucleic Acid Amplification“, European Application Serial No. 11745310.0, publication No. EP2536739.
4. **B. I. Kankia**, “Primers and Methods for Nucleic Acid Amplification“, Canadian Application Serial No. 2790342, pending.
5. **B. I. Kankia**, “Isothermal Amplification of Nucleic Acid, and Library Preparation and Clone Generation in Sequencing”, PCT/US2014/021165, pending.
6. **B. I. Kankia**, “Tetra-helical Uninterrupted Monomolecular Architecture of DNA”, US Provisional Application Serial No. 61/940,045, pending.

#### BOOK CHAPTERS

1. **B. I. Kankiya**, S. N. Buckina, S. R. Valaeva & V. A. Buckin, “Ultrasonic Investigation of Solute-Solvent Interactions in Dilute Aqueous Solutions of Nucleic Bases”, in *Ultrasound* 86, Bratislava, Czechoslovakia, 126-131 (1986).
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#### **PUBLISHED MEETING PROCEEDINGS:**

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#### **CONFERENCE PRESENTATIONS (ORAL):**

- 1 **B. I. Kankiya**, S. V. Tshelikova, R. L. Kazaryan & V. A. Buckin, “Acoustical Investigation of Interactions of DNA with Mg<sup>2+</sup>”, *7<sup>th</sup> International Symposium Spectroscopy of Biopolymers*, Kharkov, USSR (1988).

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3. **B. I. Kankia** & L. A. Marky, “Differential Hydration Resulting from the Inclusion of W-C Base Pairs, Mismatches and Loops into DNA Duplexes”, *43<sup>rd</sup> Biophysical Society Meeting*, USA (1999).
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6. **B. I. Kankia**, “Inner-sphere Complexes of  $Mg^{2+}$  with Poly(rA) and Delocalized Binding to Poly(dA)”, *16<sup>th</sup> Annual Gibbs Conference on Biothermodynamics*, USA (2002).
7. **B. I. Kankia**, George Barany, Karin Musier-Forsyth “Unfolding of DNA Quadruplexes Induced by HIV-1 Nucleocapsid Protein”, *5<sup>th</sup> International Retroviral NC Symposium*, USA (2005).
8. **B. I. Kankia**, “Thermodynamics of DNA quadruplexes” *3<sup>rd</sup> Forum of Georgian Scientists* Tbilisi, Georgia (2010).
9. **B. I. Kankia**, “Quadruplex-Based Technology for Isothermal Quadruplex Priming Amplification and Non-Enzymatic Detection”, Bill and Melinda Gates Foundation Meeting, Vancouver, Canada 2011.
10. **B. I. Kankia**, “DNA quadruplexes in diagnostics” *4<sup>th</sup> Forum of Georgian Scientists* Tbilisi, Georgia (2011).
11. J. Johnson, R. Okyere, A. Taylor, A. Joseph, K. Musier-Forsyth, **B. Kankia**, “Quadruplex-based technology for nucleic acid amplification and detection” *56<sup>th</sup> Biophysical Society Meeting*, USA (2012)
12. **B. Kankia**, “Quadruplex-Based Technology for Isothermal Quadruplex Priming Amplification and Non-Enzymatic Detection”, Bill and Melinda Gates Foundation Meeting, Seattle, USA, 2012.
13. **B. I. Kankia**, “DNA thermodynamics in Georgia” *5<sup>th</sup> Forum of Georgian Scientists* Batumi, Georgia (2012).
14. **B. Kankia**, “Quadruplex priming amplification for DNA diagnostics and isothermal clone generation”, Bill and Melinda Gates Foundation Meeting, Seattle, USA (2013).

#### CONFERENCE PRESENTATIONS (POSTER):

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6. **B. I. Kankia**, “Magnesium Binding to Single-stranded RNA: Hydration Effects”, *7<sup>th</sup> Annual Meeting of the RNA Society* (2002).
7. **B. I. Kankia** “Binding of Magnesium Ions to single- and double-stranded DNA and RNA molecules”, *47<sup>th</sup> Biophysical Society Meeting* (2003).
8. **B. I. Kankia** “Aggregation and Resolubilization of poly(dA) poly(dT) by Magnesium Ions”, *17<sup>th</sup> Annual Gibbs Conference on Biothermodynamics* (2003).
9. **B. I. Kankia**, K. Musier-Forsyth, “Influence of HIV-1 Nucleocapsid Protein on Stability of DNA Quadruplexes and Duplexes”, *17<sup>th</sup> Annual Gibbs Conference on Biothermodynamics* (2004).
10. **B. I. Kankia**, K. Musier-Forsyth, George Barany “Influence of HIV-1 Nucleocapsid Protein on Strand-replacement Reactions Investigated Using a Novel UV-based Assay”, *49<sup>th</sup> Biophysical Society Meeting* (2005).
11. **B. I. Kankia**, G. Barany, K. Musier-Forsyth “HIV-1 Nucleocapsid protein-catalyzed DNA Strand-exchange Reactions Monitored by a Novel Quadruplex Displacement assay”, *232<sup>th</sup> American Chemical Society National Meeting* (2006).
12. **B. I. Kankia**, K. Musier-Forsyth “DNA strand-exchange reactions catalyzed by HIV-1 nucleocapsid protein”, *51<sup>th</sup> Biophysical Society Meeting* (2007).
13. **B. I. Kankia**, K. Musier-Forsyth “Differential Effects of HIV-1 NC on Strand-exchange Reactions Involving Mismatched DNA Duplexes ”, *6<sup>th</sup> International Retroviral NC Symposium* (2007).
14. **B. I. Kankia**, K. Musier-Forsyth “Influence of HIV-1 nucleocapsid protein on nucleic acid secondary structure invasion by complementary strands”, *52<sup>nd</sup> Biophysical Society Meeting* (2008).
15. **B. I. Kankia**, K. Musier-Forsyth “Real-time optical assay for monitoring nucleic acid strand-exchange and cleavage”, *53<sup>rd</sup> Biophysical Society Meeting* (2009).
16. **B. I. Kankia**, K. Musier-Forsyth “HIV NC as a tool to facilitate invasion and cleavage of structured nucleic acids”, *7<sup>th</sup> International Retroviral NC Symposium* (2009).
17. **B. I. Kankia**, “Isothermal amplification and quantification of nucleic acids using intrinsic fluorescence of primers”, *54<sup>th</sup> Biophysical Society Meeting* (2010).
18. S. Kelley, K. Musier-Forsyth, **B. Kankia** “Evaluation of (GGGT)<sub>4</sub> G-quadruplex DNA for potential PCR alternatives” Denman Undergraduate Research Forum (2010).
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24. R. Okyere, J. Johnson, K. A. Joseph, Musier-Forsyth, **B. Kankia**, “DNA quadruplex as an efficient structural motif to emit fluorescence of nucleotide analogs 2-Aminopurine and pteridines” Denman Undergraduate Research Forum (2012).
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26. A. Joseph, K. Musier-Forsyth, **B. Kankia**, “Quadruplex-Based Technologies in Multi-Well Point-of-Care Diagnostics” Denman Undergraduate Research Forum (2012).
27. Sh. Gogichaishvili, A. Taylor, A. Joseph, R. Okyere, **B. Kankia**, “Isothermal amplification and quantification of DNA using quadruplex primers with intrinsic fluorescence” *26<sup>th</sup> Annual Gibbs Conference on Biothermodynamics* (2012).
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29. Sh. Gogichaishvili, T. Partskhaladze, **B. Kankia**, “Quadruplex priming amplification of DNA coupled with nicking endonuclease activity” *57<sup>th</sup> Biophysical Society Meeting* (2013).
30. N.M. Adams, A. Wang, David Gvarjaladze, L. Lomidze, **B. Kankia**, D.W. Wright, F.R. Haselton, “Development of a Simple and Self-Contained mRNA Biomarker Extraction and Detection Assay” *Biomedical Engineering Society Annual Meeting* (2013).
31. T. Phartskhaladze, **B. Kankia**, “Two-primer exponential quadruplex priming amplification for diagnostics” *27<sup>th</sup> Annual Gibbs Conference on Biothermodynamics* (2013).
32. L. Lomidze, **B. Kankia**, “Isothermal generation of DNA clones for next-generation sequencing” *27<sup>th</sup> Annual Gibbs Conference on Biothermodynamics* (2013).
33. D. Gvarjaladze, **B. Kankia**, “Single-primer quadruplex priming amplification (QPA) for DNA diagnostics” *27<sup>th</sup> Annual Gibbs Conference on Biothermodynamics* (2013).
34. S. Gogichaishvili, L. Lomidze, **B. Kankia**, “Molecular diagnostics based on quadruplex priming amplification and nicking enzyme activity” *5<sup>th</sup> International Meeting on Quadruplex Nucleic Acids*” Bordeaux, France (2015).
35. D. Gvarjaladze, L. Lomidze, N. Metreveli, **B. Kankia** “Thermodynamic and optical properties of quadruplex primers for isothermal DNA amplification” *5<sup>th</sup> International Meeting on Quadruplex Nucleic Acids*” Bordeaux, France (2015).
36. L. Lomidze, D. Gvarjaladze, N. Metreveli, **B. Kankia** “Nucleic acid detection and quantification methods based on DNA quadruplexes” *5<sup>th</sup> International Meeting on Quadruplex Nucleic Acids*” Bordeaux, France (2015).
37. **B. Kankia**, “Biological applications of quadruplexes” *5<sup>th</sup> International Meeting on Quadruplex Nucleic Acids*” Bordeaux, France (2015).