

- 1)** D. P. Chandler, A. Kukhtin, R. Mokhiber, C. Knickerbocker, D. Ogles, G. Rudy, J. Golova, P. Long and A. Peacock. 2010. Monitoring microbial community structure and dynamics during in situ U(VI) bioremediation with a field-portable microarray analysis system. *Env. Sci. Technol.* 44: 5516-5522.
- 2)** S. G. Bavykin, V. M. Mikhailovich, V. M. Zakharyev, Y. P. Lysov, J. J. Kelly, O. S. Alferov, I. M. Gavin, A. V. Kukhtin, J. Jackman, D. A. Stahl, D. Chandler, and A. D. Mirzabekov. 2008. Discrimination of *Bacillus anthracis* and closely related microorganisms by analysis of 16S and 23S rRNA with oligonucleotide microarray. *Chemico-Biol. Interactions* 171(2): 212-235.
- 3)** E. M. L. Starke, J. C. Smoot, W. Jer-Horng, W.-T. Liu, D. P. Chandler, and D. A. Stahl. 2007. Saliva-based diagnostics using 16S rRNA microarrays and microfluidics. *Ann. NY. Acad. Sci.* 2007 1098: 345-361.
- 4)** M. Doran, D.S. Raicu, J.D. Furst, R. Settini, M. Schipma and D. P. Chandler. 2007. Oligonucleotide Microarray identification of *Bacillus anthracis* strains using support vector machines. *Bioinformatics* 23(4): 487 -492.
- 5)** D. P. Chandler, D. S. Schabacker, S. Bavykin and I. M. Gavin. 2007. Leaving the surface behind: At the intersection of protein microarrays and mass spectrometry. In: *Functional Protein Microarrays in Drug Discovery*. P. Predki, Ed., CRC Press. Boca Raton, FL. pp. 199-216.
- 6)** Siripong S, Kelly JJ, Stahl DA, Rittmann BE. Influence of grid placement on melting profiles obtained from gel-pad microarrays. *Environ Microbiol.* 2007 Jul; 9(7): 1866-7
- 7)** D. S. Schabacker, I. Stefanovska, I. Gavin, C. Pedrak, and D. P. Chandler. 2006. Protein array staining methods for undefined protein content, manufacturing quality control, and performance validation. *Anal. Biochem.* 359(1): 84-93.
- 8)** E. M. L. Starke, J. C. Smoot, L. M. Smoot, W.-T. Liu, D. P. Chandler, H. H. Lee, and D. A. Stahl. 2006. Technology development to explore the relationship between oral health and the oral microbial community. *BMC Oral Health* 6 (Suppl. 1): S10.
- 9)** Bavykin SG, Lysov YP, Zakhariyev V, Kelly JJ, Jackman J, Stahl DA, Cherni A. Use of 16S rRNA, 23S rRNA, and gyrB gene sequence analysis to determine phylogenetic relationships of *Bacillus cereus* group microorganisms. *J Clin Microbiol.* 2004 Aug; 42(8): 3711-30. Erratum in: *J Clin Microbiol.* 2006 Jul; 44(7): 2676.
- 10)** Eyers L, Smoot JC, Smoot LM, Bugli C, Urakawa H, McMurry Z, Siripong S, El-Fantroussi S, Lambert P, Agathos SN, Stahl DA. Discrimination of shifts in a soil microbial community associated with TNT-contamination using a functional ANOVA of 16S rRNA hybridized to oligonucleotide microarrays. *Environ Sci Technol.* 2006 Oct 1; 40(19): 5867-73.
- 11)** Siripong S, Kelly JJ, Stahl DA, Rittmann BE. Impact of prehybridization PCR amplification on microarray detection of nitrifying bacteria in wastewater treatment plant samples. *Environ Microbiol.* 2006 Sep; 8(9): 1564-74.
- 12)** Lee HH, Smoot J, McMurray Z, Stahl DA, Yager P. Recirculating flow accelerates DNA microarray hybridization in a microfluidic device. *Lab Chip.* 2006 Sep; 6(9): 1163-70. Epub 2006 Jul 13.
- 13)** M. Gavin, A. Kukhtin, A., D. Glesne, D. Schabacker, and D. P. Chandler. 2005. Analysis of protein interaction and function with a 3-Dimensional MALDI-MS protein array. *BioTechniques*: 39: 99-107.
- 14)** Pemov, H. Modi, D. P. Chandler, and S. Bavykin. 2005. DNA analysis with multiplex microarray-enhanced PCR. *Nucl. Acids Res.* 33(2): e11.
- 15)** Smoot LM, Smoot JC, Smidt H, Noble PA, Könneke M, McMurry ZA, Stahl DA. DNA microarrays as salivary diagnostic tools for characterizing the oral cavity's microbial community. *Adv Dent Res.* 2005 Jun; 18(1): 6-11.
- 16)** Kelly JJ, Siripong S, McCormack J, Janus LR, Urakawa H, El Fantroussi S, Noble PA, Sappelsa L, Rittmann BE, Stahl DA. DNA microarray detection of nitrifying bacterial 16S rRNA in wastewater treatment plant samples. *Water Res.* 2005 Sep; 39(14): 3229-38.
- 17)** Gryadunov D, Mikhailovich V, Lapa S, Roudinskii N, Donnikov M, Pan'kov S, Markova O, Kuz'min A, Chernousova L, Skotnikova O, Moroz A, Zasedatelev A, Mirzabekov A. Evaluation of hybridisation on oligonucleotide microarrays for analysis of drug-resistant *Mycobacterium tuberculosis*. *Clin Microbiol Infect.* 2005 Jul; 11(7): 531-9.

- 18)** Kashkin KN, Strizhkov BN, Griadunov DA, Surzhikov SA, Grechishnikova IV, Kreindlin EA, Chupeeva VV, Evseev KB, Turygin Alu, Mirzabekov AD. [Detection of single base polymorphism in p53 gene by ligase detection reaction and rolling circle amplification on microarrays] *Mol Biol (Mosk)*. 2005 Jan-Feb; 39(1): 30-9. Russian.
- 19)** Fesenko DO, Nasedkina TV, Prokopenko DV, Mirzabekov AD. Biosensing and monitoring of cell populations using the hydrogel bacterial microchip. *Biosens Bioelectron*. 2005 Mar 15; 20(9): 1860-5.
- 20)** Stahl DA. High-throughput techniques for analyzing complex bacterial communities. *Adv Exp Med Biol*. 2004; 547: 5-17.
- 21)** Rudinskiĭ NI, Mikhaĭlovich VM, Donnikov Mlu, Lapa SA, Sukhanova AL, Kazennova EV, Bobkov AF, Zasedatelev AS, Pokrovskii VV, Mirzabekov AD. [Development of microchips for the detection of mutations of HIV-1 variability to protease inhibitors and the usage results] *Vopr Virusol*. 2004 Nov-Dec; 49: 10-5. Russian.
- 22)** Skotnikova OI, Mikhaĭlovich VM, Nosova Elu, Lapa SA, Griadunov DA, Donnikov Mlu, Badleeva MV, Galkina Klu, Dorozhkova IR, Litvinov VI, Zasedatelev AS, Moroz AM, Mirzabekov AD. [New technologies in the determination of drug susceptibility in *Mycobacterium tuberculosis*] *Probl Tuberk Bolezn Legk*. 2004; (6): 40-2. Russian.
- 23)** Mitiaeva ON, Nasedkina TV, Zharinov VS, Isaeva EA, Turygin Alu, Chupeeva VV, Kreindlin EA, Mirzabekov AD. [Analysis of chromosome translocations involving MML by hybridization with an oligonucleotide microarray] *Mol Biol (Mosk)*. 2004 May-Jun; 38(3): 449-56. Russian.
- 24)** Dementieva EI, Rubina AY, Darii EL, Dyukova VI, Zasedatelev AS, Osipova TV, Ryabykh TP, Baryshnikov AY, Mirzabekov AD. Protein microchips in quantitative assays for tumor markers. *Dokl Biochem Biophys*. 2004 Mar-Apr; 395: 88-92.
- 25)** Kolchinskiĭ AM, Griadunov DA, Lysov IuP, Mikhaĭlovich VM, Nasedkina TV, Turygin Alu, Rubina Alu, Barskiĭ VE, Zasedatelev AS. [Microchips based on three dimensional gel cells: history and perspective] *Mol Biol (Mosk)*. 2004 Jan-Feb; 38(1): 5-16.
- 26)** Rubina AY, Pan'kov SV, Dementieva EI, Pen'kov DN, Butygin AV, Vasiliskov VA, Chudinov AV, Mikheikin AL, Mikhailovich VM, Mirzabekov AD. Hydrogel drop microchips with immobilized DNA: properties and methods for large-scale production. *Anal Biochem*. 2004 Feb 1; 325(1): 92-106.
- 27)** El Fantroussi S, Urakawa H, Bernhard AE, Kelly JJ, Noble PA, Smidt H, Yershov GM, Stahl DA. Direct profiling of environmental microbial populations by thermal dissociation analysis of native rRNAs hybridized to oligonucleotide microarrays. *Appl Environ Microbiol*. 2003 Apr; 69(4): 2377-82.
- 28)** Urakawa H, El Fantroussi S, Smidt H, Smoot JC, Tribou EH, Kelly JJ, Noble PA, Stahl DA. Optimization of single-base-pair mismatch discrimination in oligonucleotide microarrays. *Appl Environ Microbiol*. 2003 May; 69(5): 2848-56.
- 29)** Dementieva EI, Rubina AY, Stomakhin AA, Ivanov SM, Kreindlin EY, Ivanov DS, Rodin DV, Deev SM, Prasolov VS, Mirzabekov AD. Protein microchips: analysis of the expression of the recombinant barstar. *Dokl Biochem Biophys*. 2003 Nov-Dec; 393:304-8.
- 30)** Mikheikin AL, Chudinov AV, Iaroshchuk AI, Rubina Alu, Pan'kov SV, Krylov AS, Zasedatelev AS, Mirzabekov AD. [Dye with low specificity to nucleotide sequences of DNA: use for assessing the quantity of oligonucleotides, immobilized in cells of biological microchips] *Mol Biol (Mosk)*. 2003 Nov-Dec; 37(6): 1061-70. Russian.
- 31)** Griadunov DA, Mikhaĭlovich VM, Lapa SA, Rudinskiĭ NI, Barskiĭ VE, Chudinov AV, Zasedatelev AS, Mirzabekov AD. [Identification of *Mycobacterium tuberculosis* strains and a simultaneous identification of their drug resistance by the hybridization method on oligonucleotide microchips] *Mol Gen Mikrobiol Virusol*. 2003; (4): 24-7. Russian.
- 32)** Nasedkina TV, Zharinov VS, Isaeva EA, Mityaeva ON, Yurasov RN, Surzhikov SA, Turygin AY, Rubina AY, Karachunskii AI, Gartenhaus RB, Mirzabekov AD. Clinical screening of gene rearrangements in childhood leukemia by using a multiplex polymerase chain reaction-microarray approach. *Clin Cancer Res*. 2003 Nov 15; 9(15): 5620-9.
- 33)** Chechetkin VR, Prokopenko DV, Zasedateleva OA, Gitelson GI, Lomakin ES, Livshits MA, Malinina L, Turygin AY, Krylov AS, Mirzabekov AD. Analysis of binding specificity of disulfide bonded dimeric lambda-Cro V55C protein with generic hexamer oligonucleotide microchip. *J Biomol Struct Dyn*. 2003 Dec; 21(3): 425-33.
- 34)** Bonch-Osmolovskaya EA, Miroshnichenko ML, Lebedinsky AV, Chernyh NA, Nazina TN, Ivoilov VS, Belyaev SS, Boulygina ES, Lysov YP, Perov AN, Mirzabekov AD, Hippe H, Stackebrandt E, L'Haridon S, Jeanthon C. Radioisotopic, culture-based, and oligonucleotide microchip analyses of thermophilic microbial communities in a continental high-temperature petroleum reservoir. *Appl Environ Microbiol*. 2003 Oct; 69(10): 6143-51.
- 35)** Sorokin NV, Chechetkin VR, Chechetkin MA, Vasiliskov VA, Turygin AY, Mirzabekov AD. Kinetics of hybridization on the

oligonucleotide microchips with gel pads. *J Biomol Struct Dyn*. 2003 Oct; 21(2): 279-88.

36) Khomiakova EB, Livshits MA, Sharonov Alu, Prokopenko DV, Mirzabekov AD. [Analysis of perfect and mismatched DNA duplexes by a generic hexanucleotide microchip] *Mol Biol (Mosk)*. 2003 Jul-Aug;37(4):726-41. Russian.

37) Rubina AY, Dementieva EI, Stomakhin AA, Darii EL, Pan'kov SV, Barsky VE, Ivanov SM, Konovalova EV, Mirzabekov AD. Hydrogel-based protein microchips: manufacturing, properties, and applications. *Biotechniques*. 2003 May; 34(5): 1008-14, 1016-20, 1022.

38) Mikheev MV, Lapa SA, Shchelkunov SN, Chikova AK, Mikhaïlovich VM, Sobolev Alu, Babkin IV, Griadunov DA, Bulavkina MA, Gus'kov AA, Sokunova EB, Kochneva GV, Blinov VM, Sandakhchiev LS, Zasedatelev AS, Mirzabekov AD. [Identification of orthopoxvirus species using oligonucleotide micro-chips] *Vopr Virusol*. 2003 Jan-Feb; 48(1): 4-9. Russian.

39) Urakawa H, Noble PA, El Fantroussi S, Kelly JJ, Stahl DA. Single-base-pair discrimination of terminal mismatches by using oligonucleotide microarrays and neural network analyses. *Appl Environ Microbiol*. 2002 Jan; 68(1): 235-44.

40) Koizumi Y, Kelly JJ, Nakagawa T, Urakawa H, El-Fantroussi S, Al-Muzaini S, Fukui M, Urushigawa Y, Stahl DA. Parallel characterization of anaerobic toluene- and ethylbenzene-degrading microbial consortia by PCR-denaturing gradient gel electrophoresis, RNA-DNA membrane hybridization, and DNA microarray technology. *Appl Environ Microbiol*. 2002 Jul; 68(7): 3215-25.

41) Kelly JJ, Chernov BK, Tovstanovsky I, Mirzabekov AD, Bavykin SG. Radical-generating coordination complexes as tools for rapid and effective fragmentation and fluorescent labeling of nucleic acids for microchip hybridization. *Anal Biochem*. 2002 Dec 15; 311(2): 103-18.

42) Zasedateleva OA, Krylov AS, Prokopenko DV, Skabkin MA, Ovchinnikov LP, Kolchinsky A, Mirzabekov AD. Specificity of mammalian Y-box binding protein p50 in interaction with ss and ds DNA analyzed with generic oligonucleotide microchip. *J Mol Biol*. 2002 Nov 15; 324(1): 73-87.

43) Barsky V, Perov A, Tokalov S, Chudinov A, Kreindlin E, Sharonov A, Kotova E, Mirzabekov A. Fluorescence data analysis on gel-based biochips. *J Biomol Screen*. 2002 Jun; 7(3): 247-57.

44) Nasedkina T, Domer P, Zharinov V, Hoberg J, Lysov Y, Mirzabekov A. Identification of chromosomal translocations in

leukemias by hybridization with oligonucleotide microarrays. *Haematologica*. 2002 Apr; 87(4): 363-72.

45) Kolchinsky A, Mirzabekov A. Analysis of SNPs and other genomic variations using gel-based chips. *Hum Mutat*. 2002 Apr; 19(4): 343-60.

46) Skotnikova OI, Soboleva Alu, Mikhaïlovich VM, Griadunov DA, Irtuganova OA, Nosova Elu, Isaeva EL, Lapa SA, Zasedatelev AS, Litvinov VI, Moroz AM, Mirzabekov AD. [Molecular genetic methods for the detection of rifampicin-resistant Mycobacterium tuberculosis strains] *Vestn Ross Akad Med Nauk*. 2002; (2): 36-9. Russian.

47) Lapa S, Mikheev M, Shchelkunov S, Mikhailovich V, Sobolev A, Blinov V, Babkin I, Guskov A, Sokunova E, Zasedatelev A, Sandakhchiev L, Mirzabekov A. Species-level identification of orthopoxviruses with an oligonucleotide microchip. *J Clin Microbiol*. 2002 Mar; 40(3): 753-7.

48) Mirzabekov A, Kolchinsky A. Emerging array-based technologies in proteomics. *Curr Opin Chem Biol*. 2002 Feb; 6(1): 70-5.

49) Liu WT, Mirzabekov AD, Stahl DA. Optimization of an oligonucleotide microchip for microbial identification studies: a non-equilibrium dissociation approach. *Environ Microbiol*. 2001 Oct; 3(10): 619-29.

50) Fesenko DO, Nasedkina TV, Mirzabekov AD. A bacterial microchip: the principle of operation as exemplified by detection of antibiotics. *Dokl Biochem Biophys*. 2001 Nov-Dec; 381: 427-9.

51) Rubina A, Pan'kov SV, Ivanov SM, Dement'eva EI, Mirzabekov AD. Protein microchips. *Dokl Biochem Biophys*. 2001 Nov-Dec; 381: 419-22.

52) Gryadunov DA, Mikhailovich VM, Noskov AN, Lapa SA, Sobolev A, Pan'kov SV, Rubina A, Zasedatelev AS, Mirzabekov AD. Detection of Bacillus anthracis using multiplex PCR on the oligonucleotide biochip. *Dokl Biochem Biophys*. 2001 Nov-Dec; 381: 384-6.

53) Lebed JB, Chechetkin VR, Turygin AY, Shick VV, Mirzabekov AD. Comparison of complex DNA mixtures with generic oligonucleotide microchips. *J Biomol Struct Dyn*. 2001 Jun; 18(6): 813-23.

54) Mikhailovich V, Lapa S, Gryadunov D, Sobolev A, Strizhkov B, Chernyh N, Skotnikova O, Irtuganova O, Moroz A, Litvinov V, Vladimirkii M, Perelman M, Chernousova L, Erokhin V, Zasedatelev A, Mirzabekov A. Identification of rifampin-resistant Mycobacterium tuberculosis strains by hybridization, PCR, and

ligase detection reaction on oligonucleotide microchips. *J Clin Microbiol.* 2001 Jul; 39(7): 2531-40.

55) Krylov AS, Zasedateleva OA, Prokopenko DV, Rouviere-Yaniv J, Mirzabekov AD. Massive parallel analysis of the binding specificity of histone-like protein HU to single- and double-stranded DNA with generic oligodeoxyribonucleotide microchips. *Nucleic Acids Res.* 2001 Jun 15;29(12):2654-60.

56) Timofeev E, Mirzabekov A. Binding specificity and stability of duplexes formed by modified oligonucleotides with a 4096-hexanucleotide microarray. *Nucleic Acids Res.* 2001 Jun 15; 29(12): 2626-34.

57) Vasiliskov VA, Prokopenko DV, Mirzabekov AD. Parallel multiplex thermodynamic analysis of coaxial base stacking in DNA duplexes by oligodeoxyribonucleotide microchips. *Nucleic Acids Res.* 2001 Jun 1; 29 (11): 2303-13.

58) Zlatanova J, Mirzabekov A. Gel-immobilized microarrays of nucleic acids and proteins. Production and application for macromolecular research. *Methods Mol Biol.* 2001; 170: 17-38.

59) Mikhailovich VM, Lapa SA, Gryadunov DA, Strizhkov BN, Sobolev AY, Skotnikova OI, Irtuganova OA, Moroz AM, Litvinov VI, Shipina LK, Vladimirovskii MA, Chernousova LN, Erokhin VV, Mirzabekov AD. Detection of rifampicin-resistant *Mycobacterium tuberculosis* strains by hybridization and polymerase chain reaction on a specialized TB-microchip. *Bull Exp Biol Med.* 2001 Jan; 131(1): 94-8.

60) Tillib SV, Strizhkov BN, Mirzabekov AD. Integration of multiple PCR amplifications and DNA mutation analyses by using oligonucleotide microchip. *Anal Biochem.* 2001 May 1; 292(1): 155-60.

61) Tillib SV, Mirzabekov AD. Advances in the analysis of DNA sequence variations using oligonucleotide microchip technology. *Curr Opin Biotechnol.* 2001 Feb; 12(1): 53-8.

62) Bavykin SG, Akowski JP, Zakhariyev VM, Barsky VE, Perov AN, Mirzabekov AD. Portable system for microbial sample preparation and oligonucleotide microarray analysis. *Appl Environ Microbiol.* 2001 Feb; 67(2): 922-8.

63) Strizhkov BN, Drobyshev AL, Mikhailovich VM, Mirzabekov AD. PCR amplification on a microarray of gel-immobilized oligonucleotides: detection of bacterial toxin- and drug-resistant genes and their mutations. *Biotechniques.* 2000 Oct; 29(4): 844-8, 850-2, 854 passim.

64) LaForge KS, Shick V, Spangler R, Proudnikov D, Yuferov

V, Lysov Y, Mirzabekov A, Kreek MJ. Detection of single nucleotide polymorphisms of the human mu opioid receptor gene by hybridization or single nucleotide extension on custom oligonucleotide gelpad microchips: potential in studies of addiction. *Am J Med Genet.* 2000 Oct 9; 96(5): 604-15.

65) Chechetkin VR, Turygin AY, Proudnikov DY, Prokopenko DV, Kirillov EV, Mirzabekov AD. Sequencing by hybridization with the generic 6-mer oligonucleotide microarray: an advanced scheme for data processing. *J Biomol Struct Dyn.* 2000 Aug; 18(1): 83-101.

66) Proudnikov D, Kirillov E, Chumakov K, Donlon J, Rezapkin G, Mirzabekov A. Analysis of mutations in oral poliovirus vaccine by hybridization with generic oligonucleotide microchips. *Biologicals.* 2000 Jun; 28(2): 57-66.

67) Kotova Elu, Kreindlin Ela, Barskiy VE, Mirzabekov AD. [Optical properties of fluorochromes, promising for use in biological microchips] *Mol Biol (Mosk).* 2000 Mar-Apr; 34(2): 304-9. Russian.

68) Kotova Elu, Kreindlin Ela, Barskiy VE, Mirzabekov AD. [Mutual effect of oligonucleotides and fluorescent probes on the effectiveness of hybridization with oligonucleotides, immobilized on biological microchips] *Mol Biol (Mosk).* 2000 Mar-Apr; 34(2): 237-45. Russian.

69) Stomakhin AA, Vasiliskov VA, Timofeev E, Schulga D, Cotter RJ, Mirzabekov AD. DNA sequence analysis by hybridization with oligonucleotide microchips: MALDI mass spectrometry identification of 5mers contiguously stacked to microchip oligonucleotides. *Nucleic Acids Res.* 2000 Mar 1; 28(5): 1193-8.

70) Arenkov P, Kukhtin A, Gemell A, Voloshchuk S, Chupeeva V, Mirzabekov A. Protein microchips: use for immunoassay and enzymatic reactions. *Anal Biochem.* 2000 Feb 15;278(2):123-31.

71) Favorov AV, Livshits MA, Mirzabekov AD. [Hybridization of DNA with an oligonucleotide microchip. Correlation and screening for errors] *Mol Biol (Mosk).* 1999 May-Jun; 33(3): 428-32. Russian.

72) Drobyshev AL, Zasedatelev AS, Yershov GM, Mirzabekov AD. Massive parallel analysis of DNA-Hoechst 33258 binding specificity with a generic oligodeoxyribonucleotide microchip. *Nucleic Acids Res.* 1999 Oct 15; 27(20): 4100-5.

73) Vasiliskov AV, Timofeev EN, Surzhikov SA, Drobyshev AL, Shick VV, Mirzabekov AD. Fabrication of microarray of gel-immobilized compounds on a chip by copolymerization. *Biotechniques.* 1999 Sep;27(3):592-4, 596-8, 600 passim.

74) Dubiley S, Kirillov E, Mirzabekov A. Polymorphism analysis and gene detection by minisequencing on an array of gel-

immobilized primers. *Nucleic Acids Res.* 1999 Sep 15; 27(18): e19.

- 75)** Maldonado-Rodriguez R, Espinosa-Lara M, Loyola-Abitia P, Beattie WG, Beattie KL. Mutation detection by stacking hybridization on genosensor arrays. *Mol Biotechnol.* 1999 Feb; 11(1): 13-25.
- 76)** Vasiliskov VA, Timofeev EN, Surzhikov SA, Drobyshev AL, Shik VV, Mirzabekov AD. [A method for preparing microchips using copolymerization with acrylamide] *Mol Biol (Mosk).* 1998 Sep-Oct; 32(5): 923-5. Russian.
- 77)** Proudnikov D, Timofeev E, Mirzabekov A. Immobilization of DNA in polyacrylamide gel for the manufacture of DNA and DNA-oligonucleotide microchips. *Anal Biochem.* 1998 May 15; 259(1): 34-41.
- 78)** Fotin AV, Drobyshev AL, Proudnikov DY, Perov AN, Mirzabekov AD. Parallel thermodynamic analysis of duplexes on oligodeoxyribonucleotide microchips. *Nucleic Acids Res.* 1998 Mar 15; 26(6): 1515-21.
- 79)** Guschin D, Yershov G, Zaslavsky A, Gemmell A, Shick V, Proudnikov D, Arenkov P, Mirzabekov A. Manual manufacturing of oligonucleotide, DNA, and protein microchips. *Anal Biochem.* 1997 Aug 1; 250(2): 203-11.
- 80)** Dubiley S, Kirillov E, Lysov Y, Mirzabekov A. Fractionation, phosphorylation and ligation on oligonucleotide microchips to enhance sequencing by hybridization. *Nucleic Acids Res.* 1997 Jun 15; 25(12): 2259-65.
- 81)** Drobyshev A, Mologina N, Shik V, Pobedimskaya D, Yershov G, Mirzabekov A. Sequence analysis by hybridization with oligonucleotide microchip: identification of beta-thalassemia mutations. *Gene.* 1997 Mar 25; 188(1): 45-52.
- 82)** Ivanov IB, Ershov GM, Barskiĭ VE, Bel'govskiĭ AI, Kirillov EV, Kreindlin EA, Parinov SV, Mologina NV, Mirzabekov AD. [Diagnosis of genetic mutations using oligonucleotide microchips] *Mol Biol (Mosk).* 1997 Jan-Feb; 31(1): 159-67. Russian.
- 83)** Proudnikov D, Mirzabekov A. Chemical methods of DNA and RNA fluorescent labeling. *Nucleic Acids Res.* 1996 Nov 15; 24(22): 4535-42.
- 84)** Livshits MA, Mirzabekov AD. Theoretical analysis of the kinetics of DNA hybridization with gel-immobilized oligonucleotides. *Biophys J.* 1996 Nov; 71(5): 2795-801.
- 85)** Livshits MA, Mirzabekov AD. [Calculation of kinetics of hybridization of DNA with oligonucleotides fixed in a gel layer]

Mol Biol (Mosk). 1996 Sep-Oct; 30(5): 1158-64. Russian.

- 86)** Timofeev E, Kochetkova SV, Mirzabekov AD, Florentiev VL. Regioselective immobilization of short oligonucleotides to acrylic copolymer gels. *Nucleic Acids Res.* 1996 Aug 15; 24(16): 3142-8.
- 87)** Parinov S, Barsky V, Yershov G, Kirillov E, Timofeev E, Belgovskiy A, Mirzabekov A. DNA sequencing by hybridization to microchip octa- and decanucleotides extended by stacked pentanucleotides. *Nucleic Acids Res.* 1996 Aug 1; 24(15): 2998-3004.
- 88)** Yershov G, Barsky V, Belgovskiy A, Kirillov E, Kreindlin E, Ivanov I, Parinov S, Guschin D, Drobishev A, Dubiley S, Mirzabekov A. DNA analysis and diagnostics on oligonucleotide microchips. *Proc Natl Acad Sci U S A.* 1996 May 14; 93(10): 4913-8.
- 89)** Lysov YP, Gnuchev FN, Mironov AA, Chernyi AA, Beattie KL, Mirzabekov AD. Efficiency of sequencing by hybridization on oligonucleotide matrix supplemented by measurement of the distance between DNA segments. *DNA Seq.* 1996; 6(2): 65-73.
- 90)** Lysov IuN, Chernyi AA, Balaev AA, Gnuchev FN, Beattie KL, Mirzabekov AD. [Use of continuous stacking hybridization in sequencing using modified oligonucleotide matrices] *Mol Biol (Mosk).* 1995 Jan-Feb; 29(1): 104-13. Russian.
- 91)** Lysov IuP, Chernyi AA, Balaev AA, Gnuchev FN, Beattie KL, Mirzabekov AD. [Effectiveness of sequencing using stacking hybridization on oligonucleotide matrices with varying length of immobilized oligonucleotides] *Mol Biol (Mosk).* 1994 Jul-Aug; 28(4): 832-9. Russian.
- 92)** Lysov IuP, Mironov AA, Gnuchev FN, Chernyi AA, Mirzabekov AD. [Measurement of distances between DNA segments for increasing the effectiveness of sequencing using hybridization on an oligonucleotide matrix] *Mol Biol (Mosk).* 1994 May-Jun; 28(3): 652-7. Russian.
- 93)** Kuznetsova SA, Kanevskiĭ IE, Florent'ev VA, Mirzabekov AD, Shabarova ZA. [DNA sequencing by hybridization with oligonucleotides immobilized in a gel. Chemical ligation as a method of expanding the prospects for the method] *Mol Biol (Mosk).* 1994 Mar-Apr; 28(2): 290-9. Russian.
- 94)** Lysov YuP, Chernyi AA, Balaev AA, Beattie KL, Mirzabekov AD. DNA sequencing by hybridization to oligonucleotide matrix. Calculation of continuous stacking hybridization efficiency. *J Biomol Struct Dyn.* 1994 Feb; 11(4): 797-812.
- 95)** Livshits MA, Florentiev VL, Mirzabekov AD. Dissociation of duplexes formed by hybridization of DNA with gel-immobilized

oligonucleotides. *J Biomol Struct Dyn.* 1994 Feb; 11(4): 783-95.

96) Mirzabekov AD. DNA sequencing by hybridization--a megasequencing method and a diagnostic tool? *Trends Biotechnol.* 1994 Jan; 12(1): 27-32.

97) Lysov IuP, Chernyĭ AA, Balaev AA, Beattie KL, Florent'ev VL, Mirzabekov AD. [Reconstruction of a sequenced sequence using results of stacked hybridization with an oligonucleotide matrix] *Mol Biol (Mosk).* 1993 Sep-Oct; 27(5): 1126-38. Russian.

98) Livshits MA, Ivanov IB, Mirzabekov AD, Florent'ev VL. [DNA sequencing by hybridization with an oligonucleotide matrix (SHOM). The theory of DNA elution after hybridization] *Mol Biol (Mosk).* 1992 Nov-Dec; 26(6): 1298-313. Russian.

99) Mirzabekov AD. [New strategies for DNA sequencing and determining protein location in genomic DNA] *Bioorg Khim.* 1992 Oct-Nov; 18(10-11): 1361-74. Russian.

100) Cantor CR, Mirzabekov A, Southern E. Report on the sequencing by hybridization workshop. *Genomics.* 1992 Aug; 13(4): 1378-83.

101) Pevzner PA, Lysov YuP, Khrapko KR, Belyavsky AV, Florentiev VL, Mirzabekov AD. Improved chips for sequencing by hybridization. *J Biomol Struct Dyn.* 1991 Oct; 9(2): 399-410.

102) Khrapko KR, Khorlin AA, Ivanov IB, Chernov BK, Lysov IuP, Vasilenko SK, Florent'ev VL, Mirzabekov AD. [Hybridization of DNA with oligonucleotides immobilized in a gel: a convenient method for recording single base replacements] *Mol Biol (Mosk).* 1991 May-Jun; 25(3): 718-30. Russian.

103) Pevzner PA, Lysov IuP, Khrapko KR, Beliavskii AV, Florent'ev VL, Mirzabekov AD. [Optimal chips for megabase DNA sequencing] *Mol Biol (Mosk).* 1991 Mar-Apr; 25(2): 552-62. Russian.

104) Khorlin AA, Khrapko KR, Ivanov IB, Lysov YuP, Yershov GK, Vasilenko SK, Florentiev VL, Mirzabekov AD. An oligonucleotide matrix hybridization approach to DNA sequencing. *Nucleic Acids Symp Ser.* 1991; (24): 191-2.

105) Ivanov IB, Khrapko KR, Chernov BK, Khorlin AA, Lysov YuP, Florentiev VL, Mirzabekov AD. Hybridization properties of gel-immobilized oligonucleotides. *Nucleic Acids Symp Ser.* 1991; (24): 189-90.

106) Khrapko KR, Lysov YuP, Khorlin AA, Ivanov IB, Yershov GM, Vasilenko SK, Florentiev VL, Mirzabekov AD. A method for DNA sequencing by hybridization with oligonucleotide matrix. *DNA Seq.* 1991; 1(6): 375-88.

107) Khrapko KR, Lysov YuP, Khorlyn AA, Shick VV, Florentiev VL, Mirzabekov AD. An oligonucleotide hybridization approach to DNA sequencing. *FEBS Lett.* 1989 Oct 9; 256(1-2): 118-22.

> [PL | 006.01 | 10.10](#)