

# G Mike Makrigiorgos

## List of Publications by Year in descending order

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104  
papers

3,809  
citations

126907

33  
h-index

138484

58  
g-index

109  
all docs

109  
docs citations

109  
times ranked

4685  
citing authors

#	ARTICLE	IF	CITATIONS
1	Precision and Performance Characteristics of Bisulfite Conversion and Real-Time PCR (MethyLight) for Quantitative DNA Methylation Analysis. <i>Journal of Molecular Diagnostics</i> , 2006, 8, 209-217.	2.8	361
2	Replacing PCR with COLD-PCR enriches variant DNA sequences and redefines the sensitivity of genetic testing. <i>Nature Medicine</i> , 2008, 14, 579-584.	30.7	346
3	Bystander effect produced by radiolabeled tumor cells in vivo. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2002, 99, 13765-13770.	7.1	177
4	PCR-Based Methods for the Enrichment of Minority Alleles and Mutations. <i>Clinical Chemistry</i> , 2009, 55, 632-640.	3.2	155
5	Nanoparticle Mediated Tumor Vascular Disruption: A Novel Strategy in Radiation Therapy. <i>Nano Letters</i> , 2015, 15, 7488-7496.	9.1	143
6	Sensitive Detection of Minimal Residual Disease in Patients Treated for Early-Stage Breast Cancer. <i>Clinical Cancer Research</i> , 2020, 26, 2556-2564.	7.0	109
7	Ice -COLD-PCR enables rapid amplification and robust enrichment for low-abundance unknown DNA mutations. <i>Nucleic Acids Research</i> , 2011, 39, e2-e2.	14.5	92
8	In vitro radiosensitization by gold nanoparticles during continuous low-dose-rate gamma irradiation with I-125 brachytherapy seeds. <i>Nanomedicine: Nanotechnology, Biology, and Medicine</i> , 2013, 9, 25-27.	3.3	86
9	DNA amplification method tolerant to sample degradation. <i>Genome Research</i> , 2004, 14, 2357-2366.	5.5	79
10	Advanced multimodal nanoparticles delay tumor progression with clinical radiation therapy. <i>Journal of Controlled Release</i> , 2016, 238, 103-113.	9.9	76
11	A PCR-based amplification method retaining the quantitative difference between two complex genomes. <i>Nature Biotechnology</i> , 2002, 20, 936-939.	17.5	74
12	COLD-PCR—Enhanced High-Resolution Melting Enables Rapid and Selective Identification of Low-Level Unknown Mutations. <i>Clinical Chemistry</i> , 2009, 55, 2130-2143.	3.2	69
13	COLD-PCR: a new platform for highly improved mutation detection in cancer and genetic testing. <i>Biochemical Society Transactions</i> , 2009, 37, 427-432.	3.4	68
14	COLD-PCR Enrichment of Rare Cancer Mutations prior to Targeted Amplicon Resequencing. <i>Clinical Chemistry</i> , 2012, 58, 580-589.	3.2	61
15	Methylation of the ATM promoter in glioma cells alters ionizing radiation sensitivity. <i>Biochemical and Biophysical Research Communications</i> , 2006, 344, 821-826.	2.1	60
16	Two-round coamplification at lower denaturation temperature-PCR (COLD-PCR)-based sanger sequencing identifies a novel spectrum of low-level mutations in lung adenocarcinoma. <i>Human Mutation</i> , 2009, 30, 1583-1590.	2.5	58
17	NRAS mutations with low allele burden have independent prognostic significance for patients with lower risk myelodysplastic syndromes. <i>Leukemia</i> , 2013, 27, 2077-2081.	7.2	57
18	DNA Degradation Test Predicts Success in Whole-Genome Amplification from Diverse Clinical Samples. <i>Journal of Molecular Diagnostics</i> , 2007, 9, 441-451.	2.8	56

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19	Balanced-PCR amplification allows unbiased identification of genomic copy changes in minute cell and tissue samples. <i>Nucleic Acids Research</i> , 2004, 32, e76-e76.	14.5	55
20	Coamplification at Lower Denaturation Temperature-PCR Increases Mutation-Detection Selectivity of TaqMan-Based Real-Time PCR. <i>Clinical Chemistry</i> , 2009, 55, 748-756.	3.2	55
21	Full COLD-PCR Protocol for Noninvasive Prenatal Diagnosis of Genetic Diseases. <i>Clinical Chemistry</i> , 2011, 57, 136-138.	3.2	55
22	Elimination of unaltered DNA in mixed clinical samples via nuclease-assisted minor-allele enrichment. <i>Nucleic Acids Research</i> , 2016, 44, gkw650.	14.5	55
23	COLD-PCR: improving the sensitivity of molecular diagnostics assays. <i>Expert Review of Molecular Diagnostics</i> , 2011, 11, 159-169.	3.1	50
24	Gold nanoparticle-aided brachytherapy with vascular dose painting: Estimation of dose enhancement to the tumor endothelial cell nucleus. <i>Medical Physics</i> , 2011, 39, 392-398.	3.0	48
25	FLAG assay as a novel method for real-time signal generation during PCR: application to detection and genotyping of KRAS codon 12 mutations. <i>Nucleic Acids Research</i> , 2007, 35, e131.	14.5	47
26	Effect of dental restorations and prostheses on radiotherapy dose distribution: a Monte Carlo study. <i>Journal of Applied Clinical Medical Physics</i> , 2009, 10, 80-89.	1.9	45
27	Image-guided radiotherapy platform using single nodule conditional lung cancer mouse models. <i>Nature Communications</i> , 2014, 5, 5870.	12.8	44
28	Build-up and surface dose measurements on phantoms using micro-MOSFET in 6 and 10MV x-ray beams and comparisons with Monte Carlo calculations. <i>Medical Physics</i> , 2007, 34, 1266-1273.	3.0	41
29	Metastasis-associated <i>MCL1</i> and <i>P16</i> copy number alterations dictate resistance to vemurafenib in a <i>BRAFV600E</i> patient-derived papillary thyroid carcinoma preclinical model. <i>Oncotarget</i> , 2015, 6, 42445-42467.	1.8	40
30	Auger electron emitters: Insights gained from in vitro experiments. <i>Radiation and Environmental Biophysics</i> , 1990, 29, 75-91.	1.4	39
31	Third generation gold nanoplatfrom optimized for radiation therapy. <i>Translational Cancer Research</i> , 2013, 2, .	1.0	39
32	Brachytherapy Application With In Situ Dose Painting Administered by Gold Nanoparticle Eluters. <i>International Journal of Radiation Oncology Biology Physics</i> , 2015, 91, 385-392.	0.8	37
33	Nanoformulation of Olaparib Amplifies PARP Inhibition and Sensitizes <i>PTEN/TP53</i> -Deficient Prostate Cancer to Radiation. <i>Molecular Cancer Therapeutics</i> , 2017, 16, 1279-1289.	4.1	37
34	Enhanced detection of microsatellite instability using pre-PCR elimination of wild-type DNA homo-polymers in tissue and liquid biopsies. <i>Nucleic Acids Research</i> , 2018, 46, e74-e74.	14.5	36
35	DISSECT Method Using PNA-LNA Clamp Improves Detection of EGFR T790m Mutation. <i>PLoS ONE</i> , 2013, 8, e67782.	2.5	34
36	Whole Genome Amplification of Plasma-Circulating DNA Enables Expanded Screening for Allelic Imbalance in Plasma. <i>Journal of Molecular Diagnostics</i> , 2006, 8, 22-30.	2.8	33

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37	Antiprimer Quenching-Based Real-Time PCR and Its Application to the Analysis of Clinical Cancer Samples. <i>Clinical Chemistry</i> , 2006, 52, 624-633.	3.2	32
38	Methylation-Specific Loop-Mediated Isothermal Amplification for Detecting Hypermethylated DNA in Simplex and Multiplex Formats. <i>Clinical Chemistry</i> , 2010, 56, 1287-1296.	3.2	32
39	Temperature-Tolerant COLD-PCR Reduces Temperature Stringency and Enables Robust Mutation Enrichment. <i>Clinical Chemistry</i> , 2012, 58, 1130-1138.	3.2	32
40	Massively parallel enrichment of low-frequency alleles enables duplex sequencing at low depth. <i>Nature Biomedical Engineering</i> , 2022, 6, 257-266.	22.5	32
41	Multiplex Amplification Coupled with COLD-PCR and High Resolution Melting Enables Identification of Low-Abundance Mutations in Cancer Samples with Low DNA Content. <i>Journal of Molecular Diagnostics</i> , 2011, 13, 220-232.	2.8	31
42	MS-FLAG, a Novel Real-Time Signal Generation Method for Methylation-Specific PCR. <i>Clinical Chemistry</i> , 2007, 53, 2119-2127.	3.2	30
43	Solid tumor radionuclide therapy dosimetry: New paradigms in view of tumor microenvironment and angiogenesis. <i>Medical Physics</i> , 2010, 37, 2974-2984.	3.0	29
44	Nuclease-Assisted Minor Allele Enrichment Using Overlapping Probes-Assisted Amplification-Refractory Mutation System: An Approach for the Improvement of Amplification-Refractory Mutation System-Polymerase Chain Reaction Specificity in Liquid Biopsies. <i>Analytical Chemistry</i> , 2019, 91, 13105-13111.	6.5	29
45	Stable siRNA-mediated silencing of ATM alters the transcriptional profile of HeLa cells. <i>Biochemical and Biophysical Research Communications</i> , 2004, 317, 1037-1044.	2.1	26
46	Enhanced Ratio of Signals Enables Digital Mutation Scanning for Rare Allele Detection. <i>Journal of Molecular Diagnostics</i> , 2015, 17, 284-292.	2.8	26
47	s-RT-MELT for rapid mutation scanning using enzymatic selection and real time DNA-melting: new potential for multiplex genetic analysis. <i>Nucleic Acids Research</i> , 2007, 35, e84.	14.5	25
48	Chitosan Film Containing Poly(D,L-Lactic-Co-Glycolic Acid) Nanoparticles: A Platform for Localized Dual-Drug Release. <i>Pharmaceutical Research</i> , 2010, 27, 1738-1745.	3.5	25
49	Reproducible and inexpensive probe preparation for oligonucleotide arrays. <i>Nucleic Acids Research</i> , 2001, 29, 66e-66.	14.5	24
50	Cellular Radiation Dosimetry and Its Implications for Estimation of Radiation Risks. <i>JAMA - Journal of the American Medical Association</i> , 1990, 264, 592.	7.4	23
51	Closing the Cancer Divide Through Ubuntu: Information and Communication Technology-Powered Models for Global Radiation Oncology. <i>International Journal of Radiation Oncology Biology Physics</i> , 2016, 94, 440-449.	0.8	23
52	Multiplexed Elimination of Wild-Type DNA and High-Resolution Melting Prior to Targeted Resequencing of Liquid Biopsies. <i>Clinical Chemistry</i> , 2017, 63, 1605-1613.	3.2	23
53	Sensitive and quantitative detection of mutations associated with clinical resistance to STI-571. <i>Leukemia Research</i> , 2003, 27, 979-982.	0.8	22
54	Anti-primer quenching-based real-time PCR for simplex or multiplex DNA quantification and single-nucleotide polymorphism genotyping. <i>Nature Protocols</i> , 2007, 2, 50-58.	12.0	22

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55	Differential strand separation at critical temperature: A minimally disruptive enrichment method for low-abundance unknown DNA mutations. <i>Nucleic Acids Research</i> , 2013, 41, e50-e50.	14.5	22
56	Methylation-sensitive enrichment of minor DNA alleles using a double-strand DNA-specific nuclease. <i>Nucleic Acids Research</i> , 2017, 45, e39-e39.	14.5	22
57	An amplification and ligation-based method to scan for unknown mutations in DNA. <i>Human Mutation</i> , 2002, 20, 139-147.	2.5	21
58	Denaturation-Enhanced Droplet Digital PCR for Liquid Biopsies. <i>Clinical Chemistry</i> , 2018, 64, 1762-1771.	3.2	21
59	Ligation of a primer at a mutation: a method to detect low level mutations in DNA. <i>Mutagenesis</i> , 2002, 17, 365-374.	2.6	20
60	PCR-Based detection of minority point mutations. <i>Human Mutation</i> , 2004, 23, 406-412.	2.5	20
61	Adsorption of metallic radionuclides on plastic phantom walls. <i>Medical Physics</i> , 2008, 35, 1606-1610.	3.0	20
62	Generation of Hydroxyl Radicals by Nucleohistone-Bound Metal-Adriamycin Complexes. <i>Free Radical Research</i> , 1996, 25, 207-220.	3.3	15
63	Novel amplification of DNA in a hairpin structure: towards a radical elimination of PCR errors from amplified DNA. <i>Nucleic Acids Research</i> , 2003, 31, 26e-26.	14.5	15
64	Inverse PCR-Based RFLP Scanning Identifies Low-Level Mutation Signatures in Colon Cells and Tumors. <i>Cancer Research</i> , 2004, 64, 2544-2551.	0.9	14
65	Genotype-Specific Signal Generation Based on Digestion of 3-Way DNA Junctions: Application to KRAS Variation Detection. <i>Clinical Chemistry</i> , 2006, 52, 1855-1863.	3.2	13
66	Biotinylated Probe Isolation of Targeted Gene Region Improves Detection of T790M Epidermal Growth Factor Receptor Mutation via Peptide Nucleic Acid-Enriched Real-Time PCR. <i>Clinical Chemistry</i> , 2011, 57, 770-773.	3.2	13
67	Boosting the Abscopal Effect Using Immunogenic Biomaterials With Varying Radiation Therapy Field Sizes. <i>International Journal of Radiation Oncology Biology Physics</i> , 2022, 112, 475-486.	0.8	13
68	Initial recombination of ions in electron tracks: an evaluation of the predictions of Lea's model and a modified track structure model. <i>The International Journal of Applied Radiation and Isotopes</i> , 1985, 36, 813-818.	0.7	12
69	Preferential Amplification of Apoptotic DNA from Plasma: Potential for Enhancing Detection of Minor DNA Alterations in Circulating DNA. <i>Clinical Chemistry</i> , 2008, 54, 1582-1584.	3.2	12
70	COLD-PCR Amplification of Bisulfite-Converted DNA Allows the Enrichment and Sequencing of Rare Un-Methylated Genomic Regions. <i>PLoS ONE</i> , 2014, 9, e94103.	2.5	12
71	NGS-based identification and tracing of microsatellite instability from minute amounts DNA using inter-Alu-PCR. <i>Nucleic Acids Research</i> , 2021, 49, e24-e24.	14.5	12
72	Sensitive detection of microsatellite instability in tissues and liquid biopsies: Recent developments and updates. <i>Computational and Structural Biotechnology Journal</i> , 2021, 19, 4931-4940.	4.1	10

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73	Duplex-Repair enables highly accurate sequencing, despite DNA damage. <i>Nucleic Acids Research</i> , 2022, 50, e1-e1.	14.5	10
74	On a modification of Lea's model for initial recombination of electrons. <i>The International Journal of Applied Radiation and Isotopes</i> , 1985, 36, 509-510.	0.7	9
75	Detection of hotspot mutations and polymorphisms using an enhanced PCR-RFLP approach. <i>Human Mutation</i> , 2003, 21, 535-541.	2.5	9
76	DMSO Increases Mutation Scanning Detection Sensitivity of High-Resolution Melting in Clinical Samples. <i>Clinical Chemistry</i> , 2015, 61, 1354-1362.	3.2	9
77	ESR1 NAPA Assay: Development and Analytical Validation of a Highly Sensitive and Specific Blood-Based Assay for the Detection of ESR1 Mutations in Liquid Biopsies. <i>Cancers</i> , 2021, 13, 556.	3.7	9
78	COLD-PCR Enriches Low-Level Variant DNA Sequences and Increases the Sensitivity of Genetic Testing. <i>Methods in Molecular Biology</i> , 2014, 1102, 623-639.	0.9	8
79	Enrichment of Mutations in Multiple DNA Sequences Using COLD-PCR in Emulsion. <i>PLoS ONE</i> , 2012, 7, e51362.	2.5	8
80	Novel Visible and Ultraviolet Light Photogeneration of Hydroxyl Radicals by 2-Methyl-4-nitro-quinoline-N-oxide (MNO) and 4, 4'-Dinitro-(2, 2') bipyridinyl-N, N'-dioxide (DBD). <i>Photochemistry and Photobiology</i> , 1998, 67, 635-640.	2.5	7
81	Fast Temperature-Gradient COLD PCR for the enrichment of the paternally inherited SNPs in cell free fetal DNA; an application to non-invasive prenatal diagnosis of $\beta^2$ -thalassaemia. <i>PLoS ONE</i> , 2018, 13, e0200348.	2.5	7
82	Mutation enrichment in human DNA samples via UV-mediated cross-linking. <i>Nucleic Acids Research</i> , 2022, 50, e32-e32.	14.5	7
83	Recent Developments in Mutation Enrichment and Detection Technologies. <i>Clinical Chemistry</i> , 2022, 68, 1250-1260.	3.2	6
84	<i>Nucleic Acid Techniques</i> , 2018, , 47-86.		4
85	Noninvasive imaging of tumor hypoxia after nanoparticle-mediated tumor vascular disruption. <i>PLoS ONE</i> , 2020, 15, e0236245.	2.5	4
86	Pre-PCR Mutation-Enrichment Methods for Liquid Biopsy Applications. <i>Cancers</i> , 2022, 14, 3143.	3.7	4
87	Sensitive Detection of Microsatellite Instability (MSI) in Liquid Biopsies from Early Stage Colon Cancer Patients using Nuclease-based Enrichment and Standard-Marker or NGS based approaches. <i>International Journal of Radiation Oncology Biology Physics</i> , 2019, 105, S24-S25.	0.8	3
88	Nuclease-Assisted, Multiplexed Minor-Allele Enrichment: Application in Liquid Biopsy of Cancer. <i>Methods in Molecular Biology</i> , 2022, 2394, 433-451.	0.9	3
89	Enriching Mutant Sequences by Modulating the Denaturation Time during PCR. <i>Clinical Chemistry</i> , 2014, 60, 1014-1016.	3.2	2
90	Characteristics of an ethylene-polyethylene high-pressure ionization chamber and its potential for deriving radiation dose and quality information in neutron-gamma radiation fields. <i>Medical Physics</i> , 1988, 15, 36-39.	3.0	1

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91	Nanoparticle-aided Radiotherapy for Retinoblastoma and Choroidal Melanoma. IFMBE Proceedings, 2015, 51, 907-910.	0.3	1
92	Extreme PCR Meets High-Speed Melting: A Step Closer to Molecular Diagnostics "While You Wait". Clinical Chemistry, 2019, 65, 217-219.	3.2	1
93	The Measurement of the Restricted Dose Mean LET Ratios of Two Photon Spectra on the Basis of Initial Recombination Theory. Radiation Protection Dosimetry, 1985, 13, 383-386.	0.8	0
94	Measurement of the restricted linear energy transfer of stray radiation close to the treatment volume of 12 and 18 MeV clinical photon beams. Medical Physics, 1989, 16, 302-304.	3.0	0
95	s-RT-MELT: A Novel Technology for Mutation Screening. Methods in Molecular Biology, 2010, 653, 207-219.	0.9	0
96	SU-E-T-302: Customizable Radiotherapy Enhancement (CuRE) for Retinal Diseases Using Nanoparticles. Medical Physics, 2013, 40, 274-274.	3.0	0
97	SU-E-T-253: Open-Source Automatic Software for Quantifying Biological Assays of Radiation Effects. Medical Physics, 2014, 41, 281-282.	3.0	0
98	WE-G-BRE-06: New Potential for Enhancing External Beam Radiotherapy for Lung Cancer Using FDA-Approved Concentrations of Cisplatin Or Carboplatin Nanoparticles Administered Via Inhalation. Medical Physics, 2014, 41, 518-518.	3.0	0
99	SU-E-T-89: Comprehensive Quality Assurance Phantom for the Small Animal Radiation Research Platform. Medical Physics, 2014, 41, 242-242.	3.0	0
100	SU-F-19A-08: Optimal Time Release Schedule of In-Situ Drug Release During Permanent Prostate Brachytherapy. Medical Physics, 2014, 41, 389-390.	3.0	0
101	TU-F-CAMPUS-T-02: Monte Carlo Evaluation of Kilovoltage Radiosurgery with AuNPs for Age Related Macular Degeneration (AMD). Medical Physics, 2015, 42, 3644-3644.	3.0	0
102	MO-FG-BRA-05: Next Generation Radiotherapy Biomaterials Loaded With Gold Nanoparticles. Medical Physics, 2015, 42, 3565-3565.	3.0	0
103	WE-FG-BRA-02: Docetaxel Eluting Brachytherapy Spacers for Local Chemo-Radiation Therapy in Prostate Cancer. Medical Physics, 2016, 43, 3823-3823.	3.0	0
104	A bi-institutional multi-disciplinary failure mode and effects analysis (FMEA) for a Co-60 based total body irradiation technique. Radiation Oncology, 2021, 16, 224.	2.7	0