RESEARCH & PUBLICATIONS

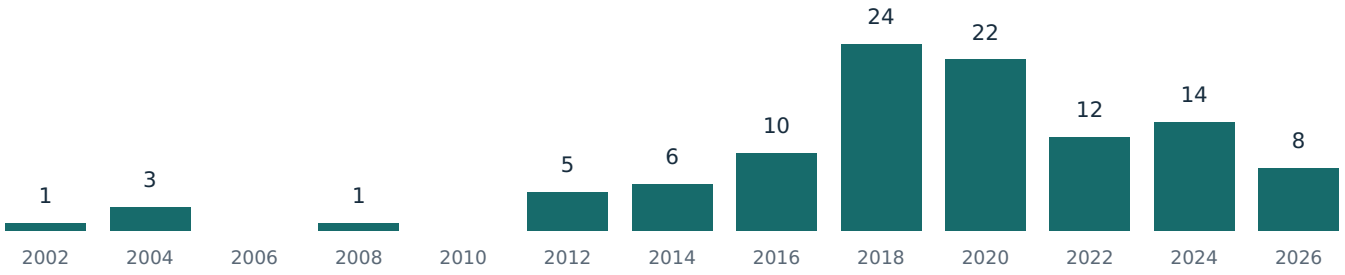
Mathew J Garnett

A publication record at a glance

106	22,585	54
ARTICLES	CITATIONS	h-INDEX

PUBLICATION ACTIVITY

Articles grouped into 2-year periods



MOST CITED IN THIS LIST

Genomics of Drug Sensitivity in Cancer (GDSC): A Resource for Therapeutic Biomarker Discovery in Cancer Cells — 3,539

2013 Nucleic Acids Research

Systematic Identification of Genomic Markers of Drug Sensitivity in Cancer Cells — 2,258

2012 Nature

Prospective Derivation of a Living Organoid Biobank of Colorectal Cancer Patients — 2,229

2015 Cell

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Ordered by publication year, newest first

2026

01 Genetic Interactions, Synthetic Lethality and Complexity in Cancer Vulnerability Mapping—Insights and Perspectives From the 2nd EuroDepMap Symposium
1 citations
FEBS Letters · 600, 997-1005
https://exaly.com/article/210741110

02 Multiplexed TrAEL-Seq Captures DNA Replication Dynamics in Mammalian Cells
4 citations
Nucleic Acids Research
https://exaly.com/article/210827369

03 Abstract 504: Interferon Enriched Gene Expression Signatures Are Associated With ADAR1 Dependency in Oral Squamous Cell Carcinoma
0 citations
Cancer Research · 86, 504
https://exaly.com/article/212244839

04 Abstract 374: On-Target WRN Mutations Drive Resistance to WRN Inhibitors in TA-Repeat-Expanded MSI Cancers
0 citations
Cancer Research · 86, 374
https://exaly.com/article/212266401

05 BEstimate: A Computational Tool for the Design and Interpretation of CRISPR Base Editing Experiments
1 citations
Genome Biology · 27, 191
https://exaly.com/article/213144379

06 The PRECISE European Initiative for Cancer-Vulnerability Mapping and Prediction
1 citations
Nature Genetics · 58, 1738-1744
https://exaly.com/article/215901976

07 A Tumour-Derived Organoid Biobank Maps Cancer Gene Dependencies
7 citations
Nature · 657, 765-774
https://exaly.com/article/216846934

08 A Compendium of Next-Generation Patient-Derived Models for Diverse Cancers
6 citations
Nature · 657, 775-788
https://exaly.com/article/216854532

2025

09 Interferon-Inducible ADAR1 p150 Is Essential for the Survival of Oral Squamous Cell Carcinoma
1 citations
Molecular Carcinogenesis · 64, 1066-1077
https://exaly.com/article/199382578

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2025 / continued

10 A Next-Generation Dual Guide CRISPR System for Genetic Interaction Library Screening
5 citations
Nature Communications · 17, 561
https://exaly.com/article/208014115

11 Large-Scale Drug Sensitivity, Gene Dependency, and Proteogenomic Analyses of Telomere Maintenance Mechanisms in Cancer Cells
5 citations
Nature Communications · 16, 11337
https://exaly.com/article/208454847

2024

12 scSNV-Seq: High-Throughput Phenotyping of Single Nucleotide Variants by Coupled Single-Cell Genotyping and Transcriptomics
10 citations
Genome Biology · 25, 1-15
https://exaly.com/article/174734286

13 Benchmark Software and Data for Evaluating CRISPR-Cas9 Experimental Pipelines Through the Assessment of a Calibration Screen
1 citations
CRISPR Journal · 7, 355-365
https://exaly.com/article/175010737

14 A Comprehensive Clinically Informed Map of Dependencies in Cancer Cells and Framework for Target Prioritization
92 citations
Cancer Cell · 42, 301-316.e9
https://exaly.com/article/175225932

15 Establishment and Characterization of an Epstein-Barr Virus–Positive Cell Line From a Non-Keratinizing Differentiated Primary Nasopharyngeal Carcinoma
12 citations
Cancer Research Communications · 4, 645-659
https://exaly.com/article/176384350

16 Large-Scale Pan-Cancer Cell Line Screening Identifies Actionable and Effective Drug Combinations
42 citations
Cancer Discovery · 14, 846-865
https://exaly.com/article/177033949

17 Novel WRN Helicase Inhibitors Selectively Target Microsatellite-Unstable Cancer Cells
62 citations
Cancer Discovery · 14, 1457-1475
https://exaly.com/article/178011950

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2024 / continued

18 A Pan-Cancer Screen Identifies Drug Combination Benefit in Cancer Cell Lines at the Individual and Population Level
8 citations
Cell Reports Medicine · 5, 101687
https://exaly.com/article/188402397

19 Cancer Drug-Tolerant Persister Cells: From Biological Questions to Clinical Opportunities
204 citations
Nature Reviews Cancer · 24, 1-24
https://exaly.com/article/188881698

20 High TNF and NF-κB Pathway Dependency Are Associated With AZD5582 Sensitivity in OSCC via CASP8-Dependent Apoptosis
2 citations
Cancer Research Communications · 4, 2919-2932
https://exaly.com/article/193420321

21 Base Editing Screens Define the Genetic Landscape of Cancer Drug Resistance Mechanisms
49 citations
Nature Genetics · 56, 1-14
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22 Synthetic Augmentation of Cancer Cell Line Multi-Omic Datasets Using Unsupervised Deep Learning
43 citations
Nature Communications · 15, 1-12
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2023

23 Base Editing Screens Map Mutations Affecting Interferon-γ Signaling in Cancer
80 citations
Cancer Cell · 41, 288-303.e6
https://exaly.com/article/159197188

24 RAF1 Contributes to Cell Proliferation and STAT3 Activation in Colorectal Cancer Independently of Microsatellite and KRAS Status
27 citations
Oncogene · 42, 1649-1660
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25 A Landscape of Response to Drug Combinations in Non-Small Cell Lung Cancer
55 citations
Nature Communications · 14, 1-19
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26 Highlights From the 1st European Cancer Dependency Map Symposium and Workshop
6 citations
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2022

27 **High-Content CRISPR Screening**
Nature Reviews Methods Primers · 2, 1-23
https://exaly.com/article/125470849
476 citations

28 **High-Content CRISPR Screening**
Nature Reviews Methods Primers · 2, 1-1
https://exaly.com/article/125498972
344 citations

29 **Effective Drug Combinations in Breast, Colon and Pancreatic Cancer Cells**
Nature · 603, 166-173
https://exaly.com/article/134533435
410 citations

30 **A Suspension Technique for Efficient Large-Scale Cancer Organoid Culturing and Perturbation Screens**
Scientific Reports · 12, 1-11
https://exaly.com/article/135056168
46 citations

31 **Can Drug Repurposing Accelerate Precision Oncology?**
Cancer Discovery · 12, 1634-1641
https://exaly.com/article/146293613
45 citations

32 **Pan-Cancer Proteomic Map of 949 Human Cell Lines**
Cancer Cell · 40, 835-849.e8
https://exaly.com/article/149058120
197 citations

33 **Criteria for Assessing Reading Skills in Younger Students With Autism Spectrum Disorders**
Innovate Pedagogy · 1, 104-109
https://exaly.com/article/155546965
0 citations

34 **AKT-mTORC1 Reactivation Is the Dominant Resistance Driver for PI3Kβ/AKT Inhibitors in PTEN-Null Breast Cancer and Can Be Overcome by Combining With Mcl-1 Inhibitors**
Oncogene · 41, 5046-5060
https://exaly.com/article/155693004
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35 **AZD0364 Is a Potent and Selective ERK1/2 Inhibitor That Enhances Antitumor Activity in KRAS-Mutant Tumor Models When Combined With the MEK Inhibitor, Selumetinib**
Molecular Cancer Therapeutics · 20, 238-249
https://exaly.com/article/77870367
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36 SLFN11 Informs on Standard of Care and Novel Treatments in a Wide Range of Cancer Models
71 citations
British Journal of Cancer · 124, 951-962
https://exaly.com/article/77949472

37 Project Score Database: A Resource for Investigating Cancer Cell Dependencies and Prioritizing Therapeutic Targets
85 citations
Nucleic Acids Research · 49, D1365-D1372
https://exaly.com/article/77989789

38 Cancer Research Needs a Better Map
80 citations
Nature · 589, 514-516
https://exaly.com/article/78287648

39 Integrated Cross-Study Datasets of Genetic Dependencies in Cancer
246 citations
Nature Communications · 12, 1-14
https://exaly.com/article/79451062

40 Use of Preclinical Models for Malignant Pleural Mesothelioma
29 citations
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41 Werner Helicase Is a Synthetic-Lethal Vulnerability in Mismatch Repair–Deficient Colorectal Cancer Refractory to Targeted Therapies, Chemotherapy, and Immunotherapy
102 citations
Cancer Discovery · 11, 1923-1937
https://exaly.com/article/80143723

42 MTH1 Inhibitor TH1579 Induces Oxidative DNA Damage and Mitotic Arrest in Acute Myeloid Leukemia
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Cancer Research · 81, 5733-5744
https://exaly.com/article/82059451

43 Inferred Ancestral Origin of Cancer Cell Lines Associates With Differential Drug Response
4 citations
International Journal of Molecular Sciences · 22, 10135
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44 Minimal Genome-Wide Human CRISPR-Cas9 Library
67 citations
Genome Biology · 22, 1-14
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45 Combinatorial CRISPR Screen Identifies Fitness Effects of Gene Paralogues
102 citations
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46 **CoRe: A Robustly Benchmarked R Package for Identifying Core-Fitness Genes in Genome-Wide Pooled CRISPR-Cas9 Screens**

22 citations

BMC Genomics · 22, 1-16

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47 **AZD4320, A Dual Inhibitor of Bcl-2 and Bcl-xL, Induces Tumor Regression in Hematologic Cancer Models Without Dose-Limiting Thrombocytopenia**

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48 **CELLector: Genomics-Guided Selection of Cancer in Vitro Models**

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49 **Stratification and Prediction of Drug Synergy Based on Target Functional Similarity**

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50 **Genomics-Guided Pre-Clinical Development of Cancer Therapies**

25 citations

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51 **Patient-Specific Logic Models of Signaling Pathways From Screenings on Cancer Biopsies to Prioritize Personalized Combination Therapies**

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52 **Drug Mechanism-of-Action Discovery Through the Integration of Pharmacological and CRISPR Screens**

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53 **Genome-Wide CRISPR Screens of Oral Squamous Cell Carcinoma Reveal Fitness Genes in the Hippo Pathway**

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54 **A Statistical Framework for Assessing Pharmacological Responses and Biomarkers Using Uncertainty Estimates**

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55 Abstract IA09: Tumor Organoid Cultures as a Platform for Functional Genomics
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56 Author Response: Genome-Wide CRISPR Screens of Oral Squamous Cell Carcinoma Reveal Fitness Genes in the Hippo Pathway
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57 Patient-Derived Xenografts and Matched Cell Lines Identify Pharmacogenomic Vulnerabilities in Colorectal Cancer
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58 JACKS: Joint Analysis of CRISPR/Cas9 Knockout Screens
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59 Imipridone ONC212 Activates Orphan G Protein-Coupled Receptor GPR132 and Integrated Stress Response in Acute Myeloid Leukemia
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60 Community Assessment to Advance Computational Prediction of Cancer Drug Combinations in a Pharmacogenomic Screen
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61 Functional Linkage of Gene Fusions to Cancer Cell Fitness Assessed by Pharmacological and CRISPR-Cas9 Screening
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62 Characterizing Mutational Signatures in Human Cancer Cell Lines Reveals Episodic APOBEC Mutagenesis
Cell · 176, 1282-1294.e20
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63 Prioritization of Cancer Therapeutic Targets Using CRISPR–Cas9 Screens
Nature · 568, 511-516
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64 Structural Rearrangements Generate Cell-Specific, Gene-Independent CRISPR-Cas9 Loss of Fitness Effects
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65 Agreement Between Two Large Pan-Cancer CRISPR-Cas9 Gene Dependency Data Sets
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66 Pancreatic Cancer Organoids Recapitulate Disease and Allow Personalized Drug Screening
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69 Abstract 3877: IND-Enabling Characterization of DRD2/3 Imipridone Antagonist ONC206 for Oncology
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70 Abstract 2749: Defining Structure Activity Relationships for GPCR Engagement and Anti-Cancer Efficacy of Imipridone Small Molecules
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71 Discovery of Potent and Selective MRCK Inhibitors With Therapeutic Effect on Skin Cancer
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72 GDSCTools for Mining Pharmacogenomic Interactions in Cancer
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73 **Perturbation-Response Genes Reveal Signaling Footprints in Cancer Gene Expression** — 897 citations
Nature Communications · 9, 1-11
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74 **Transcription Factor Activities Enhance Markers of Drug Sensitivity in Cancer** — 146 citations
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75 **Single Agent and Synergistic Combinatorial Efficacy of First-in-Class Small Molecule Imipridone ONC201 in Hematological Malignancies** — 54 citations
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76 **Itraconazole Targets Cell Cycle Heterogeneity in Colorectal Cancer** — 63 citations
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77 **Organoid Cultures Recapitulate Esophageal Adenocarcinoma Heterogeneity Providing a Model for Clonality Studies and Precision Therapeutics** — 296 citations
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78 **Erratum To: Drug Sensitivity Assays of Human Cancer Organoid Cultures** — 4 citations
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79 **The Germline Genetic Component of Drug Sensitivity in Cancer Cell Lines** — 41 citations
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80 **Abstract 4874: Receptor Pharmacology and Anti-Cancer Activity of Selective DRD2/3 Antagonist Imipridone ONC206** — 0 citations
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82 Human Primary Liver Cancer–Derived Organoid Cultures for Disease Modeling and Drug Screening — 1,364 citations
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83 Revisiting Olfactory Receptors as Putative Drivers of Cancer — 56 citations
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85 A Landscape of Pharmacogenomic Interactions in Cancer — 1,741 citations
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86 Multilevel Models Improve Precision and Speed of IC50 Estimates — 67 citations
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87 Logic Models to Predict Continuous Outputs Based on Binary Inputs With an Application to Personalized Cancer Therapy — 60 citations
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88 Drug Sensitivity Assays of Human Cancer Organoid Cultures — 74 citations
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89 A Biobank of Breast Cancer Explants With Preserved Intra-Tumor Heterogeneity to Screen Anticancer Compounds — 396 citations
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90 Identification of Differential PI3K Pathway Target Dependencies in T-Cell Acute Lymphoblastic Leukemia Through a Large Cancer Cell Panel Screen — 25 citations
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91 **A Semi-Supervised Approach for Refining Transcriptional Signatures of Drug Response and Repositioning Predictions**
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92 **Combinations of PARP Inhibitors With Temozolomide Drive PARP1 Trapping and Apoptosis in Ewing's Sarcoma**
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93 **Potent Organo-Osmium Compound Shifts Metabolism in Epithelial Ovarian Cancer Cells**
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95 **Fast Randomization of Large Genomic Datasets While Preserving Alteration Counts**
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96 **The Evolving Role of Cancer Cell Line-Based Screens to Define the Impact of Cancer Genomes on Drug Response**
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103 Mutations of C-RAF Are Rare in Human Cancer Because C-RAF Has a Low Basal Kinase Activity Compared With B-RAF

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104 Wild-Type and Mutant B-RAF Activate C-RAF Through Distinct Mechanisms Involving Heterodimerization

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105 Guilty as Charged: B-RAF Is a Human Oncogene

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106 ETV6-NTRK3 Transformation Requires Insulin-Like Growth Factor 1 Receptor Signaling and Is Associated With Constitutive IRS-1 Tyrosine Phosphorylation

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