

Mark D Pagel

List of Publications by Year in descending order

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Version: 2024-02-01

100
papers

4,973
citations

117625

34
h-index

98798

67
g-index

106
all docs

106
docs citations

106
times ranked

5551
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 1 | Bayesian Analysis of Correlated Evolution of Discrete Characters by Reversible Jump Markov Chain Monte Carlo. <i>American Naturalist</i> , 2006, 167, 808-825. | 2.1 | 809 |
| 2 | Frequency of word-use predicts rates of lexical evolution throughout Indo-European history. <i>Nature</i> , 2007, 449, 717-720. | 27.8 | 421 |
| 3 | Bantu expansion shows that habitat alters the route and pace of human dispersals. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 13296-13301. | 7.1 | 223 |
| 4 | Clinical applications of chemical exchange saturation transfer (CEST) MRI. <i>Journal of Magnetic Resonance Imaging</i> , 2018, 47, 11-27. | 3.4 | 203 |
| 5 | Languages Evolve in Punctuational Bursts. <i>Science</i> , 2008, 319, 588-588. | 12.6 | 169 |
| 6 | Evaluations of extracellular pH within in vivo tumors using acidoCEST MRI. <i>Magnetic Resonance in Medicine</i> , 2014, 72, 1408-1417. | 3.0 | 168 |
| 7 | A review of responsive MRI contrast agents: 2005–2014. <i>Contrast Media and Molecular Imaging</i> , 2015, 10, 245-265. | 0.8 | 168 |
| 8 | An overview of responsive MRI contrast agents for molecular imaging. <i>Frontiers in Bioscience - Landmark</i> , 2008, 13, 1733. | 3.0 | 130 |
| 9 | Design and characterization of a new irreversible responsive PARACEST MRI contrast agent that detects nitric oxide. <i>Magnetic Resonance in Medicine</i> , 2007, 58, 1249-1256. | 3.0 | 112 |
| 10 | Using Two Chemical Exchange Saturation Transfer Magnetic Resonance Imaging Contrast Agents for Molecular Imaging Studies. <i>Accounts of Chemical Research</i> , 2009, 42, 915-924. | 15.6 | 103 |
| 11 | Evaluating pH in the Extracellular Tumor Microenvironment Using CEST MRI and Other Imaging Methods. <i>Advances in Radiology</i> , 2015, 2015, 1-25. | 0.7 | 102 |
| 12 | Measuring in vivo tumor pHe with CEST-FISP MRI. <i>Magnetic Resonance in Medicine</i> , 2012, 67, 760-768. | 3.0 | 100 |
| 13 | Review and consensus recommendations on clinical $^{3}T_1$ -weighted imaging approaches at $^{3}T_1$: Application to brain tumors. <i>Magnetic Resonance in Medicine</i> , 2022, 88, 546-574. | 3.0 | 79 |
| 14 | Enzyme-responsive PARACEST MRI contrast agents: a new biomedical imaging approach for studies of the proteasome. <i>Contrast Media and Molecular Imaging</i> , 2007, 2, 189-198. | 0.8 | 77 |
| 15 | PARACEST MRI with improved temporal resolution. <i>Magnetic Resonance in Medicine</i> , 2009, 61, 399-408. | 3.0 | 74 |
| 16 | Clinical Translation of Tumor Acidosis Measurements with AcidoCEST MRI. <i>Molecular Imaging and Biology</i> , 2017, 19, 617-625. | 2.6 | 74 |
| 17 | Computer-aided Detection of Brain Metastases in T1-weighted MRI for Stereotactic Radiosurgery Using Deep Learning Single-Shot Detectors. <i>Radiology</i> , 2020, 295, 407-415. | 7.3 | 74 |
| 18 | A comparison of iopromide and iopamidol, two acidoCEST MRI contrast media that measure tumor extracellular pH. <i>Contrast Media and Molecular Imaging</i> , 2015, 10, 446-455. | 0.8 | 72 |

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|----|--|------|-----------|
| 19 | Tracking the Relative In Vivo Pharmacokinetics of Nanoparticles with PARACEST MRI. <i>Molecular Pharmaceutics</i> , 2009, 6, 1409-1416. | 4.6 | 69 |
| 20 | Parallel Accumulation of Tumor Hyaluronan, Collagen, and Other Drivers of Tumor Progression. <i>Clinical Cancer Research</i> , 2018, 24, 4798-4807. | 7.0 | 65 |
| 21 | Imaging in Vivo Extracellular pH with a Single Paramagnetic Chemical Exchange Saturation Transfer Magnetic Resonance Imaging Contrast Agent. <i>Molecular Imaging</i> , 2012, 11, 7290.2011.00026. | 1.4 | 64 |
| 22 | Evaluations of Tumor Acidosis Within In Vivo Tumor Models Using Parametric Maps Generated with AcidoCEST MRI. <i>Molecular Imaging and Biology</i> , 2015, 17, 488-496. | 2.6 | 63 |
| 23 | Imaging in vivo extracellular pH with a single paramagnetic chemical exchange saturation transfer magnetic resonance imaging contrast agent. <i>Molecular Imaging</i> , 2012, 11, 47-57. | 1.4 | 63 |
| 24 | Assessments of tumor metabolism with CEST MRI. <i>NMR in Biomedicine</i> , 2019, 32, e3943. | 2.8 | 62 |
| 25 | A CatalyCEST MRI Contrast Agent That Detects the Enzyme-Catalyzed Creation of a Covalent Bond. <i>Journal of the American Chemical Society</i> , 2013, 135, 6396-6398. | 13.7 | 61 |
| 26 | Improved pH measurements with a single PARACEST MRI contrast agent. <i>Contrast Media and Molecular Imaging</i> , 2012, 7, 26-34. | 0.8 | 59 |
| 27 | Advances in Magnetic Resonance Imaging Contrast Agents for Biomarker Detection. <i>Annual Review of Analytical Chemistry</i> , 2016, 9, 95-115. | 5.4 | 57 |
| 28 | A self-calibrating PARACEST MRI contrast agent that detects esterase enzyme activity. <i>Contrast Media and Molecular Imaging</i> , 2011, 6, 219-228. | 0.8 | 54 |
| 29 | The Hanes-Woolf linear QUESP method improves the measurements of fast chemical exchange rates with CEST MRI. <i>Magnetic Resonance in Medicine</i> , 2014, 71, 1603-1612. | 3.0 | 50 |
| 30 | Detection of in vivo enzyme activity with CatalyCEST MRI. <i>Magnetic Resonance in Medicine</i> , 2014, 71, 1221-1230. | 3.0 | 49 |
| 31 | A comparison of exogenous and endogenous CEST MRI methods for evaluating in vivo pH. <i>Magnetic Resonance in Medicine</i> , 2018, 79, 2766-2772. | 3.0 | 49 |
| 32 | Measuring Extracellular pH in a Lung Fibrosis Model with acidoCEST MRI. <i>Molecular Imaging and Biology</i> , 2015, 17, 177-184. | 2.6 | 36 |
| 33 | Assessment of carbonic anhydrase IX expression and extracellular pH in B-cell lymphoma cell line models. <i>Leukemia and Lymphoma</i> , 2015, 56, 1432-1439. | 1.3 | 36 |
| 34 | A nano-sized PARACEST-fluorescence imaging contrast agent facilitates and validates in vivo CEST MRI detection of glioma. <i>Nanomedicine</i> , 2012, 7, 1827-1837. | 3.3 | 34 |
| 35 | Detecting Enzyme Activities with Exogenous MRI Contrast Agents. <i>Chemistry - A European Journal</i> , 2014, 20, 9840-9850. | 3.3 | 34 |
| 36 | Noninvasive detection of enzyme activity in tumor models of human ovarian cancer using catalyCEST MRI. <i>Magnetic Resonance in Medicine</i> , 2017, 77, 2005-2014. | 3.0 | 34 |

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|----|--|-----|-----------|
| 37 | A linear algorithm of the reference region model for DCE-MRI is robust and relaxes requirements for temporal resolution. <i>Magnetic Resonance Imaging</i> , 2013, 31, 497-507. | 1.8 | 33 |
| 38 | A single diamagnetic catalyCEST MRI contrast agent that detects cathepsin B enzyme activity by using a ratio of two CEST signals. <i>Contrast Media and Molecular Imaging</i> , 2016, 11, 130-138. | 0.8 | 32 |
| 39 | MetNet: Computer-aided segmentation of brain metastases in post-contrast T1-weighted magnetic resonance imaging. <i>Radiotherapy and Oncology</i> , 2020, 153, 189-196. | 0.6 | 32 |
| 40 | An amine-derivatized, DOTA-loaded polymeric support for Fmoc solid phase peptide synthesis. <i>Tetrahedron Letters</i> , 2009, 50, 4459-4462. | 1.4 | 31 |
| 41 | Detection of Alkaline Phosphatase Enzyme Activity with a CatalyCEST MRI Biosensor. <i>ACS Sensors</i> , 2016, 1, 857-861. | 7.8 | 30 |
| 42 | Preliminary Results that Assess Metformin Treatment in a Preclinical Model of Pancreatic Cancer Using Simultaneous [18F]FDG PET and acidoCEST MRI. <i>Molecular Imaging and Biology</i> , 2018, 20, 575-583. | 2.6 | 29 |
| 43 | Multislice CEST MRI improves the spatial assessment of tumor pH. <i>Magnetic Resonance in Medicine</i> , 2017, 78, 97-106. | 3.0 | 27 |
| 44 | Calcium carbonate nanoparticles stimulate tumor metabolic reprogramming and modulate tumor metastasis. <i>Nanomedicine</i> , 2019, 14, 169-182. | 3.3 | 25 |
| 45 | Imaging biomarkers to monitor response to the hypoxia-activated prodrug TH-302 in the MiaPaCa2 flank xenograft model. <i>Magnetic Resonance Imaging</i> , 2012, 30, 1002-1009. | 1.8 | 23 |
| 46 | The deep history of the number words. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2018, 373, 20160517. | 4.0 | 23 |
| 47 | Detection of Enzyme Activity and Inhibition during Studies in Solution, In Vitro and In Vivo with CatalyCEST MRI. <i>Molecular Imaging and Biology</i> , 2018, 20, 240-248. | 2.6 | 23 |
| 48 | Fluorescent and Lanthanide Labeling for Ligand Screens, Assays, and Imaging. <i>Methods in Molecular Biology</i> , 2011, 716, 89-126. | 0.9 | 21 |
| 49 | The reciprocal linear QUEST analysis method facilitates the measurements of chemical exchange rates with CEST MRI. <i>Contrast Media and Molecular Imaging</i> , 2014, 9, 252-258. | 0.8 | 21 |
| 50 | A light-fluence-independent method for the quantitative analysis of dynamic contrast-enhanced multispectral optoacoustic tomography (DCE MSOT). <i>Photoacoustics</i> , 2018, 10, 54-64. | 7.8 | 21 |
| 51 | Diamagnetic Imaging Agents with a Modular Chemical Design for Quantitative Detection of β -Galactosidase and β -Glucuronidase Activities with CatalyCEST MRI. <i>Bioconjugate Chemistry</i> , 2016, 27, 2549-2557. | 3.6 | 20 |
| 52 | Differentiating lung cancer and infection based on measurements of extracellular pH with acidoCEST MRI. <i>Scientific Reports</i> , 2019, 9, 13002. | 3.3 | 20 |
| 53 | Peptidyl Molecular Imaging Contrast Agents Using a New Solid-Phase Peptide Synthesis Approach. <i>Bioconjugate Chemistry</i> , 2007, 18, 903-911. | 3.6 | 19 |
| 54 | Q&A: What is human language, when did it evolve and why should we care?. <i>BMC Biology</i> , 2017, 15, 64. | 3.8 | 19 |

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|----|--|-----|-----------|
| 55 | The History, Rate and Pattern of World Linguistic Evolution. , 2000, , 391-416. | | 18 |
| 56 | The hope and hype of multimodality imaging contrast agents. <i>Nanomedicine</i> , 2011, 6, 945-948. | 3.3 | 18 |
| 57 | Recent Advances in Targeting Tumor Energy Metabolism with Tumor Acidosis as a Biomarker of Drug Efficacy. <i>Journal of Cancer Science & Therapy</i> , 2016, 08, 20-29. | 1.7 | 18 |
| 58 | Assessing Metabolic Changes in Response to mTOR Inhibition in a Mantle Cell Lymphoma Xenograft Model Using AcidoCEST MRI. <i>Molecular Imaging</i> , 2016, 15, 153601211664543. | 1.4 | 18 |
| 59 | Extracellular acidosis differentiates pancreatitis and pancreatic cancer in mouse models using acidoCEST MRI. <i>Neoplasia</i> , 2019, 21, 1085-1090. | 5.3 | 18 |
| 60 | Machine Segmentation of Pelvic Anatomy in MRI-Assisted Radiosurgery (MARS) for Prostate Cancer Brachytherapy. <i>International Journal of Radiation Oncology Biology Physics</i> , 2020, 108, 1292-1303. | 0.8 | 18 |
| 61 | Functional Tumor Volume by Fast Dynamic Contrast-Enhanced MRI for Predicting Neoadjuvant Systemic Therapy Response in Triple-Negative Breast Cancer. <i>Journal of Magnetic Resonance Imaging</i> , 2021, 54, 251-260. | 3.4 | 18 |
| 62 | Monitoring infection and inflammation in murine models of cystic fibrosis with magnetic resonance imaging. <i>Journal of Magnetic Resonance Imaging</i> , 2008, 28, 527-532. | 3.4 | 17 |
| 63 | A CatalyCEST MRI Contrast Agent that Can Simultaneously Detect Two Enzyme Activities. <i>ChemBioChem</i> , 2016, 17, 383-387. | 2.6 | 17 |
| 64 | Detection of Sulfatase Enzyme Activity with a CatalyCEST MRI Contrast Agent. <i>Chemistry - A European Journal</i> , 2016, 22, 6491-6495. | 3.3 | 16 |
| 65 | Reproducibility of Magnetic Resonance Perfusion Imaging. <i>PLoS ONE</i> , 2014, 9, e89797. | 2.5 | 15 |
| 66 | A facile synthesis of \pm -amino-DOTA as a versatile molecular imaging probe. <i>Tetrahedron Letters</i> , 2006, 47, 7327-7330. | 1.4 | 14 |
| 67 | Detection of DT-diaphorase Enzyme with a ParaCEST MRI Contrast Agent. <i>Chemistry - A European Journal</i> , 2017, 23, 6514-6517. | 3.3 | 14 |
| 68 | Detecting <i>in vivo</i> urokinase plasminogen activator activity with a catalyCEST MRI contrast agent. <i>NMR in Biomedicine</i> , 2017, 30, e3721. | 2.8 | 14 |
| 69 | Double agents and secret agents: the emerging fields of exogenous chemical exchange saturation transfer and T2-exchange magnetic resonance imaging contrast agents for molecular imaging. <i>Research and Reports in Nuclear Medicine</i> , 2015, 5, 19. | 1.0 | 13 |
| 70 | Respiration gating and Bloch fitting improve pH measurements with acidoCEST MRI in an ovarian orthotopic tumor model. <i>Proceedings of SPIE</i> , 2016, 9788, . | 0.8 | 13 |
| 71 | Measuring Kidney Perfusion, pH, and Renal Clearance Consecutively Using MRI and Multispectral Optoacoustic Tomography. <i>Molecular Imaging and Biology</i> , 2020, 22, 494-503. | 2.6 | 13 |
| 72 | Assessment of Early Response to Neoadjuvant Systemic Therapy in Triple-Negative Breast Cancer Using Amide Proton Transfer-weighted Chemical Exchange Saturation Transfer MRI: A Pilot Study. <i>Radiology Imaging Cancer</i> , 2021, 3, e200155. | 1.6 | 12 |

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|----|---|------|-----------|
| 73 | Diffusion MRI with Semi-Automated Segmentation Can Serve as a Restricted Predictive Biomarker of the Therapeutic Response of Liver Metastasis. <i>Magnetic Resonance Imaging</i> , 2015, 33, 1267-1273. | 1.8 | 11 |
| 74 | A biomarker-responsive T ₂ MRI contrast agent. <i>Magnetic Resonance in Medicine</i> , 2017, 77, 1665-1670. | 3.0 | 11 |
| 75 | Linearization improves the repeatability of quantitative dynamic contrast-enhanced MRI. <i>Magnetic Resonance Imaging</i> , 2018, 47, 16-24. | 1.8 | 11 |
| 76 | Dominant words rise to the top by positive frequency-dependent selection. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 7397-7402. | 7.1 | 11 |
| 77 | Characterization of D-glucose as a T ₂ -exchange contrast agent for dynamic contrast-enhanced MRI. <i>Magnetic Resonance in Medicine</i> , 2018, 80, 1158-1164. | 3.0 | 10 |
| 78 | Tumor necrosis by pretreatment breast MRI: association with neoadjuvant systemic therapy (NAST) response in triple-negative breast cancer (TNBC). <i>Breast Cancer Research and Treatment</i> , 2021, 185, 1-12. | 2.5 | 10 |
| 79 | Design and optimization of pulsed Chemical Exchange Saturation Transfer MRI using a multiobjective genetic algorithm. <i>Journal of Magnetic Resonance</i> , 2016, 263, 184-192. | 2.1 | 9 |
| 80 | A reference agent model for DCE MRI can be used to quantify the relative vascular permeability of two MRI contrast agents. <i>Magnetic Resonance Imaging</i> , 2013, 31, 900-910. | 1.8 | 7 |
| 81 | Differentiation of Myositis-Induced Models of Bacterial Infection and Inflammation with T2-Weighted, CEST, and DCE-MRI. <i>Tomography</i> , 2019, 5, 283-291. | 1.8 | 7 |
| 82 | Machine learning improves classification of preclinical models of pancreatic cancer with chemical exchange saturation transfer MRI. <i>Magnetic Resonance in Medicine</i> , 2019, 81, 594-601. | 3.0 | 6 |
| 83 | AcidoCEST MRI Evaluates the Bone Microenvironment in Multiple Myeloma. <i>Molecular Imaging and Biology</i> , 2021, 23, 865-873. | 2.6 | 6 |
| 84 | Imaging Lung Cancer by Using Chemical Exchange Saturation Transfer MRI With Retrospective Respiration Gating. <i>Tomography</i> , 2017, 3, 201-210. | 1.8 | 6 |
| 85 | Quantitative Apparent Diffusion Coefficients From Peritumoral Regions as Early Predictors of Response to Neoadjuvant Systemic Therapy in Triple-Negative Breast Cancer. <i>Journal of Magnetic Resonance Imaging</i> , 2022, 56, 1901-1909. | 3.4 | 6 |
| 86 | QUESPOWR MRI: QUantification of Exchange as a function of Saturation Power On the Water Resonance. <i>Journal of Magnetic Resonance</i> , 2016, 270, 56-70. | 2.1 | 5 |
| 87 | Deep learning application engine (DLAE): Development and integration of deep learning algorithms in medical imaging. <i>SoftwareX</i> , 2019, 10, 100347. | 2.6 | 5 |
| 88 | Radiometal-Based PET/MRI Contrast Agents for Sensing Tumor Extracellular pH. <i>Biosensors</i> , 2022, 12, 134. | 4.7 | 5 |
| 89 | Development of a Nanoscale Chemical Exchange Saturation Transfer Magnetic Resonance Imaging Contrast Agent That Measures pH. <i>ACS Nano</i> , 2021, 15, 20678-20688. | 14.6 | 4 |
| 90 | A Comparison of Iron Oxide Particles and Silica Particles for Tracking Organ Recellularization. <i>Molecular Imaging</i> , 2018, 17, 153601211878732. | 1.4 | 3 |

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| 91 | Comparison of analytical and numerical analysis of the reference region model for DCE-MRI. <i>Magnetic Resonance Imaging</i> , 2014, 32, 845-853. | 1.8 | 2 |
| 92 | Computer-aided detection of mantle cell lymphoma on F-FDG PET/CT using a deep learning convolutional neural network. <i>American Journal of Nuclear Medicine and Molecular Imaging</i> , 2021, 11, 260-270. | 1.0 | 2 |
| 93 | Simultaneous Evaluations of pH and Enzyme Activity with a CEST MRI Contrast Agent. <i>ACS Sensors</i> , 2021, 6, 4535-4544. | 7.8 | 2 |
| 94 | Abstract PD6-06: Radiomic phenotypes from dynamic contrast-enhanced MRI (DCE-MRI) parametric maps for early prediction of response to neoadjuvant systemic therapy (NAST) in triple negative breast cancer (TNBC) patients. , 2021, , . | | 1 |
| 95 | Responsive paramagnetic chemical exchange saturation transfer MRI contrast agents. <i>Imaging in Medicine</i> , 2011, 3, 377-380. | 0.0 | 0 |
| 96 | CEST and PARACEST MRI Contrast Agents for Imaging Cancer Biomarkers. , 2012, , 689-713. | | 0 |
| 97 | Managers of Molecular Imaging Laboratories (MOMIL) Interest Group. <i>Molecular Imaging and Biology</i> , 2017, 19, 332-335. | 2.6 | 0 |
| 98 | Recommendations for Reviewers of Biomedical Imaging Grant Applications. <i>Molecular Imaging and Biology</i> , 2019, 21, 612-619. | 2.6 | 0 |
| 99 | Abstract PD6-07: Volumetric changes on longitudinal dynamic contrast enhanced MR imaging (DCE-MRI) as an early treatment response predictor to neoadjuvant systemic therapy (NAST) in triple negative breast cancer (TNBC) patients. , 2021, , . | | 0 |
| 100 | Chapter 13 Responsive paraCEST MRI Contrast Agents and Their Biomedical Applications. , 2017, , 283-310. | | 0 |