Regina Barzilay

List of Publications by Citations

35 papers	2,492 citations	18 h-index	38 g-index
38 ext. papers	3,811 ext. citations	11.3 avg, IF	5.68 L-index

#	Paper	IF	Citations
35	A Deep Learning Approach to Antibiotic Discovery. *Cell*, **2020**, 180, 688-702.e13	56.2	430
34	Prediction of Organic Reaction Outcomes Using Machine Learning. *ACS Central Science*, **2017**, 3, 434-443	16.8	325
33	Analyzing Learned Molecular Representations for Property Prediction. *Journal of Chemical Information and Modeling*, **2019**, 59, 3370-3388	6.1	247
32	A graph-convolutional neural network model for the prediction of chemical reactivity. *Chemical Science*, **2019**, 10, 370-377	9.4	237
31	Convolutional Embedding of Attributed Molecular Graphs for Physical Property Prediction. *Journal of Chemical Information and Modeling*, **2017**, 57, 1757-1772	6.1	191
30	A Deep Learning Mammography-based Model for Improved Breast Cancer Risk Prediction. *Radiology*, **2019**, 292, 60-66	20.5	179
29	Modeling Local Coherence: An Entity-Based Approach. *Computational Linguistics*, **2008**, 34, 1-34	2.8	142
28	Mammographic Breast Density Assessment Using Deep Learning: Clinical Implementation. *Radiology*, **2019**, 290, 52-58	20.5	97
27	High-Risk Breast Lesions: A Machine Learning Model to Predict Pathologic Upgrade and Reduce Unnecessary Surgical Excision. *Radiology*, **2018**, 286, 810-818	20.5	86
26	A Deep Learning Model to Triage Screening Mammograms: A Simulation Study. *Radiology*, **2019**, 293, 38-46	20.5	67
25	Using machine learning to parse breast pathology reports. *Breast Cancer Research and Treatment*, **2017**, 161, 203-211	4.4	65
24	Current and Future Roles of Artificial Intelligence in Medicinal Chemistry Synthesis. *Journal of Medicinal Chemistry*, **2020**, 63, 8667-8682	8.3	53
23	Uncertainty Quantification Using Neural Networks for Molecular Property Prediction. *Journal of Chemical Information and Modeling*, **2020**, 60, 3770-3780	6.1	47
22	Applications of Deep Learning in Molecule Generation and Molecular Property Prediction. *Accounts of Chemical Research*, **2021**, 54, 263-270	24.3	39
21	Machine Learning Methods to Extract Documentation of Breast Cancer Symptoms From Electronic Health Records. *Journal of Pain and Symptom Management*, **2018**, 55, 1492-1499	4.8	38
20	Aspect-augmented Adversarial Networks for Domain Adaptation. *Transactions of the Association for Computational Linguistics*, **2017**, 5, 515-528	5.6	30
19	Toward robust mammography-based models for breast cancer risk. *Science Translational Medicine*, **2021**, 13,	17.5	25

18	Using deep learning for dermatologist-level detection of suspicious pigmented skin lesions from wide-field images. *Science Translational Medicine*, **2021**, 13,	17.5	18
17	Deep learning identifies synergistic drug combinations for treating COVID-19. *Proceedings of the National Academy of Sciences of the United States of America*, **2021**, 118,	11.5	18
16	Can machine learning improve patient selection for cardiac resynchronization therapy?. *PLoS ONE*, **2019**, 14, e0222397	3.7	17
15	Machine learning to parse breast pathology reports in Chinese. *Breast Cancer Research and Treatment*, **2018**, 169, 243-250	4.4	17
14	Pathologic findings in reduction mammoplasty specimens: a surrogate for the population prevalence of breast cancer and high-risk lesions. *Breast Cancer Research and Treatment*, **2019**, 173, 201-207	4.4	17
13	Deep Learning to Estimate RECIST in Patients with NSCLC Treated with PD-1 Blockade. *Cancer Discovery*, **2021**, 11, 59-67	24.4	16
12	The Limitations of Stylometry for Detecting Machine-Generated Fake News. *Computational Linguistics*, **2020**, 46, 499-510	2.8	12
11	Towards efficient discovery of green synthetic pathways with Monte Carlo tree search and reinforcement learning. *Chemical Science*, **2020**, 11, 10959-10972	9.4	12
10	Multi-Institutional Validation of a Mammography-Based Breast Cancer Risk Model. *Journal of Clinical Oncology*, **2021**, JCO2101337	2.2	11
9	Incidental breast carcinoma: incidence, management, and outcomes in 4804 bilateral reduction mammoplasties. *Breast Cancer Research and Treatment*, **2019**, 177, 741-748	4.4	9
8	Representation Learning for Grounded Spatial Reasoning. *Transactions of the Association for Computational Linguistics*, **2018**, 6, 49-61	5.6	8
7	Deep Learning Model to Assess Cancer Risk on the Basis of a Breast MR Image Alone. *American Journal of Roentgenology*, **2019**, 213, 227-233	5.4	7
6	Critical assessment of AI in drug discovery. *Expert Opinion on Drug Discovery*, **2021**, 16, 937-947	6.2	7
5	Atypical ductal hyperplasia in men with gynecomastia: what is their breast cancer risk?. *Breast Cancer Research and Treatment*, **2019**, 175, 1-4	4.4	5
4	Optimizing risk-based breast cancer screening policies with reinforcement learning.. *Nature Medicine*, **2022**,	50.5	3
3	Generative models for molecular discovery: Recent advances and challenges. *Wiley Interdisciplinary Reviews: Computational Molecular Science*,	7.9	2
2	Exploiting Rules to Enhance Machine Learning in Extracting Information From Multi-Institutional Prostate Pathology Reports. *JCO Clinical Cancer Informatics*, **2020**, 4, 865-874	5.2	1
1	Reply to M. Eriksson et al and Z. Jin et al.. *Journal of Clinical Oncology*, **2022**, JCO2200292	2.2	