

Elisabetta A Cavalcanti-Adam

List of Publications by Year in descending order

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82
papers

6,136
citations

126907

33
h-index

71685

76
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91
all docs

91
docs citations

91
times ranked

7643
citing authors

#	ARTICLE	IF	CITATIONS
1	Control of Cell Adhesion using Hydrogel Patterning Techniques for Applications in Traction Force Microscopy. <i>Journal of Visualized Experiments</i> , 2022, , .	0.3	0
2	Actomyosin-Assisted Pulling of Lipid Nanotubes from Lipid Vesicles and Cells. <i>Nano Letters</i> , 2022, 22, 1145-1150.	9.1	1
3	Integrin $\alpha 5 \beta 1$ Activation and Clustering in Minimal Synthetic Cells. <i>Advanced NanoBiomed Research</i> , 2022, 2, .	3.6	3
4	Synthetic virions reveal fatty acid-coupled adaptive immunogenicity of SARS-CoV-2 spike glycoprotein. <i>Nature Communications</i> , 2022, 13, 868.	12.8	20
5	Tuning Epithelial Cell Cell Adhesion and Collective Dynamics with Functional DNA-E-Cadherin Hybrid Linkers. <i>Nano Letters</i> , 2022, 22, 302-310.	9.1	9
6	Controllable ligand spacing stimulates cellular mechanotransduction and promotes stem cell osteogenic differentiation on soft hydrogels. <i>Biomaterials</i> , 2021, 268, 120543.	11.4	48
7	An Engineered Biomimetic Peptide Regulates Cell Behavior by Synergistic Integrin and Growth Factor Signaling. <i>Advanced Healthcare Materials</i> , 2021, 10, 2001757.	7.6	16
8	Surface Co-presentation of BMP-2 and integrin selective ligands at the nanoscale favors $\alpha 5 \beta 1$ integrin-mediated adhesion. <i>Biomaterials</i> , 2021, 267, 120484.	11.4	15
9	Role of Clathrin Light Chains in Regulating Invadopodia Formation. <i>Cells</i> , 2021, 10, 451.	4.1	6
10	Nanoindentation of mesenchymal stem cells using atomic force microscopy: effect of adhesive cell-substrate structures. <i>Nanotechnology</i> , 2021, 32, 215706.	2.6	5
11	Functionalization of Cellular Membranes with DNA Nanotechnology. <i>Trends in Biotechnology</i> , 2021, 39, 1208-1220.	9.3	19
12	BMP6 Loaded Polyelectrolyte Complex Nanoparticles Inducing Osteogenic Differentiation and Apoptosis of Malignant Plasma Cells for Local Treatment of Multiple Myeloma. <i>Particle and Particle Systems Characterization</i> , 2021, 38, 2000263.	2.3	1
13	Single Cell Center of Mass for the Analysis of BMP Receptor Heterodimers Distributions. <i>Journal of Imaging</i> , 2021, 7, 219.	3.0	0
14	Surface Patterning for the Control of Receptor Clustering and Molecular Forces of Integrin-Mediated Adhesions. <i>Methods in Molecular Biology</i> , 2021, 2217, 183-195.	0.9	1
15	Forces during cellular uptake of viruses and nanoparticles at the ventral side. <i>Nature Communications</i> , 2020, 11, 32.	12.8	35
16	Heparan sulfate co-immobilized with cRGD ligands and BMP2 on biomimetic platforms promotes BMP2-mediated osteogenic differentiation. <i>Acta Biomaterialia</i> , 2020, 114, 90-103.	8.3	20
17	Soft Hydrogels for Balancing Cell Proliferation and Differentiation. <i>ACS Biomaterials Science and Engineering</i> , 2020, 6, 4687-4701.	5.2	37
18	Biosensors for Studies on Adhesion-Mediated Cellular Responses to Their Microenvironment. <i>Frontiers in Bioengineering and Biotechnology</i> , 2020, 8, 597950.	4.1	5

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19	Bioengineering Bone Tissue with 3D Printed Scaffolds in the Presence of Oligostilbenes. <i>Materials</i> , 2020, 13, 4471.	2.9	18
20	Osteogenic and Chondrogenic Potential of the Supramolecular Aggregate T-LysYal [®] . <i>Frontiers in Endocrinology</i> , 2020, 11, 285.	3.5	12
21	Ligand Diffusion Enables Force-Independent Cell Adhesion via Activating β_1 Integrin and Initiating Rac and RhoA Signaling. <i>Advanced Materials</i> , 2020, 32, e2002566.	21.0	50
22	BMP β_2 Signaling and Mechanotransduction Synergize to Drive Osteogenic Differentiation via YAP/TAZ. <i>Advanced Science</i> , 2020, 7, 1902931.	11.2	66
23	An optochemical tool for light-induced dissociation of adherens junctions to control mechanical coupling between cells. <i>Nature Communications</i> , 2020, 11, 472.	12.8	31
24	Surface functionalization of biomaterials for cell biology applications. , 2020, , 163-176.		0
25	An in vitro DNA Sensor-based Assay to Measure Receptor-specific Adhesion Forces of Eukaryotic Cells and Pathogens. <i>Bio-protocol</i> , 2020, 10, e3733.	0.4	0
26	Hyaluronan hydrogels delivering BMP-6 for local targeting of malignant plasma cells and osteogenic differentiation of mesenchymal stromal cells. <i>Acta Biomaterialia</i> , 2019, 96, 258-270.	8.3	15
27	Unjamming overcomes kinetic and proliferation arrest in terminally differentiated cells and promotes collective motility of carcinoma. <i>Nature Materials</i> , 2019, 18, 1252-1263.	27.5	117
28	Comment on "Tuning the bioactivity of bone morphogenetic protein-2 with surface immobilization strategies" by Chen et al.. <i>Acta Biomaterialia</i> , 2019, 89, 419.	8.3	0
29	Building nanobridges for cell adhesion. <i>Nature Materials</i> , 2019, 18, 1272-1273.	27.5	7
30	Copresentation of BMP-6 and RGD Ligands Enhances Cell Adhesion and BMP-Mediated Signaling. <i>Cells</i> , 2019, 8, 1646.	4.1	11
31	BMP2 acts as a "gatekeeper" to protect endothelial cells from increased TGF β responses and altered cell mechanics. <i>PLoS Biology</i> , 2019, 17, e3000557.	5.6	71
32	Switchable Release of Bone Morphogenetic Protein from Thermo-responsive Poly(NIPAM-co-DMAEMA)/Cellulose Sulfate Particle Coatings. <i>Polymers</i> , 2018, 10, 1314.	4.5	13
33	Surface Immobilization of Viruses and Nanoparticles Elucidates Early Events in Clathrin-Mediated Endocytosis. <i>ACS Infectious Diseases</i> , 2018, 4, 1585-1600.	3.8	18
34	Vitamin D Promotes MSC Osteogenic Differentiation Stimulating Cell Adhesion and β_3 Expression. <i>Stem Cells International</i> , 2018, 2018, 1-9.	2.5	28
35	A Comprehensive Evaluation of the Activity and Selectivity Profile of Ligands for RGD-binding Integrins. <i>Scientific Reports</i> , 2017, 7, 39805.	3.3	425
36	Biomaterials and computation: a strategic alliance to investigate emergent responses of neural cells. <i>Biomaterials Science</i> , 2017, 5, 648-657.	5.4	9

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37	Focal adhesion stabilization by enhanced integrin-cRGD binding affinity. <i>BioNanoMaterials</i> , 2017, 18, .	1.4	10
38	Target Expression, Generation, Preclinical Activity, and Pharmacokinetics of the BCMA-T Cell Bispecific Antibody EM801 for Multiple Myeloma Treatment. <i>Cancer Cell</i> , 2017, 31, 396-410.	16.8	251
39	Enhanced Biological Activity of BMP-2 Bound to Surface-Grafted Heparan Sulfate. <i>Advanced Biology</i> , 2017, 1, e1600041.	3.0	24
40	Colloid, adhesive and release properties of nanoparticulate ternary complexes between cationic and anionic polysaccharides and basic proteins like bone morphogenetic protein BMP-2. <i>Colloids and Surfaces B: Biointerfaces</i> , 2017, 151, 58-67.	5.0	6
41	Amoeboid-mesenchymal migration plasticity promotes invasion only in complex heterogeneous microenvironments. <i>Scientific Reports</i> , 2017, 7, 9237.	3.3	78
42	Targeting Adult Mesenchymal Stem Cells Plasticity for Tissue Regeneration. <i>Stem Cells International</i> , 2017, 2017, 1-2.	2.5	4
43	NURR1 Downregulation Favors Osteoblastic Differentiation of MSCs. <i>Stem Cells International</i> , 2017, 2017, 1-10.	2.5	19
44	Force loading explains spatial sensing of ligands by cells. <i>Nature</i> , 2017, 552, 219-224.	27.8	244
45	Vitamin D Effects on Osteoblastic Differentiation of Mesenchymal Stem Cells from Dental Tissues. <i>Stem Cells International</i> , 2016, 2016, 1-9.	2.5	47
46	Selective binding and lateral clustering of $\alpha 5 \beta 1$ and $\alpha v \beta 3$ integrins: Unraveling the spatial requirements for cell spreading and focal adhesion assembly. <i>Cell Adhesion and Migration</i> , 2016, 10, 505-515.	2.7	37
47	Tuning cellular responses to BMP-2 with material surfaces. <i>Cytokine and Growth Factor Reviews</i> , 2016, 27, 43-54.	7.2	74
48	Challenges in imaging cell surface receptor clusters. <i>Optics and Lasers in Engineering</i> , 2016, 76, 3-8.	3.8	3
49	Segregation Versus Colocalization: Orthogonally Functionalized Binary Micropatterned Substrates Regulate the Molecular Distribution in Focal Adhesions. <i>Advanced Materials</i> , 2015, 27, 3737-3747.	21.0	34
50	Regulation of integrin and growth factor signaling in biomaterials for osteodifferentiation. <i>Beilstein Journal of Organic Chemistry</i> , 2015, 11, 773-783.	2.2	47
51	Matrix-Immobilized BMP-2 on Microcontact Printed Fibronectin as an in vitro Tool to Study BMP-Mediated Signaling and Cell Migration. <i>Frontiers in Bioengineering and Biotechnology</i> , 2015, 3, 62.	4.1	26
52	Nanoscale Control of Surface Immobilized BMP-2: Toward a Quantitative Assessment of BMP-Mediated Signaling Events. <i>Nano Letters</i> , 2015, 15, 1526-1534.	9.1	87
53	Osteogenic differentiation of mesenchymal stem cells from dental bud: Role of integrins and cadherins. <i>Stem Cell Research</i> , 2015, 15, 618-628.	0.7	70
54	Receptor clustering control and associated force sensing by surface patterning: when force matters. <i>Nanomedicine</i> , 2015, 10, 681-684.	3.3	9

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55	An Emerging Allee Effect Is Critical for Tumor Initiation and Persistence. PLoS Computational Biology, 2015, 11, e1004366.	3.2	81
56	$\alpha 5 \beta 1$ -integrin and MT1-MMP promote tumor cell migration in 2D but not in 3D fibronectin microenvironments. Computational Mechanics, 2014, 53, 499-510.	4.0	6
57	Soft/Elastic Nanopatterned Biointerfaces in the Service of Cell Biology. Methods in Cell Biology, 2014, 119, 237-260.	1.1	9
58	Bioactivity of xerogels as modulators of osteoclastogenesis mediated by connexin 43. Biomaterials, 2014, 35, 1487-1495.	11.4	25
59	Investigation of early cell-surface interactions of human mesenchymal stem cells on nanopatterned β -type titanium-niobium alloy surfaces. Interface Focus, 2014, 4, 20130046.	3.0	20
60	Nanoparticle Tension Probes Patterned at the Nanoscale: Impact of Integrin Clustering on Force Transmission. Nano Letters, 2014, 14, 5539-5546.	9.1	124
61	Adherent cells avoid polarization gradients on periodically poled LiTaO ₃ ferroelectrics. Biointerphases, 2013, 8, 27.	1.6	13
62	Functionalizing $\alpha 3 \beta 1$ - or $\alpha 5 \beta 1$ -selective Integrin Antagonists for Surface Coating: A Method To Discriminate Integrin Subtypes In-vitro. Angewandte Chemie - International Edition, 2013, 52, 1572-1575.	13.8	80
63	Covalent Binding of BMP-2 on Surfaces Using a Self-assembled Monolayer Approach. Journal of Visualized Experiments, 2013, , .	0.3	2
64	Selective modulation of cell response on engineered fractal silicon substrates. Scientific Reports, 2013, 3, 1461.	3.3	32
65	Hydrogel Micropillars with Integrin Selective Peptidomimetic Functionalized Nanopatterned Tops: A New Tool for the Measurement of Cell Traction Forces Transmitted through $\alpha v \beta 3$ - or $\alpha 5 \beta 1$ -integrins. Advanced Materials, 2013, 25, 5869-5874.	21.0	54
66	Distinct Effects of RGD-glycoproteins on Integrin-Mediated Adhesion and Osteogenic Differentiation of Human Mesenchymal Stem Cells. International Journal of Medical Sciences, 2013, 10, 1846-1859.	2.5	35
67	Light- and transmission-electron-microscopic investigations on distribution of CD44, connexin 43 and actin cytoskeleton during the foreign body reaction to a nanoparticulate hydroxyapatite in mini-pigs. Acta Biomaterialia, 2012, 8, 2807-2814.	8.3	7
68	Surface immobilization of bone morphogenetic protein 2 via a self-assembled monolayer formation induces cell differentiation. Acta Biomaterialia, 2012, 8, 772-780.	8.3	64
69	Force-induced destabilization of focal adhesions at defined integrin spacings on nanostructured surfaces. Physical Review E, 2010, 81, 051914.	2.1	14
70	Polymeric Substrates with Tunable Elasticity and Nanoscopically Controlled Biomolecule Presentation. Langmuir, 2010, 26, 15472-15480.	3.5	75
71	Cell interactions with hierarchically structured nano-patterned adhesive surfaces. Soft Matter, 2009, 5, 72-77.	2.7	167
72	Cell adhesion and polarisation on molecularly defined spacing gradient surfaces of cyclic RGDfk peptide patches. European Journal of Cell Biology, 2008, 87, 743-750.	3.6	78

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73	Induction of Cell Polarization and Migration by a Gradient of Nanoscale Variations in Adhesive Ligand Spacing. <i>Nano Letters</i> , 2008, 8, 2063-2069.	9.1	292
74	Cell adhesion and response to synthetic nanopatterned environments by steering receptor clustering and spatial location. <i>HFSP Journal</i> , 2008, 2, 276-285.	2.5	106
75	Cellular chemomechanics at interfaces: sensing, integration and response. <i>Soft Matter</i> , 2007, 3, 307.	2.7	114
76	Cell Spreading and Focal Adhesion Dynamics Are Regulated by Spacing of Integrin Ligands. <i>Biophysical Journal</i> , 2007, 92, 2964-2974.	0.5	840
77	RGDS peptides immobilized on titanium alloy stimulate bone cell attachment, differentiation and confer resistance to apoptosis. <i>Journal of Biomedical Materials Research - Part A</i> , 2007, 83A, 577-584.	4.0	56
78	Lateral spacing of integrin ligands influences cell spreading and focal adhesion assembly. <i>European Journal of Cell Biology</i> , 2006, 85, 219-224.	3.6	336
79	Apoptosis and Survival of Osteoblast-like Cells Are Regulated by Surface Attachment. <i>Journal of Biological Chemistry</i> , 2005, 280, 1733-1739.	3.4	83
80	Block copolymer micelle nanolithography on non-conductive substrates. <i>New Journal of Physics</i> , 2004, 6, 101-101.	2.9	48
81	Activation of Integrin Function by Nanopatterned Adhesive Interfaces. <i>ChemPhysChem</i> , 2004, 5, 383-388.	2.1	1,093
82	RGD Peptides Immobilized on a Mechanically Deformable Surface Promote Osteoblast Differentiation. <i>Journal of Bone and Mineral Research</i> , 2002, 17, 2130-2140.	2.8	50