# Sharon L Campbell

## List of Publications by Citations



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|---|---|---|---|
| 117 papers | 7,442 citations | 48 h-index | 85 g-index |
| 122 ext. papers | 8,115 ext. citations | 6.5 avg, IF | 5.56 L-index |

| # | Paper | IF | Citations |
|---|---|---|---|
| 117 | Increasing complexity of Ras signaling. *Oncogene*, **1998**, 17, 1395-413 | 9.2 | 903 |
| 116 | A molecular redox switch on p21(ras). Structural basis for the nitric oxide-p21(ras) interaction. *Journal of Biological Chemistry*, **1997**, 272, 4323-6 | 5.4 | 379 |
| 115 | Rho family proteins and Ras transformation: the RHOad less traveled gets congested. *Oncogene*, **1998**, 17, 1415-38 | 9.2 | 316 |
| 114 | Copper is required for oncogenic BRAF signalling and tumorigenesis. *Nature*, **2014**, 509, 492-6 | 50.4 | 288 |
| 113 | Recognition and processing of cisplatin- and oxaliplatin-DNA adducts. *Critical Reviews in Oncology/Hematology*, **2005**, 53, 3-11 | 7 | 264 |
| 112 | Vav2 is an activator of Cdc42, Rac1, and RhoA. *Journal of Biological Chemistry*, **2000**, 275, 10141-9 | 5.4 | 208 |
| 111 | Molecular mechanism of vinculin activation and nanoscale spatial organization in focal adhesions. *Nature Cell Biology*, **2015**, 17, 880-92 | 23.4 | 193 |
| 110 | A crystallographic view of interactions between Dbs and Cdc42: PH domain-assisted guanine nucleotide exchange. *EMBO Journal*, **2002**, 21, 1315-26 | 13 | 182 |
| 109 | Two distinct Raf domains mediate interaction with Ras. *Journal of Biological Chemistry*, **1995**, 270, 9809-12 | 5.4 | 181 |
| 108 | Vinculin-actin interaction couples actin retrograde flow to focal adhesions, but is dispensable for focal adhesion growth. *Journal of Cell Biology*, **2013**, 202, 163-77 | 7.3 | 172 |
| 107 | The solution structure of the Raf-1 cysteine-rich domain: a novel ras and phospholipid binding site. *Proceedings of the National Academy of Sciences of the United States of America*, **1996**, 93, 8312-7 | 11.5 | 170 |
| 106 | Direct activation of RhoA by reactive oxygen species requires a redox-sensitive motif. *PLoS ONE*, **2009**, 4, e8045 | 3.7 | 146 |
| 105 | Increasing complexity of Ras signal transduction: involvement of Rho family proteins. *Advances in Cancer Research*, **1998**, 72, 57-107 | 5.9 | 133 |
| 104 | Ras interaction with two distinct binding domains in Raf-1 may be required for Ras transformation. *Journal of Biological Chemistry*, **1996**, 271, 233-7 | 5.4 | 126 |
| 103 | Mutation-specific RAS oncogenicity explains NRAS codon 61 selection in melanoma. *Cancer Discovery*, **2014**, 4, 1418-29 | 24.4 | 121 |
| 102 | Dbl family proteins. *Biochimica Et Biophysica Acta: Reviews on Cancer*, **1997**, 1332, F1-23 | 11.2 | 112 |
| 101 | 14-3-3 zeta negatively regulates raf-1 activity by interactions with the Raf-1 cysteine-rich domain. *Journal of Biological Chemistry*, **1997**, 272, 20990-3 | 5.4 | 103 |

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| 100 | Dependence of Dbl and Dbs transformation on MEK and NF-kappaB activation. *Molecular and Cellular Biology*, **1999**, 19, 7759-70 | 4.8 | 101 |
| 99 | ROCK1 and ROCK2 are required for non-small cell lung cancer anchorage-independent growth and invasion. *Cancer Research*, **2012**, 72, 5338-47 | 10.1 | 98 |
| 98 | NMR characterization of full-length farnesylated and non-farnesylated H-Ras and its implications for Raf activation. *Journal of Molecular Biology*, **2004**, 343, 1391-408 | 6.5 | 93 |
| 97 | Mechanism of redox-mediated guanine nucleotide exchange on redox-active Rho GTPases. *Journal of Biological Chemistry*, **2005**, 280, 31003-10 | 5.4 | 92 |
| 96 | Structural and biochemical studies of p21Ras S-nitrosylation and nitric oxide-mediated guanine nucleotide exchange. *Proceedings of the National Academy of Sciences of the United States of America*, **2003**, 100, 6376-81 | 11.5 | 85 |
| 95 | Protein interactions with platinum-DNA adducts: from structure to function. *Journal of Inorganic Biochemistry*, **2004**, 98, 1551-9 | 4.2 | 82 |
| 94 | Kinetics of creatine kinase in heart: a 31P NMR saturation- and inversion-transfer study. *Biochemistry*, **1985**, 24, 5510-6 | 3.2 | 80 |
| 93 | Molecular basis for Rho GTPase signaling specificity. *Breast Cancer Research and Treatment*, **2004**, 84, 61-71 | 4.4 | 79 |
| 92 | Molecular basis for Rac1 recognition by guanine nucleotide exchange factors. *Nature Structural Biology*, **2001**, 8, 1037-41 | | 78 |
| 91 | Elucidation of binding determinants and functional consequences of Ras/Raf-cysteine-rich domain interactions. *Journal of Biological Chemistry*, **2000**, 275, 22172-9 | 5.4 | 78 |
| 90 | Palladin is an actin cross-linking protein that uses immunoglobulin-like domains to bind filamentous actin. *Journal of Biological Chemistry*, **2008**, 283, 6222-31 | 5.4 | 77 |
| 89 | Mechanism of p21Ras S-nitrosylation and kinetics of nitric oxide-mediated guanine nucleotide exchange. *Biochemistry*, **2004**, 43, 2314-22 | 3.2 | 76 |
| 88 | Peptides containing a consensus Ras binding sequence from Raf-1 and theGTPase activating protein NF1 inhibit Ras function. *Proceedings of the National Academy of Sciences of the United States of America*, **1996**, 93, 1577-81 | 11.5 | 72 |
| 87 | Multiple paxillin binding sites regulate FAK function. *Journal of Molecular Signaling*, **2008**, 3, 1 | 1 | 70 |
| 86 | Atypical KRAS Mutant Is Impaired in PI3K Signaling and Macropinocytosis in Pancreatic Cancer. *Cancer Discovery*, **2020**, 10, 104-123 | 24.4 | 70 |
| 85 | Site-specific monoubiquitination activates Ras by impeding GTPase-activating protein function. *Nature Structural and Molecular Biology*, **2013**, 20, 46-52 | 17.6 | 68 |
| 84 | Redox regulation of Ras and Rho GTPases: mechanism and function. *Antioxidants and Redox Signaling*, **2013**, 18, 250-8 | 8.4 | 67 |
| 83 | Topological determinants of protein domain swapping. *Structure*, **2006**, 14, 5-14 | 5.2 | 67 |

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| 82 | NMR solution structure of the focal adhesion targeting domain of focal adhesion kinase in complex with a paxillin LD peptide: evidence for a two-site binding model. *Journal of Biological Chemistry*, **2004**, 279, 8441-51 | 5.4 | 63 |
| 81 | Deciphering protein dynamics from NMR data using explicit structure sampling and selection. *Biophysical Journal*, **2007**, 93, 2300-6 | 2.9 | 61 |
| 80 | Structural and functional analysis of a mutant Ras protein that is insensitive to nitric oxide activation. *Biochemistry*, **1997**, 36, 3640-4 | 3.2 | 60 |
| 79 | NMR solution structure of an oxaliplatin 1,2-d(GG) intrastrand cross-link in a DNA dodecamer duplex. *Journal of Molecular Biology*, **2004**, 341, 1251-69 | 6.5 | 60 |
| 78 | Redox regulation of RhoA. *Biochemistry*, **2006**, 45, 14481-9 | 3.2 | 59 |
| 77 | Mechanism of free radical nitric oxide-mediated Ras guanine nucleotide dissociation. *Journal of Molecular Biology*, **2005**, 346, 1423-40 | 6.5 | 58 |
| 76 | New insights into FAK signaling and localization based on detection of a FAT domain folding intermediate. *Structure*, **2004**, 12, 2161-71 | 5.2 | 58 |
| 75 | TC21 and Ras share indistinguishable transforming and differentiating activities. *Oncogene*, **1999**, 18, 2107-16 | 9.2 | 54 |
| 74 | Solution structures of a DNA dodecamer duplex with and without a cisplatin 1,2-d(GG) intrastrand cross-link: comparison with the same DNA duplex containing an oxaliplatin 1,2-d(GG) intrastrand cross-link. *Biochemistry*, **2007**, 46, 6477-87 | 3.2 | 52 |
| 73 | Differences in the regulation of K-Ras and H-Ras isoforms by monoubiquitination. *Journal of Biological Chemistry*, **2013**, 288, 36856-62 | 5.4 | 49 |
| 72 | The vinculin C-terminal hairpin mediates F-actin bundle formation, focal adhesion, and cell mechanical properties. *Journal of Biological Chemistry*, **2011**, 286, 45103-15 | 5.4 | 48 |
| 71 | Nitric oxide cell signaling: S-nitrosation of Ras superfamily GTPases. *Cardiovascular Research*, **2007**, 75, 229-39 | 9.9 | 48 |
| 70 | High-resolution NMR studies of Saccharomyces cerevisiae. *Annual Review of Microbiology*, **1987**, 41, 595-616 | 6.5 | 48 |
| 69 | Lipid binding to the tail domain of vinculin: specificity and the role of the N and C termini. *Journal of Biological Chemistry*, **2009**, 284, 7223-31 | 5.4 | 46 |
| 68 | Ras regulation by reactive oxygen and nitrogen species. *Biochemistry*, **2006**, 45, 2200-10 | 3.2 | 46 |
| 67 | Aberrant overexpression of the Rgl2 Ral small GTPase-specific guanine nucleotide exchange factor promotes pancreatic cancer growth through Ral-dependent and Ral-independent mechanisms. *Journal of Biological Chemistry*, **2010**, 285, 34729-40 | 5.4 | 45 |
| 66 | Recognition and activation of Rho GTPases by Vav1 and Vav2 guanine nucleotide exchange factors. *Biochemistry*, **2005**, 44, 6573-85 | 3.2 | 45 |
| 65 | Critical but distinct roles for the pleckstrin homology and cysteine-rich domains as positive modulators of Vav2 signaling and transformation. *Molecular and Cellular Biology*, **2002**, 22, 2487-97 | 4.8 | 45 |

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| 64 | Requirement for C-terminal sequences in regulation of Ect2 guanine nucleotide exchange specificity and transformation. *Journal of Biological Chemistry*, **2004**, 279, 25226-33 | 5.4 | 44 |
| 63 | Superoxide anion radical modulates the activity of Ras and Ras-related GTPases by a radical-based mechanism similar to that of nitric oxide. *Journal of Biological Chemistry*, **2005**, 280, 12438-45 | 5.4 | 43 |
| 62 | Involvement of the switch 2 domain of Ras in its interaction with guanine nucleotide exchange factors. *Journal of Biological Chemistry*, **1996**, 271, 11076-82 | 5.4 | 43 |
| 61 | Improved 4D NMR experiments for the assignment of backbone nuclei in13C/15N labelled proteins. *Journal of Biomolecular NMR*, **1992**, 2, 631-637 | 3 | 43 |
| 60 | Dominant activating RAC2 mutation with lymphopenia, immunodeficiency, and cytoskeletal defects. *Blood*, **2019**, 133, 1977-1988 | 2.2 | 42 |
| 59 | Rho GTPases, oxidation, and cell redox control. *Small GTPases*, **2014**, 5, e28579 | 2.7 | 41 |
| 58 | Identification of an actin binding surface on vinculin that mediates mechanical cell and focal adhesion properties. *Structure*, **2014**, 22, 697-706 | 5.2 | 38 |
| 57 | Identification of residues in the cysteine-rich domain of Raf-1 that control Ras binding and Raf-1 activity. *Journal of Biological Chemistry*, **1998**, 273, 21578-84 | 5.4 | 36 |
| 56 | The focal adhesion targeting domain of focal adhesion kinase contains a hinge region that modulates tyrosine 926 phosphorylation. *Structure*, **2004**, 12, 881-91 | 5.2 | 35 |
| 55 | The Ras/p120 GTPase-activating protein (GAP) interaction is regulated by the p120 GAP pleckstrin homology domain. *Journal of Biological Chemistry*, **2000**, 275, 35021-7 | 5.4 | 35 |
| 54 | The insert region of Rac1 is essential for membrane ruffling but not cellular transformation. *Molecular and Cellular Biology*, **2001**, 21, 2847-57 | 4.8 | 34 |
| 53 | Biological and structural characterization of a Ras transforming mutation at the phenylalanine-156 residue, which is conserved in all members of the Ras superfamily. *Proceedings of the National Academy of Sciences of the United States of America*, **1995**, 92, 1272-6 | 11.5 | 34 |
| 52 | The Structural Basis of Actin Organization by Vinculin and Metavinculin. *Journal of Molecular Biology*, **2016**, 428, 10-25 | 6.5 | 32 |
| 51 | Refolding and purification of Ras proteins. *Methods in Enzymology*, **1995**, 255, 3-13 | 1.7 | 29 |
| 50 | Redox regulation of Rac1 by thiol oxidation. *Free Radical Biology and Medicine*, **2015**, 79, 237-50 | 7.8 | 27 |
| 49 | Glutathiolated Ras: characterization and implications for Ras activation. *Free Radical Biology and Medicine*, **2013**, 57, 221-9 | 7.8 | 25 |
| 48 | Novel C-Raf phosphorylation sites: serine 296 and 301 participate in Raf regulation. *FEBS Letters*, **2005**, 579, 464-8 | 3.8 | 25 |
| 47 | Critical role of the pleckstrin homology domain in Dbs signaling and growth regulation. *Journal of Biological Chemistry*, **2003**, 278, 21188-96 | 5.4 | 24 |

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| 46 | In vivo 31P nuclear magnetic resonance saturation transfer measurements of phosphate exchange reactions in the yeast Saccharomyces cerevisiae. *FEBS Letters*, **1985**, 193, 189-93 | 3.8 | 24 |
| 45 | Structural and biophysical insights into the role of the insert region in Rac1 function. *Biochemistry*, **2002**, 41, 3875-83 | 3.2 | 22 |
| 44 | Bacterial expressed DH and DH/PH domains. *Methods in Enzymology*, **2000**, 325, 25-38 | 1.7 | 22 |
| 43 | A KRAS GTPase K104Q Mutant Retains Downstream Signaling by Offsetting Defects in Regulation. *Journal of Biological Chemistry*, **2017**, 292, 4446-4456 | 5.4 | 20 |
| 42 | Vinculin and metavinculin: oligomerization and interactions with F-actin. *FEBS Letters*, **2013**, 587, 1220-9 | 3.8 | 20 |
| 41 | Vinculin regulation of F-actin bundle formation: what does it mean for the cell?. *Cell Adhesion and Migration*, **2013**, 7, 219-25 | 3.2 | 20 |
| 40 | Regulation of Ras proteins by reactive nitrogen species. *Free Radical Biology and Medicine*, **2011**, 51, 565-78 | 7.8 | 20 |
| 39 | Structure and function of palladin□s actin binding domain. *Journal of Molecular Biology*, **2013**, 425, 3325-37 | 5 | 18 |
| 38 | Role of MLK3-mediated activation of p70 S6 kinase in Rac1 transformation. *Journal of Biological Chemistry*, **2002**, 277, 4770-7 | 5.4 | 18 |
| 37 | Phosphorylation at Y1065 in vinculin mediates actin bundling, cell spreading, and mechanical responses to force. *Biochemistry*, **2014**, 53, 5526-36 | 3.2 | 17 |
| 36 | Structural characterization of the interactions between palladin and □actinin. *Journal of Molecular Biology*, **2011**, 413, 712-25 | 6.5 | 17 |
| 35 | A Structural Model for Vinculin Insertion into PIP-Containing Membranes and the Effect of Insertion on Vinculin Activation and Localization. *Structure*, **2017**, 25, 264-275 | 5.2 | 15 |
| 34 | Flanking bases influence the nature of DNA distortion by platinum 1,2-intrastrand (GG) cross-links. *PLoS ONE*, **2011**, 6, e23582 | 3.7 | 15 |
| 33 | Regulation of large and small G proteins by ubiquitination. *Journal of Biological Chemistry*, **2019**, 294, 18613-18623 | 5.4 | 14 |
| 32 | Amino acid metabolites that regulate G protein signaling during osmotic stress. *PLoS Genetics*, **2017**, 13, e1006829 | 6 | 13 |
| 31 | Rac1 modification by an electrophilic 15-deoxy-□12,14)-prostaglandin J2 analog. *Redox Biology*, **2015**, 4, 346-54 | 11.3 | 12 |
| 30 | Site-specific monoubiquitination activates Ras by impeding GTPase-activating protein function. *Small GTPases*, **2013**, 4, 186-92 | 2.7 | 11 |
| 29 | A universal allosteric mechanism for G protein activation. *Molecular Cell*, **2021**, 81, 1384-1396.e6 | 17.6 | 11 |

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| 28 | Vinculin tail conformation and self-association is independent of pH and H906 protonation. *Biochemistry*, **2008**, 47, 12467-75 | 3.2 | 10 |
| 27 | Detection of Ras GTPase protein radicals through immuno-spin trapping. *Free Radical Biology and Medicine*, **2012**, 53, 1339-45 | 7.8 | 9 |
| 26 | pH-dependent perturbation of Ras-guanine nucleotide interactions and Ras guanine nucleotide exchange. *Biochemistry*, **2004**, 43, 10102-11 | 3.2 | 9 |
| 25 | Backbone 1H, 13C, and 15N resonance assignments for the 21 kDa GTPase Rac1 complexed to GDP and Mg2+. *Journal of Biomolecular NMR*, **2003**, 27, 87-8 | 3 | 8 |
| 24 | KRAS Ubiquitination at Lysine 104 Retains Exchange Factor Regulation by Dynamically Modulating the Conformation of the Interface. *IScience*, **2020**, 23, 101448 | 6.1 | 8 |
| 23 | Rationally designed carbohydrate-occluded epitopes elicit HIV-1 Env-specific antibodies. *Nature Communications*, **2019**, 10, 948 | 17.4 | 8 |
| 22 | RAS ubiquitylation modulates effector interactions. *Small GTPases*, **2020**, 11, 180-185 | 2.7 | 7 |
| 21 | In vitro phosphorylation of the focal adhesion targeting domain of focal adhesion kinase by Src kinase. *Biochemistry*, **2012**, 51, 2213-23 | 3.2 | 7 |
| 20 | Vinculin and metavinculin exhibit distinct effects on focal adhesion properties, cell migration, and mechanotransduction. *PLoS ONE*, **2019**, 14, e0221962 | 3.7 | 6 |
| 19 | The molecular basis for immune dysregulation by the hyperactivated E62K mutant of the GTPase RAC2. *Journal of Biological Chemistry*, **2020**, 295, 12130-12142 | 5.4 | 6 |
| 18 | Backbone 1H, 13C, and 15N NMR assignments of the tail domain of vinculin. *Biomolecular NMR Assignments*, **2008**, 2, 69-71 | 0.7 | 5 |
| 17 | Getting a Handle on RAS-targeted Therapies: Cysteine Directed Inhibitors. *Mini-Reviews in Medicinal Chemistry*, **2016**, 16, 383-90 | 3.2 | 5 |
| 16 | Post-translational modification of RAS proteins. *Current Opinion in Structural Biology*, **2021**, 71, 180-192 | 8.1 | 5 |
| 15 | Biomolecular applications of heteronuclear multidimensional NMR. *Current Opinion in Biotechnology*, **1994**, 5, 346-54 | 11.4 | 4 |
| 14 | Biophysical and proteomic characterization strategies for cysteine modifications in Ras GTPases. *Methods in Molecular Biology*, **2014**, 1120, 75-96 | 1.4 | 4 |
| 13 | Subcellular localization of Rap1 GTPase activator CalDAG-GEFI is orchestrated by interaction of its atypical C1 domain with membrane phosphoinositides. *Journal of Thrombosis and Haemostasis*, **2020**, 18, 693-705 | 15.4 | 4 |
| 12 | Cardiomyopathy Mutations in Metavinculin Disrupt Regulation of Vinculin-Induced F-Actin Assemblies. *Journal of Molecular Biology*, **2019**, 431, 1604-1618 | 6.5 | 3 |
| 11 | Identification of lysine methylation in the core GTPase domain by GoMADScan. *PLoS ONE*, **2019**, 14, e0219436 | 3.7 | 3 |

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| 10 | 1H, 15N, and 13C NMR chemical shift assignments for the Ig3 domain of palladin. *Biomolecular NMR Assignments*, **2008**, 2, 51-3 | 0.7 | 3 |
| 9 | Protein-protein interaction analysis by nuclear magnetic resonance spectroscopy. *Methods in Molecular Biology*, **2015**, 1278, 267-79 | 1.4 | 3 |
| 8 | Distinct Binding Modes of Vinculin Isoforms Underlie Their Functional Differences. *Structure*, **2019**, 27, 1527-1536.e3 | 5.2 | 2 |
| 7 | Biophysical and Structural Characterization of Novel RAS-Binding Domains (RBDs) of PI3K and PI3K *Journal of Molecular Biology*, **2021**, 433, 166838 | 6.5 | 2 |
| 6 | Exciton interactions in phycoerythrin. *Photosynthesis Research*, **1986**, 10, 209-15 | 3.7 | 1 |
| 5 | Differences in Conformation and Conformational Dynamics Between Cisplatin and Oxaliplatin DNA Adducts **2009**, 157-169 | | 1 |
| 4 | Monoubiquitination of KRAS at Lysine104 and Lysine147 Modulates Its Dynamics and Interaction with Partner Proteins. *Journal of Physical Chemistry B*, **2021**, 125, 4681-4691 | 3.4 | 1 |
| 3 | Divergent Mechanisms Activating RAS and Small GTPases Through Post-translational Modification. *Frontiers in Molecular Biosciences*, **2021**, 8, 707439 | 5.6 | 1 |
| 2 | New insights into the Ras onco-protein and its interactions with the Raf-1-1 kinase. *Proceedings Annual Meeting Electron Microscopy Society of America*, **1996**, 54, 878-879 | | |
| 1 | Ras Activity Regulation by Monoubiquitination. *FASEB Journal*, **2013**, 27, 1046.3 | 0.9 | |