## John S Philo

## List of Publications by Citations

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78
papers

4,454
citations

81
ext. papers

4,726
ext. citations

33
h-index

3,8
solutions

3.8
solutions

5.62
L-index

| #  | Paper  | IF   | Citations |
|----|--|------|-----------|
| 78 | Size-exclusion chromatography with on-line light-scattering, absorbance, and refractive index detectors for studying proteins and their interactions. <i>Analytical Biochemistry</i> , <b>1996</b> , 240, 155-66   | 3.1  | 443       |
| 77 | Role of arginine in protein refolding, solubilization, and purification. <i>Biotechnology Progress</i> , <b>2004</b> , 20, 1301-8  | 2.8  | 327       |
| 76 | A method for directly fitting the time derivative of sedimentation velocity data and an alternative algorithm for calculating sedimentation coefficient distribution functions. <i>Analytical Biochemistry</i> , <b>2000</b> , 279, 151-63   | 3.1  | 239       |
| 75 | Mechanisms of protein aggregation. Current Pharmaceutical Biotechnology, 2009, 10, 348-51  | 2.6  | 217       |
| 74 | An improved function for fitting sedimentation velocity data for low-molecular-weight solutes. <i>Biophysical Journal</i> , <b>1997</b> , 72, 435-44   | 2.9  | 213       |
| 73 | Is any measurement method optimal for all aggregate sizes and types?. AAPS Journal, 2006, 8, E564-71   | 3.7  | 205       |
| 72 | Dimerization of the extracellular domain of the erythropoietin (EPO) receptor by EPO: one high-affinity and one low-affinity interaction. <i>Biochemistry</i> , <b>1996</b> , 35, 1681-91  | 3.2  | 186       |
| 71 | Improved methods for fitting sedimentation coefficient distributions derived by time-derivative techniques. <i>Analytical Biochemistry</i> , <b>2006</b> , 354, 238-46   | 3.1  | 185       |
| 70 | A critical review of methods for size characterization of non-particulate protein aggregates. <i>Current Pharmaceutical Biotechnology</i> , <b>2009</b> , 10, 359-72   | 2.6  | 168       |
| 69 | Conformation of sLex Tetrasaccharide, Free in Solution and Bound to E-, P-, and L-Selectin  Journal of the American Chemical Society, <b>1997</b> , 119, 1727-1736   | 16.4 | 166       |
| 68 | The critical role of mobile phase composition in size exclusion chromatography of protein pharmaceuticals. <i>Journal of Pharmaceutical Sciences</i> , <b>2010</b> , 99, 1674-92   | 3.9  | 158       |
| 67 | Elution of antibodies from a Protein-A column by aqueous arginine solutions. <i>Protein Expression and Purification</i> , <b>2004</b> , 36, 244-8  | 2    | 157       |
| 66 | Effects of acid exposure on the conformation, stability, and aggregation of monoclonal antibodies. <i>Proteins: Structure, Function and Bioinformatics</i> , <b>2007</b> , 66, 954-62  | 4.2  | 149       |
| 65 | Online size-exclusion high-performance liquid chromatography light scattering and differential refractometry methods to determine degree of polymer conjugation to proteins and protein-protein or protein-ligand association states. <i>Analytical Biochemistry</i> , <b>2001</b> , 299, 136-46 | 3.1  | 109       |
| 64 | Mechanism of photoinhibition of photosynthetic water oxidation by Cl- depletion and F-substitution: oxidation of a protein residue. <i>Biochemistry</i> , <b>1990</b> , 29, 10814-22   | 3.2  | 105       |
| 63 | Dimerization of the extracellular domain of granuloycte-colony stimulating factor receptor by ligand binding: a monovalent ligand induces 2:2 complexes. <i>Biochemistry</i> , <b>1996</b> , 35, 4886-96   | 3.2  | 65        |
| 62 | High-sensitivity magnetic susceptometer employing superconducting technology. <i>Review of Scientific Instruments</i> , <b>1977</b> , 48, 1529-1536  | 1.7  | 65        |

| 61 | Structure, signaling mechanism and regulation of the natriuretic peptide receptor guanylate cyclase. <i>FEBS Journal</i> , <b>2011</b> , 278, 1818-29   | 5.7          | 60 |
|----|---|--------------|----|
| 60 | Binding of Neu differentiation factor with the extracellular domain of Her2 and Her3. <i>Journal of Biological Chemistry</i> , <b>1995</b> , 270, 24604-8   | 5.4          | 59 |
| 59 | Human stem cell factor dimer forms a complex with two molecules of the extracellular domain of its receptor, Kit. <i>Journal of Biological Chemistry</i> , <b>1996</b> , 271, 6895-902  | 5.4          | 56 |
| 58 | Stoichiometry of heparin binding to basic fibroblast growth factor. <i>Archives of Biochemistry and Biophysics</i> , <b>1994</b> , 308, 267-73  | 4.1          | 54 |
| 57 | Biochemical, biophysical, and pharmacological characterization of bacterially expressed human agouti-related protein. <i>Biochemistry</i> , <b>1998</b> , 37, 16041-52  | 3.2          | 48 |
| 56 | Measuring Sedimentation, Diffusion, and Molecular Weights of Small Molecules by Direct Fitting of Sedimentation Velocity Concentration Profiles <b>1994</b> , 156-170   |              | 44 |
| 55 | Temperature dependence of the diamagnetism of water. <i>Journal of Chemical Physics</i> , <b>1980</b> , 72, 4429-44   | <b>3;3</b> 9 | 41 |
| 54 | Re-examining the oligomerization state of macrophage migration inhibitory factor (MIF) in solution. <i>Biophysical Chemistry</i> , <b>2004</b> , 108, 77-87   | 3.5          | 40 |
| 53 | Studies on the structure and function of glycosylated and nonglycosylated neu differentiation factors. Similarities and differences of the alpha and beta isoforms. <i>Journal of Biological Chemistry</i> , <b>1995</b> , 270, 4784-91 | 5.4          | 36 |
| 52 | Refolding of brain-derived neurotrophic factor from guanidine hydrochloride: kinetic trapping in a collapsed form which is incompetent for dimerization. <i>Biochemistry</i> , <b>1993</b> , 32, 10812-8                                | 3.2          | 36 |
| 51 | Complete sequence, subunit structure, and complexes with pancreatic alpha-amylase of an alpha-amylase inhibitor from Phaseolus vulgaris white kidney beans. <i>Journal of Biochemistry</i> , <b>1996</b> , 120, 177-83                  | 3.1          | 35 |
| 50 | Photosynthetic oxygen evolution: changes in magnetism of the water-oxidizing enzyme. <i>Journal of the American Chemical Society</i> , <b>1989</b> , 111, 3221-3225   | 16.4         | 35 |
| 49 | Sedimentation equilibrium analysis of mixed associations using numerical constraints to impose mass or signal conservation. <i>Methods in Enzymology</i> , <b>2000</b> , 321, 100-20  | 1.7          | 34 |
| 48 | Heparin is essential for a single keratinocyte growth factor molecule to bind and form a complex with two molecules of the extracellular domain of its receptor. <i>Biochemistry</i> , <b>1999</b> , 38, 2523-34                        | 3.2          | 34 |
| 47 | Monitoring the homogeneity of adenovirus preparations (a gene therapy delivery system) using analytical ultracentrifugation. <i>Analytical Biochemistry</i> , <b>2007</b> , 362, 16-37  | 3.1          | 33 |
| 46 | Reversibility of heat-induced denaturation of the recombinant human megakaryocyte growth and development factor. <i>Pharmaceutical Research</i> , <b>1999</b> , 16, 799-807   | 4.5          | 33 |
| 45 | Human hepatic lipase subunit structure determination. <i>Journal of Biological Chemistry</i> , <b>1996</b> , 271, 22931   | 564          | 32 |
| 44 | Induction of alpha-helix in the beta-sheet protein tumor necrosis factor-alpha: thermal- and trifluoroethanol-induced denaturation at neutral pH. <i>Biochemistry</i> , <b>1996</b> , 35, 11447-53                                      | 3.2          | 31 |

| 43 | Granulocyte-colony stimulating factor maintains a thermally stable, compact, partially folded structure at pH2. <i>Chemical Biology and Drug Design</i> , <b>1997</b> , 50, 310-8   |     | 30 |
|----|---|-----|----|
| 42 | Kinetic and thermodynamic analysis of thermal unfolding of recombinant erythropoietin.  Bioscience, Biotechnology and Biochemistry, 2001, 65, 1321-7  | 2.1 | 29 |
| 41 | Protein isolated from biopharmaceutical formulations cannot be used for comparative studies: Follow-up to "a case study using Epoetin Alfa from Epogen and EPREX". <i>Journal of Pharmaceutical Sciences</i> , <b>2007</b> , 96, 3214-25              | 3.9 | 27 |
| 40 | Neutron reflectometry studies of the adsorbed structure of the amelogenin, LRAP. <i>Journal of Physical Chemistry B</i> , <b>2013</b> , 117, 3098-109   | 3.4 | 26 |
| 39 | ErbB receptor activation, cell morphology changes, and apoptosis induced by anti-Her2 monoclonal antibodies. <i>Biochemical and Biophysical Research Communications</i> , <b>1996</b> , 226, 59-69  | 3.4 | 26 |
| 38 | Secondary and quaternary structural transition of the halophilic archaeon nucleoside diphosphate kinase under high- and low-salt conditions. <i>FEMS Microbiology Letters</i> , <b>2002</b> , 216, 235-41   | 2.9 | 25 |
| 37 | Induction of alpha-helix in the beta-sheet protein tumor necrosis factor-alpha: acid-induced denaturation. <i>Biochemistry</i> , <b>1996</b> , 35, 11454-60   | 3.2 | 24 |
| 36 | Reversibly bound chloride in the atrial natriuretic peptide receptor hormone-binding domain: possible allosteric regulation and a conserved structural motif for the chloride-binding site. <i>Protein Science</i> , <b>2010</b> , 19, 544-57         | 6.3 | 22 |
| 35 | Effect of the intermolecular disulfide bond on the conformation and stability of glial cell line-derived neurotrophic factor. <i>Protein Engineering, Design and Selection</i> , <b>2002</b> , 15, 59-64  | 1.9 | 22 |
| 34 | Dimerization of granulocyte-colony stimulating factor receptor: the Ig plus CRH construct of granulocyte-colony stimulating factor receptor forms a 2:2 complex with a ligand. <i>Journal of Biochemistry</i> , <b>1997</b> , 121, 370-5              | 3.1 | 21 |
| 33 | Acid-induced unfolding of brain-derived neurotrophic factor results in the formation of a monomeric "a state". <i>Biochemistry</i> , <b>1993</b> , 32, 10819-25   | 3.2 | 20 |
| 32 | Diamagnetism of human apo-, oxy-, and (carbonmonoxy)hemoglobin. <i>Biochemistry</i> , <b>1984</b> , 23, 865-72  | 3.2 | 19 |
| 31 | Ca2+ depletion from the photosynthetic water-oxidizing complex reveals photooxidation of a protein residue. <i>Biochemistry</i> , <b>1991</b> , 30, 4740-7  | 3.2 | 18 |
| 30 | Recombinant rat fibroblast growth factor-16: structure and biological activity. <i>Archives of Biochemistry and Biophysics</i> , <b>1999</b> , 361, 34-46   | 4.1 | 17 |
| 29 | The inorganic biochemistry of photosynthetic water oxidation. <i>Biochemical Society Transactions</i> , <b>1994</b> , 22, 323-7   | 5.1 | 17 |
| 28 | Structural characterization of an alpha-amylase inhibitor from a wild common bean (Phaseolus vulgaris): insight into the common structural features of leguminous alpha-amylase inhibitors. <i>Journal of Biochemistry</i> , <b>1997</b> , 121, 350-4 | 3.1 | 16 |
| 27 | Sites of iodination in recombinant human brain-derived neurotrophic factor and its effect on neurotrophic activity. <i>Protein Science</i> , <b>1993</b> , 2, 1664-74   | 6.3 | 15 |
| 26 | Quaternary structure has little influence on spin states in mixed-spin human methemoglobins. <i>Biochemistry</i> , <b>1985</b> , 24, 2985-92  | 3.2 | 15 |

## (2001-1996)

| 25 | Characterization of keratinocyte growth factor binding to heparin and dextran sulfate. <i>Archives of Biochemistry and Biophysics</i> , <b>1996</b> , 332, 41-6  | 4.1               | 14 |
|----|--|-------------------|----|
| 24 | Interactions between NFkappaB and its inhibitor ikappaB: biophysical characterization of a NFkappaB/ikappaB-alpha complex. <i>The Protein Journal</i> , <b>1998</b> , 17, 757-63   |                   | 13 |
| 23 | The leucine-rich amelogenin protein (LRAP) is primarily monomeric and unstructured in physiological solution. <i>Journal of Structural Biology</i> , <b>2015</b> , 190, 81-91  | 3.4               | 12 |
| 22 | The importance of Arg40 and 45 in the mitogenic activity and structural stability of basic fibroblast growth factor: effects of acidic amino acid substitutions. <i>The Protein Journal</i> , <b>1995</b> , 14, 263-74   |                   | 12 |
| 21 | Development of Calcitonin Salmon Nasal Spray: similarity of peptide formulated in chlorobutanol compared to benzalkonium chloride as preservative. <i>Journal of Pharmaceutical Sciences</i> , <b>2009</b> , 98, 3691  | - <del>7</del> 06 | 11 |
| 20 | Structure and solubility of interleukin-2 in sodium dodecyl sulfate. <i>International Journal of Peptide and Protein Research</i> , <b>1994</b> , 43, 583-7  |                   | 10 |
| 19 | Changes in conformation and stability upon formation of complexes of erythropoietin (EPO) and soluble EPO receptor. <i>The Protein Journal</i> , <b>1997</b> , 16, 213-25  |                   | 10 |
| 18 | Densimetric determination of equilibrium binding of sucrose octasulfate with basic fibroblast growth factor. <i>The Protein Journal</i> , <b>1993</b> , 12, 689-93   |                   | 10 |
| 17 | Kinetics of hemoglobin-carbon monoxide reactions measured with a superconducting magnetometer: a new method for fast reactions in solution. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>1977</b> , 74, 2620-3                    | 11.5              | 10 |
| 16 | Quaternary structure dynamics and carbon monoxide binding kinetics of hemoglobin valency hybrids. <i>Biophysical Journal</i> , <b>1996</b> , 70, 1949-65   | 2.9               | 9  |
| 15 | A light scattering/size exclusion chromatography method for studying the stoichiometry of a protein-protein complex. <i>Techniques in Protein Chemistry</i> , <b>1996</b> , 23-31  |                   | 9  |
| 14 | A chimera-like alpha-amylase inhibitor suggesting the evolution of Phaseolus vulgaris alpha-amylase inhibitor. <i>Journal of Biochemistry</i> , <b>2000</b> , 128, 139-44  | 3.1               | 8  |
| 13 | Limiting the sedimentation coefficient for sedimentation velocity data analysis: partial boundary modeling and g(s) approaches revisited. <i>Analytical Biochemistry</i> , <b>2011</b> , 412, 189-202  | 3.1               | 7  |
| 12 | Chromatographic determination of extinction coefficients of non-glycosylated proteins using refractive index (RI) and UV absorbance (UV) detectors: Applications for studying protein interactions by size exclusion chromatography with light-scattering, UV, and RI detectors. |                   | 7  |
| 11 | Characterizing Biopharmaceuticals using Analytical Ultracentrifugation <b>2015</b> , 211-260   |                   | 5  |
| 10 | Structure of folding intermediates at pH 4.0 and native state of microbial transglutaminase. <i>Bioscience, Biotechnology and Biochemistry</i> , <b>2003</b> , 67, 291-4   | 2.1               | 3  |
| 9  | Overview of the quantitation of protein interactions. <i>Current Protocols in Protein Science</i> , <b>2001</b> , Chapter 20, Unit20.1   | 3.1               | 3  |
| 8  | Copper staining method for extracting biologically active proteins from native gels. <i>Bioscience, Biotechnology and Biochemistry</i> , <b>2001</b> , 65, 1315-20   | 2.1               | 2  |

| 7 | Molecular cloning of groESL locus, and purification and characterization of chaperonins, GroEL and GroES, from Bacillus brevis. <i>Bioscience, Biotechnology and Biochemistry</i> , <b>2001</b> , 65, 1379-87 | 2.1 | 2 |
|---|---|-----|---|
| 6 | Kinetics of oxygen binding and subunit assembly for the hemoglobin alpha subunit. <i>Biophysical Chemistry</i> , <b>1992</b> , 43, 61-71  | 3.5 | 2 |
| 5 | The Glucagon-Like Peptide 2 Analog Teduglutide Reversibly Associates to Form Pentamers. <i>Journal of Pharmaceutical Sciences</i> , <b>2020</b> , 109, 775-784  | 3.9 | 2 |
| 4 | Comparison of solution properties of human and rat ciliary neurotrophic factor. <i>Chemical Biology and Drug Design</i> , <b>1997</b> , 50, 300-9   |     | 1 |
| 3 | Characterizing biopharmaceuticals using analytical ultracentrifugation 2020, 225-283  |     | О |
| 2 | Comparison of Methods for Soluble Aggregate Detection and Size Characterization <b>2012</b> , 303-333   |     |   |

Probing receptor-ligand interactions by sedimentation equilibrium **1997**, 2985, 170