

# C Mark Smales

## List of Publications by Year in descending order

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105  
papers

3,193  
citations

185998

28  
h-index

182168

51  
g-index

109  
all docs

109  
docs citations

109  
times ranked

3356  
citing authors

#	ARTICLE	IF	CITATIONS
1	Control and regulation of the cellular responses to cold shock: the responses in yeast and mammalian systems. <i>Biochemical Journal</i> , 2006, 397, 247-259.	1.7	249
2	How can thermal processing modify the antigenicity of proteins?. <i>Allergy: European Journal of Allergy and Clinical Immunology</i> , 2001, 56, 56-60.	2.7	138
3	The future of host cell protein (HCP) identification during process development and manufacturing linked to a risk-based management for their control. <i>Biotechnology and Bioengineering</i> , 2015, 112, 1727-1737.	1.7	137
4	Biochemical and Structural Insights into Bacterial Organelle Form and Biogenesis. <i>Journal of Biological Chemistry</i> , 2008, 283, 14366-14375.	1.6	133
5	The cold-shock response in cultured mammalian cells: Harnessing the response for the improvement of recombinant protein production. <i>Biotechnology and Bioengineering</i> , 2006, 93, 829-835.	1.7	130
6	Comparative proteomic analysis of GS-NSO murine myeloma cell lines with varying recombinant monoclonal antibody production rate. <i>Biotechnology and Bioengineering</i> , 2004, 88, 474-488.	1.7	120
7	Host cell protein dynamics in the supernatant of a mAb producing CHO cell line. <i>Biotechnology and Bioengineering</i> , 2012, 109, 971-982.	1.7	108
8	Comparison of the effects of 2,2,2-trifluoroethanol on peptide and protein structure and function. <i>Journal of Structural Biology</i> , 2007, 157, 329-338.	1.3	92
9	Biochemical insights into the mechanisms central to the response of mammalian cells to cold stress and subsequent rewarming. <i>FEBS Journal</i> , 2009, 276, 286-302.	2.2	91
10	The dynamics of the CHO host cell protein profile during clarification and protein A capture in a platform antibody purification process. <i>Biotechnology and Bioengineering</i> , 2013, 110, 240-251.	1.7	91
11	Host cell protein adsorption characteristics during protein a chromatography. <i>Biotechnology Progress</i> , 2012, 28, 1037-1044.	1.3	84
12	Measurement and control of host cell proteins (HCPs) in CHO cell bioprocesses. <i>Current Opinion in Biotechnology</i> , 2014, 30, 153-160.	3.3	83
13	Functional proteomic analysis of GS-NSO murine myeloma cell lines with varying recombinant monoclonal antibody production rate. <i>Biotechnology and Bioengineering</i> , 2006, 94, 830-841.	1.7	76
14	Cold-inducible RNA binding protein (CIRP) expression is modulated by alternative mRNAs. <i>Rna</i> , 2009, 15, 1164-1176.	1.6	68
15	RTN3 Is a Novel Cold-Induced Protein and Mediates Neuroprotective Effects of RBM3. <i>Current Biology</i> , 2017, 27, 638-650.	1.8	64
16	Control of translation elongation in health and disease. <i>DMM Disease Models and Mechanisms</i> , 2020, 13, .	1.2	62
17	Rapid whole monoclonal antibody analysis by mass spectrometry: An Ultra scale-down study of the effect of harvesting by centrifugation on the post-translational modification profile. <i>Biotechnology and Bioengineering</i> , 2010, 107, 85-95.	1.7	55
18	mTORC1 signalling and eIF4E/4E-BP1 translation initiation factor stoichiometry influence recombinant protein productivity from GS-CHOK1 cells. <i>Biochemical Journal</i> , 2016, 473, 4651-4664.	1.7	49

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19	Proteomic analysis of enriched microsomal fractions from GS-NS0 murine myeloma cells with varying secreted recombinant monoclonal antibody productivities. <i>Proteomics</i> , 2005, 5, 4689-4704.	1.3	48
20	Metabolic Rates, Growth Phase, and mRNA Levels Influence Cell-Specific Antibody Production Levels from In Vitro-Cultured Mammalian Cells at Sub-Physiological Temperatures. <i>Molecular Biotechnology</i> , 2008, 39, 69-77.	1.3	48
21	Rapid high-throughput characterisation, classification and selection of recombinant mammalian cell line phenotypes using intact cell MALDI-ToF mass spectrometry fingerprinting and PLS-DA modelling. <i>Journal of Biotechnology</i> , 2014, 184, 84-93.	1.9	46
22	p58IPK is an inhibitor of the eIF2 $\pm$ kinase GCN2 and its localization and expression underpin protein synthesis and ER processing capacity. <i>Biochemical Journal</i> , 2015, 465, 213-225.	1.7	42
23	Host cell protein dynamics in recombinant CHO cells. <i>Bioengineered</i> , 2013, 4, 288-291.	1.4	40
24	Eukaryotic elongation factor 2 kinase regulates the cold stress response by slowing translation elongation. <i>Biochemical Journal</i> , 2015, 465, 227-238.	1.7	39
25	NMR Analysis of Synthetic Human Serum Albumin $\hat{\text{I}}$ -Helix 28 Identifies Structural Distortion upon Amadori Modification. <i>Journal of Biological Chemistry</i> , 2005, 280, 22582-22589.	1.6	38
26	ATR (ataxia telangiectasia mutated- and Rad3-related kinase) is activated by mild hypothermia in mammalian cells and subsequently activates p53. <i>Biochemical Journal</i> , 2011, 435, 499-508.	1.7	34
27	eIF2 $\gamma$ phosphorylation, stress perception, and the shutdown of global protein synthesis in cultured CHO cells. <i>Biotechnology and Bioengineering</i> , 2005, 89, 805-814.	1.7	30
28	Identification of the limitations on recombinant gene expression in CHO cell lines with varying luciferase production rates. <i>Biotechnology and Bioengineering</i> , 2009, 102, 1593-1602.	1.7	29
29	Quantitative definition and monitoring of the host cell protein proteome using iTRAQ $\hat{\text{a}}$ a study of an industrial mAb producing CHO $\hat{\text{e}}$ cell line. <i>Biotechnology Journal</i> , 2016, 11, 1014-1024.	1.8	29
30	Engineering of Chinese hamster ovary cell lipid metabolism results in an expanded ER and enhanced recombinant biotherapeutic protein production. <i>Metabolic Engineering</i> , 2020, 57, 203-216.	3.6	29
31	Evaluation of individual protein errors in silver-stained two-dimensional gels. <i>Biochemical and Biophysical Research Communications</i> , 2003, 306, 1050-1055.	1.0	28
32	The cold-shock response in mammalian cells: investigating the HeLa cell cold-shock proteome. <i>Cytotechnology</i> , 2007, 53, 47-53.	0.7	28
33	Engineering an Improved IgG4 Molecule with Reduced Disulfide Bond Heterogeneity and Increased Fab Domain Thermal Stability. <i>Journal of Biological Chemistry</i> , 2012, 287, 24525-24533.	1.6	28
34	Transient Gene Expression Levels from Multigene Expression Vectors. <i>Biotechnology Progress</i> , 2007, 23, 435-443.	1.3	27
35	Post $\hat{\text{e}}$ translational events of a model reporter protein proceed with higher fidelity and accuracy upon mild hypothermic culturing of Chinese hamster ovary cells. <i>Biotechnology and Bioengineering</i> , 2010, 105, 215-220.	1.7	27
36	Cooling-induced SUMOylation of EXOSC10 down-regulates ribosome biogenesis. <i>Rna</i> , 2016, 22, 623-635.	1.6	27

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37	Protein modification during anti-viral heat-treatment bioprocessing of factor VIII concentrates, factor IX concentrates, and model proteins in the presence of sucrose. <i>Biotechnology and Bioengineering</i> , 2002, 77, 37-48.	1.7	25
38	Protein disulfide isomerase does not control recombinant IgG4 productivity in mammalian cell lines. <i>Biotechnology and Bioengineering</i> , 2010, 105, 770-779.	1.7	25
39	Transient expression of human TorsinA enhances secretion of two functionally distinct proteins in cultured Chinese hamster ovary (CHO) cells. <i>Biotechnology and Bioengineering</i> , 2010, 105, 556-566.	1.7	25
40	Residual on column host cell protein analysis during lifetime studies of protein A chromatography. <i>Journal of Chromatography A</i> , 2016, 1461, 70-77.	1.8	25
41	Developments in the production of mucosal antibodies in plants. <i>Biotechnology Advances</i> , 2016, 34, 77-87.	6.0	25
42	Protein modification during antiviral heat bioprocessing. <i>Biotechnology and Bioengineering</i> , 2000, 67, 177-188.	1.7	23
43	Alternative Promoters Regulate Cold Inducible RNA-Binding (CIRP) Gene Expression and Enhance Transgene Expression in Mammalian Cells. <i>Molecular Biotechnology</i> , 2013, 54, 238-249.	1.3	23
44	The impact of process temperature on mammalian cell lines and the implications for the production of recombinant proteins in CHO cells. <i>Pharmaceutical Bioprocessing</i> , 2014, 2, 49-61.	0.8	23
45	The effect of peptide glycation on local secondary structure. <i>Journal of Structural Biology</i> , 2008, 161, 151-161.	1.3	21
46	Characterization of Lysozyme-Estrone Glucuronide Conjugates. The Effect of the Coupling Reagent on the Substitution Level and Sites of Acylation. <i>Bioconjugate Chemistry</i> , 1999, 10, 693-700.	1.8	20
47	<sup>1</sup> H NMR Spectroscopy Profiling of Metabolic Reprogramming of Chinese Hamster Ovary Cells upon a Temperature Shift during Culture. <i>PLoS ONE</i> , 2013, 8, e77195.	1.1	19
48	Engineered transient and stable overexpression of translation factors eIF3i and eIF3c in CHOK1 and HEK293 cells gives enhanced cell growth associated with increased c-Myc expression and increased recombinant protein synthesis. <i>Metabolic Engineering</i> , 2020, 59, 98-105.	3.6	17
49	The chaperonin CCT interacts with and mediates the correct folding and activity of three subunits of translation initiation factor eIF3: b, i and h. <i>Biochemical Journal</i> , 2014, 458, 213-224.	1.7	16
50	Biological insights into the expression of translation initiation factors from recombinant CHOK1SV cell lines and their relationship to enhanced productivity. <i>Biochemical Journal</i> , 2015, 472, 261-273.	1.7	16
51	<sc>UV</sc> resonance Raman spectroscopy: a process analytical tool for host cell <sc>DNA</sc> and <sc>RNA</sc> dynamics in mammalian cell lines. <i>Journal of Chemical Technology and Biotechnology</i> , 2015, 90, 237-243.	1.6	16
52	Methionine sulfoximine supplementation enhances productivity in GSâ€“CHOK1SV cell lines through glutathione biosynthesis. <i>Biotechnology Progress</i> , 2017, 33, 17-25.	1.3	16
53	On the Effect of Transient Expression of Mutated eIF2 <sup>1±</sup> and eIF4E Eukaryotic Translation Initiation Factors on Reporter Gene Expression in Mammalian Cells Upon Cold-Shock. <i>Molecular Biotechnology</i> , 2006, 34, 141-150.	1.3	15
54	Expression of <i>Trypanosoma brucei gambiense</i> Antigens in <i>Leishmania tarentolae</i> . Potential for Use in Rapid Serodiagnostic Tests (RDTs). <i>PLoS Neglected Tropical Diseases</i> , 2015, 9, e0004271.	1.3	15

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55	The Long Non-coding RNA Transcriptome Landscape in CHO Cells Under Batch and Fed-batch Conditions. <i>Biotechnology Journal</i> , 2018, 13, e1800122.	1.8	15
56	Rpl24Bst mutation suppresses colorectal cancer by promoting eEF2 phosphorylation via eEF2K. <i>ELife</i> , 2021, 10, .	2.8	15
57	Mechanisms of protein modification during model anti-viral heat-treatment bioprocessing of $\beta$ -lactoglobulin variant A in the presence of sucrose. <i>Biotechnology and Applied Biochemistry</i> , 2000, 32, 109.	1.4	13
58	Global changes in gene expression observed at the transition from growth to stationary phase in <i>Listeria monocytogenes</i> ScottA batch culture. <i>Proteomics</i> , 2004, 4, 123-135.	1.3	13
59	Investigating variables and mechanisms that influence protein integrity in low water content amorphous carbohydrate matrices. <i>Biotechnology Progress</i> , 2009, 25, 1217-1227.	1.3	13
60	Experimental and In Silico Modelling Analyses of the Gene Expression Pathway for Recombinant Antibody and By-Product Production in NS0 Cell Lines. <i>PLoS ONE</i> , 2012, 7, e47422.	1.1	13
61	The challenges of product- and process-related impurities to an evolving biopharmaceutical industry. <i>Bioanalysis</i> , 2013, 5, 123-126.	0.6	12
62	An ultra scale-down approach identifies host cell protein differences across a panel of mAb producing CHO cell line variants. <i>Biotechnology Journal</i> , 2016, 11, 415-424.	1.8	12
63	Polysome profiling of mAb producing CHO cell lines links translational control of cell proliferation and recombinant mRNA loading onto ribosomes with global and recombinant protein synthesis. <i>Biotechnology Journal</i> , 2017, 12, 1700177.	1.8	12
64	Monitoring changes in nisin susceptibility of <i>Listeria monocytogenes</i> Scott A as an indicator of growth phase using FACS. <i>Journal of Microbiological Methods</i> , 2006, 66, 43-55.	0.7	11
65	Application of Imaging Flow Cytometry for the Characterization of Intracellular Attributes in Chinese Hamster Ovary Cell Lines at the Single-cell Level. <i>Biotechnology Journal</i> , 2019, 14, e1800675.	1.8	11
66	Analytics of host cell proteins (HCPs): lessons from biopharmaceutical mAb analysis for Gene therapy products. <i>Current Opinion in Biotechnology</i> , 2021, 71, 98-104.	3.3	11
67	Strategies to control therapeutic antibody glycosylation during bioprocessing: Synthesis and separation. <i>Biotechnology and Bioengineering</i> , 2022, 119, 1343-1358.	1.7	11
68	Protein Modifications during Antiviral Heat Bioprocessing and Subsequent Storage. <i>Biotechnology Progress</i> , 2001, 17, 974-978.	1.3	10
69	On the statistical analysis of the GS-NS0 cell proteome: Imputation, clustering and variability testing. <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , 2006, 1764, 1179-1187.	1.1	10
70	MALDI-ToF mass spectrometry coupled with multivariate pattern recognition analysis for the rapid biomarker profiling of <i>Escherichia coli</i> in different growth phases. <i>Analytical and Bioanalytical Chemistry</i> , 2013, 405, 8251-8265.	1.9	10
71	Meta-analysis of Publicly Available Chinese Hamster Ovary (CHO) Cell Transcriptomic Datasets for Identifying Engineering Targets to Enhance Recombinant Protein Yields. <i>Biotechnology Journal</i> , 2018, 13, e1800066.	1.8	10
72	Defining lncRNAs Correlated with CHO Cell Growth and IgG Productivity by RNA-Seq. <i>IScience</i> , 2020, 23, 100785.	1.9	10

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73	Modulation of Phosducin-Like Protein 3 (PhLP3) Levels Promotes Cytoskeletal Remodelling in a MAPK and RhoA-Dependent Manner. <i>PLoS ONE</i> , 2011, 6, e28271.	1.1	10
74	Glycosylation of <i>Trypanosoma cruzi</i> TcI antigen reveals recognition by chagasic sera. <i>Scientific Reports</i> , 2020, 10, 16395.	1.6	9
75	Engineering the Chaperone Network of CHO Cells for Optimal Recombinant Protein Production and Authenticity. <i>Methods in Molecular Biology</i> , 2012, 824, 595-608.	0.4	9
76	Noncovalently linked nuclear localization peptides for enhanced calcium phosphate transfection. <i>Molecular Biotechnology</i> , 2006, 33, 1-11.	1.3	9
77	Application of microRNA Targeted 3'UTRs to Repress DHFR Selection Marker Expression for Development of Recombinant Antibody Expressing CHO Cell Pools. <i>Biotechnology Journal</i> , 2018, 13, e1800129.	1.8	8
78	A proline metabolism selection system and its application to the engineering of lipid biosynthesis in Chinese hamster ovary cells. <i>Metabolic Engineering Communications</i> , 2021, 13, e00179.	1.9	8
79	Use of ion-exchange and hydrophobic-interaction chromatography for the rapid purification of lysozyme-estrone glucuronide conjugates. <i>Biomedical Applications</i> , 1994, 662, 3-14.	1.7	7
80	Acid-Polyacrylamide Gel Electrophoresis of Lysozyme-Estrone Glucuronide Conjugates. <i>Bioconjugate Chemistry</i> , 1998, 9, 838-841.	1.8	7
81	Evaluation of protein modification during anti-viral heat bioprocessing by electrospray ionization mass spectrometry. <i>Rapid Communications in Mass Spectrometry</i> , 2001, 15, 351-356.	0.7	7
82	Effects of lysosomal biotherapeutic recombinant protein expression on cell stress and protease and general host cell protein release in Chinese hamster ovary cells. <i>Biotechnology Progress</i> , 2017, 33, 666-676.	1.3	7
83	A Novel Target Synthesis Laboratory for Students. <i>Journal of Chemical Education</i> , 1999, 76, 1558.	1.1	6
84	Acquired resistance to oxaliplatin is not directly associated with increased resistance to DNA damage in SK-N-ASrOXALI4000, a newly established oxaliplatin-resistant sub-line of the neuroblastoma cell line SK-N-AS. <i>PLoS ONE</i> , 2017, 12, e0172140.	1.1	6
85	A comparative analysis of recombinant Fab and full-length antibody production in Chinese hamster ovary cells. <i>Biotechnology and Bioengineering</i> , 2021, 118, 4815-4828.	1.7	6
86	Use of Defined Estrone Glucuronide-Hen Egg White Lysozyme Conjugates as Signal Generators in Homogeneous Enzyme Immunoassays for Urinary Estrone Glucuronide. <i>Journal of Immunoassay and Immunochemistry</i> , 2003, 24, 147-172.	0.5	5
87	Application of ER Stress Biomarkers to Predict Formulated Monoclonal Antibody Stability. <i>Biotechnology Journal</i> , 2019, 14, e1900024.	1.8	5
88	Engineering of Chinese Hamster Ovary Cells With NDPK-A to Enhance DNA Nuclear Delivery Combined With EBNA1 Plasmid Maintenance Gives Improved Exogenous Transient Reporter, mAb and SARS-CoV-2 Spike Protein Expression. <i>Frontiers in Bioengineering and Biotechnology</i> , 2021, 9, 679448.	2.0	5
89	Selection of CHO host and recombinant cell pools by inhibition of the proteasome results in enhanced product yields and cell specific productivity. <i>Journal of Biotechnology</i> , 2021, 337, 35-45.	1.9	5
90	An Estrone-Glucuronide Conjugate. <i>Acta Crystallographica Section C: Crystal Structure Communications</i> , 1997, 53, 1082-1084.	0.4	4

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91	Purification and characterization of lysozyme-pregnanediol glucuronide conjugates: the effect of the hapten and coupling reagent on the substitution level, sites of acylation and the consequences for the development of future immunoassays. <i>Biotechnology and Applied Biochemistry</i> , 2002, 36, 101.	1.4	4
92	Characterization of Therapeutic Proteins by Membrane and In-Gel Tryptic Digestion. , 2005, 308, 375-380.		4
93	Control and regulation of mRNA translation. <i>Biochemical Society Transactions</i> , 2014, 42, 151-154.	1.6	4
94	Biotherapeutic protein formulation variables influence protein integrity and can promote post-translational modifications as shown using chicken egg white lysozyme as a model system. <i>Biotechnology Letters</i> , 2016, 38, 589-596.	1.1	4
95	Engineering of the cellular translational machinery and non-coding RNAs to enhance CHO cell growth, recombinant product yields and quality. <i>Current Opinion in Chemical Engineering</i> , 2018, 22, 199-208.	3.8	4
96	Data for engineering lipid metabolism of Chinese hamster ovary (CHO) cells for enhanced recombinant protein production. <i>Data in Brief</i> , 2020, 29, 105217.	0.5	4
97	Intact-Cell MALDI-ToF Mass Spectrometry for the Authentication of Drug-Adapted Cancer Cell Lines. <i>Cells</i> , 2019, 8, 1194.	1.8	3
98	Lysozyme conjugate immune complex formation and the effects on substrate hydrolysis. <i>Biochemical and Biophysical Research Communications</i> , 2003, 304, 818-824.	1.0	2
99	Investigations into, and development of, a lyophilized and formulated recombinant human factor IX produced from CHO cells. <i>Biotechnology Letters</i> , 2017, 39, 1109-1120.	1.1	2
100	The Molecular Response(s) During Cellular Adaptation to, and Recovery from, Sub-Physiological Temperatures. <i>Cell Engineering</i> , 2007, , 185-212.	0.4	1
101	The effect of formulation variables on protein stability and integrity of a model IgG4 monoclonal antibody and translation to formulation of a model ScFv. <i>Biotechnology Letters</i> , 2018, 40, 33-46.	1.1	1
102	Constitutively active Rheb mutants [T23M] and [E40K] drive increased production and secretion of recombinant protein in Chinese hamster ovary cells. <i>Biotechnology and Bioengineering</i> , 2021, 118, 2422-2434.	1.7	1
103	Proteomic Profiling Of Two-Dimensional Gel Electrophoresis Protein Expression Data. <i>AIP Conference Proceedings</i> , 2008, , .	0.3	0
104	Characterization of Host Cell Proteins (HCPs) in CHO Cell Bioprocesses. <i>Methods in Molecular Biology</i> , 2017, 1603, 243-250.	0.4	0
105	eEF2K activity is required for the phenotypes of the Rpl24 mouse. <i>Journal of Investigative Dermatology</i> , 2022, , .	0.3	0