

Jerry L Hedrick

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

103
papers

6,157
citations

39
h-index

77
g-index

104
ext. papers

6,306
ext. citations

3.4
avg, IF

5.18
L-index

#	Paper	IF	Citations
103	Sialic acid-specific lectin participates in an immune response and ovarian development of the banana shrimp <i>Fenneropenaeus merguensis</i> . <i>Comparative Biochemistry and Physiology - B Biochemistry and Molecular Biology</i> , 2017 , 203, 132-140	2.3	5
102	Structure determination by MALDI-IRMPD mass spectrometry and exoglycosidase digestions of O-linked oligosaccharides from <i>Xenopus borealis</i> egg jelly. <i>Glycobiology</i> , 2011 , 21, 877-94	5.8	15
101	Gas-phase scrambling of disulfide bonds during matrix-assisted laser desorption/ionization mass spectrometry analysis. <i>Journal of the American Society for Mass Spectrometry</i> , 2009 , 20, 1603-16	3.5	9
100	Infrared multiphoton dissociation mass spectrometry for structural elucidation of oligosaccharides. <i>Methods in Molecular Biology</i> , 2009 , 534, 23-35	1.4	12
99	Collision-induced dissociation tandem mass spectrometry for structural elucidation of glycans. <i>Methods in Molecular Biology</i> , 2009 , 534, 133-45	1.4	15
98	Anuran and pig egg zona pellucida glycoproteins in fertilization and early development. <i>International Journal of Developmental Biology</i> , 2008 , 52, 683-701	1.9	47
97	Crystallization and X-ray analysis of the salmon-egg lectin SEL24K. <i>Acta Crystallographica Section F: Structural Biology Communications</i> , 2007 , 63, 396-8		6
96	The disulfide bond pattern of salmon egg lectin 24K from the Chinook salmon <i>Oncorhynchus tshawytscha</i> . <i>Archives of Biochemistry and Biophysics</i> , 2007 , 463, 1-11	4.1	13
95	The <i>Xenopus laevis</i> cortical granule lectin: cDNA cloning, developmental expression, and identification of the eglectin family of lectins. <i>Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology</i> , 2004 , 137, 115-29	2.6	16
94	Profiling the morphological distribution of O-linked oligosaccharides. <i>Analytical Biochemistry</i> , 2004 , 334, 20-35	3.1	26
93	Strategy for profiling and structure elucidation of mucin-type oligosaccharides by mass spectrometry. <i>Analytical Chemistry</i> , 2004 , 76, 5990-6001	7.8	48
92	Method for the comparative glycomic analyses of O-linked, mucin-type oligosaccharides. <i>Analytical Chemistry</i> , 2004 , 76, 5186-97	7.8	37
91	Proteolysis of <i>Xenopus laevis</i> egg envelope ZPA triggers envelope hardening. <i>Biochemical and Biophysical Research Communications</i> , 2004 , 324, 648-54	3.4	35
90	Determination of N-glycosylation sites and site heterogeneity in glycoproteins. <i>Analytical Chemistry</i> , 2003 , 75, 5628-37	7.8	223
89	Identification of the ZPC oligosaccharide ligand involved in sperm binding and the glycan structures of <i>Xenopus laevis</i> vitelline envelope glycoproteins. <i>Biology of Reproduction</i> , 2003 , 69, 1822-30	3.9	31
88	Identification and characterization of a unique <i>Xenopus laevis</i> egg envelope component, ZPD. <i>Development Growth and Differentiation</i> , 2002 , 44, 205-12	3	37
87	Vitelline envelope of <i>Bufo arenarum</i> : biochemical and biological characterization. <i>Biology of Reproduction</i> , 2002 , 66, 1203-9	3.9	22

86	A hatching enzyme substrate in the <i>Xenopus laevis</i> egg envelope is a high molecular weight ZPA homolog. <i>Development Growth and Differentiation</i> , 2001 , 43, 305-13	3	34
85	Targeted use of exoglycosidase digestion for the structural elucidation of neutral O-linked oligosaccharides. <i>Journal of the American Society for Mass Spectrometry</i> , 2001 , 12, 877-84	3.5	26
84	Profiling with structural elucidation of the neutral and anionic O-linked oligosaccharides in the egg jelly coat of <i>Xenopus laevis</i> by Fourier transform mass spectrometry. <i>Glycoconjugate Journal</i> , 2001 , 18, 309-20	3	18
83	Identification and structural elucidation of lectin-binding oligosaccharides by bioaffinity matrix-assisted laser desorption/ionization Fourier transform mass spectrometry. <i>Analytical Chemistry</i> , 2001 , 73, 3556-61	7.8	12
82	In situ pH measurements of the Syrian hamster uterus during early pregnancy to determine the role of pH in zona pellucida loss in vivo. <i>Reproduction, Fertility and Development</i> , 2000 , 12, 105-11	1.8	2
81	Independent and hetero-oligomeric-dependent sperm binding to egg envelope glycoprotein ZPC in <i>Xenopus laevis</i> . <i>Biology of Reproduction</i> , 2000 , 62, 766-74	3.9	52
80	Fertilisation in fish: a cortical alveolar lectin and its potential role in the block to polyspermy. <i>Zygote</i> , 1999 , 8, S66-S66	1.6	1
79	Oviductin, the <i>Xenopus laevis</i> oviductal protease that processes egg envelope glycoprotein gp43, increases sperm binding to envelopes, and is translated as part of an unusual mosaic protein composed of two protease and several CUB domains. <i>Biology of Reproduction</i> , 1999 , 60, 989-95	3.9	46
78	Dichromatic staining of electrophoretically separated extracellular matrix macromolecules. <i>Analytical Biochemistry</i> , 1999 , 271, 91-3	3.1	6
77	Catalog-library approach for the rapid and sensitive structural elucidation of oligosaccharides. <i>Analytical Chemistry</i> , 1999 , 71, 3747-54	7.8	80
76	Distribution of lectin binding sites in <i>Xenopus laevis</i> egg jelly. <i>Developmental Biology</i> , 1999 , 210, 428-39	3.1	9
75	Occurrence of reducing terminal N-acetylglucosamine 3-sulfate and fucosylated outer chains in acidic N-glycans of porcine zona pellucida glycoproteins. <i>Glycoconjugate Journal</i> , 1998 , 15, 447-56	3	25
74	Treatment of <i>Xenopus laevis</i> coelomic eggs with trypsin mimics pars recta oviductal transit by selectively hydrolyzing envelope glycoprotein gp43, increasing sperm binding to the envelope, and rendering eggs fertilizable. <i>The Journal of Experimental Zoology</i> , 1998 , 281, 132-138		13
73	cDNA cloning and sequence analysis of the <i>Xenopus laevis</i> egg envelope glycoprotein gp43. <i>Development Growth and Differentiation</i> , 1997 , 39, 457-67	3	53
72	Characterization of neutral oligosaccharide-alditols from <i>Xenopus laevis</i> egg jelly coats by matrix-assisted laser desorption Fourier transform mass spectrometry. <i>Analytical Biochemistry</i> , 1997 , 250, 18-28	3.1	43
71	The fertilization layer mediated block to polyspermy in <i>Xenopus laevis</i> : isolation of the cortical granule lectin ligand. <i>Archives of Biochemistry and Biophysics</i> , 1996 , 333, 326-32	4.1	43
70	Localization of cortical granule lectin ligand in <i>Xenopus laevis</i> egg jelly. <i>Development Growth and Differentiation</i> , 1996 , 38, 647-652	3	3
69	Isolation and characterization of ovochymase, a chymotrypsin-like protease released during <i>Xenopus laevis</i> egg activation. <i>Developmental Biology</i> , 1995 , 167, 513-6	3.1	29

68	Oviductal Localization of the Cortical Granule Lectin Ligand Involved in the Block to Polyspermy of <i>Xenopus laevis</i> . <i>Development Growth and Differentiation</i> , 1994 , 36, 615-620	3	4
67	Effects of high-energy shock waves on rapidly proliferating cells: African clawed toad (<i>Xenopus laevis</i>) zygote model. <i>Journal of Endourology</i> , 1993 , 7, 371-3	2.7	1
66	O-linked neutral sugar chains of porcine zona pellucida glycoproteins. <i>FEBS Journal</i> , 1993 , 214, 763-9		34
65	Oviductin. Purification and properties of the oviductal protease that processes the molecular weight 43,000 glycoprotein of the <i>Xenopus laevis</i> egg envelope. <i>Biochemistry</i> , 1992 , 31, 4466-72	3.2	43
64	Localization of a chymotrypsin-like protease to the perivitelline space of <i>Xenopus laevis</i> eggs. <i>Developmental Biology</i> , 1992 , 154, 433-6	3.1	18
63	Immuno-electrophoretic Identification of Jelly Coat Ligands Bound by the Cortical Granule Lectin from <i>Xenopus laevis</i> Eggs. <i>Development Growth and Differentiation</i> , 1992 , 34, 91-98	3	2
62	Isolation of extracellular matrix structures from <i>Xenopus laevis</i> oocytes, eggs, and embryos. <i>Methods in Cell Biology</i> , 1991 , 36, 231-47	1.8	30
61	Structure and function of the extracellular matrix of anuran eggs. <i>Journal of Electron Microscopy Technique</i> , 1991 , 17, 319-35		109
60	Neutral oligosaccharide structures linked to asparagines of porcine zona pellucida glycoproteins. <i>Biochemistry</i> , 1991 , 30, 2078-87	3.2	66
59	Physicochemical characterization of progressive changes in the <i>Xenopus laevis</i> egg envelope following oviductal transport and fertilization. <i>Biochemistry</i> , 1990 , 29, 609-15	3.2	38
58	Enzymatic and envelope-converting activities of pars recta oviductal fluid from <i>Xenopus laevis</i> . <i>Developmental Biology</i> , 1990 , 138, 169-76	3.1	27
57	Zona pellucida-induced acrosome reaction in boar sperm. <i>Biology of Reproduction</i> , 1989 , 40, 525-30	3.9	81
56	The Synthesis and Localization of Envelope Glycoproteins in Oocytes of <i>Xenopus laevis</i> using Immunocytochemical Methods. <i>Development Growth and Differentiation</i> , 1989 , 31, 85-94	3	38
55	Proteases released from <i>Xenopus laevis</i> eggs at activation and their role in envelope conversion. <i>Developmental Biology</i> , 1989 , 135, 202-11	3.1	58
54	Structure and Function Properties of the Sperm Enzyme Acrosin. <i>ACS Symposium Series</i> , 1989 , 215-229	0.4	6
53	<i>Bufo japonicus japonicus</i> and <i>Xenopus laevis laevis</i> egg jellies contain structurally related antigens and cortical granule lectin ligands. <i>The Journal of Experimental Zoology</i> , 1988 , 245, 78-85		13
52	Identification of <i>Xenopus laevis</i> sperm and egg envelope binding components on nitrocellulose membranes. <i>The Journal of Experimental Zoology</i> , 1988 , 245, 286-93		19
51	A micromethod for the estimation of oligosaccharides containing glycosidically linked sialic acid or hexoses, or both, in glycoproteins. <i>Carbohydrate Research</i> , 1988 , 176, 195-203	2.9	5

50	Egg envelope conversion following fertilization in <i>Bufo japonicus</i> . <i>Developmental Biology</i> , 1988 , 130, 37-44	3.1	20
49	The inhibition of boar acrosin amidase activity by sulfated polysaccharides. <i>Biological Chemistry Hoppe-Seyler</i> , 1988 , 369, 727-32		14
48	Analysis and Content of ATP in Spermatozoa of Honeybees. <i>Journal of Apicultural Research</i> , 1987 , 26, 150-155	2	
47	On the macromolecular composition of the zona pellucida from porcine oocytes. <i>Developmental Biology</i> , 1987 , 121, 478-88	3.1	97
46	Differences in the macromolecular composition of the zona pellucida isolated from pig oocytes, eggs, and zygotes. <i>The Journal of Experimental Zoology</i> , 1987 , 241, 257-62		55
45	Comparative studies of <i>Bufo</i> and <i>Xenopus</i> vitelline coat molecular transformations induced by homologous and heterologous oviducal pars recta proteases. <i>The Journal of Experimental Zoology</i> , 1987 , 244, 145-150		14
44	The coelomic envelope to vitelline envelope conversion in eggs of <i>Xenopus laevis</i> . <i>Journal of Cellular Biochemistry</i> , 1986 , 30, 341-50	4.7	47
43	Subunit structure of a cortical granule lectin involved in the block to polyspermy in <i>Xenopus laevis</i> eggs. <i>FEBS Letters</i> , 1986 , 206, 353-7	3.8	21
42	The vitelline envelope to fertilization envelope conversion in eggs of <i>Xenopus laevis</i> . <i>Developmental Biology</i> , 1986 , 116, 1-7	3.1	59
41	Isolation and characterization of a lectin from the cortical granules of <i>Xenopus laevis</i> eggs. <i>Biochemistry</i> , 1986 , 25, 6013-20	3.2	72
40	N-acetyl- β -D-glucosaminidase activity in the cortical granules of <i>Xenopus laevis</i> eggs. <i>Gamete Research</i> , 1985 , 12, 305-312		28
39	Limited and specific proteolysis of the zona pellucida by acrosin. <i>The Journal of Experimental Zoology</i> , 1985 , 233, 479-83		49
38	Purification and characterization of an N-acetyl-beta-D-glucosaminidase from cortical granules of <i>Xenopus laevis</i> eggs. <i>The Journal of Experimental Zoology</i> , 1985 , 235, 335-40		42
37	Proteolysis of the zona pellucida by acrosin: the nature of the hydrolysis products. <i>The Journal of Experimental Zoology</i> , 1985 , 236, 239-43		14
36	Radioiodination studies of the envelopes from <i>Xenopus laevis</i> eggs. <i>Journal of Cellular Biochemistry</i> , 1983 , 22, 235-44	4.7	18
35	A gel eluter for recovery of proteins separated by polyacrylamide gel electrophoresis. <i>Analytical Biochemistry</i> , 1982 , 126, 116-21	3.1	38
34	Isolation and characterization of the hatching enzyme from the amphibian, <i>Xenopus laevis</i> . <i>Archives of Biochemistry and Biophysics</i> , 1981 , 206, 424-31	4.1	37
33	The hatching enzyme from <i>Xenopus laevis</i> : limited proteolysis of the fertilization envelope. <i>Journal of Supramolecular Structure and Cellular Biochemistry</i> , 1981 , 15, 111-7		19

32	Isolation, physicochemical properties, and macromolecular composition of zona pellucida from porcine oocytes. <i>Biochemistry</i> , 1980 , 19, 356-65	3.2	223
31	The use of radioiodinated protein substrates for the assay of trypsin and the hatching enzyme from the amphibian <i>Xenopus laevis</i> . <i>Analytical Biochemistry</i> , 1979 , 100, 352-6	3.1	7
30	An immunocytochemical localization of the cortical granule lectin in fertilized and unfertilized eggs of <i>xenopus laevis</i> . <i>Gamete Research</i> , 1978 , 1, 13-18		66
29	Alteration of structure and penetrability of the vitelline envelope after passage of eggs from coelom to oviduct in <i>Xenopus laevis</i> . <i>The Journal of Experimental Zoology</i> , 1977 , 201, 73-83		65
28	Evidence that the fertilization envelope blocks sperm entry in eggs of <i>Xenopus laevis</i> : interaction of sperm with isolated envelopes. <i>Developmental Biology</i> , 1976 , 54, 52-60	3.1	102
27	Isolation, physicochemical properties, and the macromolecular composition of the vitelline and fertilization envelopes from <i>Xenopus laevis</i> eggs. <i>Biochemistry</i> , 1976 , 15, 3671-8	3.2	103
26	The macromolecular composition of <i>Xenopus laevis</i> egg jelly coat. <i>Biochemistry</i> , 1975 , 14, 3101-7	3.2	66
25	Formation and structure of the fertilization envelope in <i>Xenopus laevis</i> . <i>Developmental Biology</i> , 1974 , 36, 44-61	3.1	197
24	Hatching in the toad <i>Xenopus laevis</i> : morphological events and evidence for a hatching enzyme. <i>Developmental Biology</i> , 1974 , 38, 1-13	3.1	70
23	Effect of prostaglandins on the velocity of the reaction between human renin and homologous renin substrate. <i>Journal of Clinical Endocrinology and Metabolism</i> , 1974 , 39, 530-5	5.6	9
22	The incorporation and fate of [35-S]-sulfate in the jelly coat of <i>Xenopus laevis</i> eggs. <i>Biology of Reproduction</i> , 1974 , 11, 534-42	3.9	20
21	Active-site studies on rabbit liver nicotinamide deamidase. <i>Biochemistry</i> , 1972 , 11, 1508-17	3.2	8
20	The Enzymatic Characteristics and the Control of Glycogen Phosphorylase during Early Amphibian Development. <i>Journal of Biological Chemistry</i> , 1972 , 247, 6603-6609	5.4	11
19	A molecular approach to fertilization. I. Disulfide bonds in <i>Xenopus laevis</i> jelly coat and a molecular hypothesis for fertilization. <i>Developmental Biology</i> , 1971 , 25, 337-47	3.1	53
18	A molecular approach to fertilization. II. Viability and artificial fertilization of <i>Xenopus laevis</i> gemetes. <i>Developmental Biology</i> , 1971 , 25, 348-59	3.1	156
17	A molecular approach to fertilization. 3. Development of a bioassay for sperm capacitation. <i>Developmental Biology</i> , 1971 , 25, 360-76	3.1	54
16	Gel filtration, aggregation, and the enzymatic activity of glycogen phosphorylase. <i>Biochemistry</i> , 1970 , 9, 2048-58	3.2	33
15	Reconstitution of apophosphorylase with pyridoxal 5-phosphate analogs. <i>Biochemistry</i> , 1969 , 8, 5189-96	3.2	71

14	Conformation changes and the mechanism of resolution of glycogen phosphorylase b. <i>Biochemistry</i> , 1969 , 8, 2422-9	3.2	60
13	Stereospecific requirements for carbonyl reagents in the resolution and reconstitution of phosphorylase b. <i>Biochemistry</i> , 1969 , 8, 2429-36	3.2	35
12	Characterization of the aggregated states of glycogen phosphorylases by gel electrophoresis. <i>Biochemistry</i> , 1969 , 8, 4012-9	3.2	27
11	Size and charge isomer separation and estimation of molecular weights of proteins by disc gel electrophoresis. <i>Archives of Biochemistry and Biophysics</i> , 1968 , 126, 155-64	4.1	1836
10	[78] Preparation of reduced phosphorylase by use of sodium borohydride. <i>Methods in Enzymology</i> , 1967 , 11, 671-675	1.7	29
9	[79] Preparation of apophosphorylase b by use of deforming agents. <i>Methods in Enzymology</i> , 1967 , 11, 675-677	1.7	7
8	Reevaluation of the molecular weights of glycogen phosphorylases a and b using Sephadex gel filtration. <i>Biochemistry</i> , 1967 , 6, 3489-97	3.2	59
7	An optical rotary dispersion study of glycogen phosphorylase. <i>Archives of Biochemistry and Biophysics</i> , 1966 , 114, 216-22	4.1	16
6	On the role of pyridoxal 5-phosphate in phosphorylase. 3. Physicochemical properties and reconstitution of apophosphorylase b. <i>Biochemistry</i> , 1966 , 5, 2117-25	3.2	75
5	On the role of pyridoxal 5-phosphate in phosphorylase. II. Resolution of rabbit muscle phosphorylase b. <i>Biochemistry</i> , 1966 , 5, 2108-16	3.2	151
4	On the role of pyridoxal 5-phosphate in phosphorylase. I. Absence of classical vitamin B ₆ -dependent enzymatic activities in muscle glycogen phosphorylase. <i>Biochemistry</i> , 1965 , 4, 1337-43	3.2	163
3	THE NONOXIDATIVE DECARBOXYLATION OF HYDROXYPYRUVATE IN MAMMALIAN SYSTEMS. <i>Archives of Biochemistry and Biophysics</i> , 1964 , 105, 261-9	4.1	19
2	The Metabolism of Hydroxypyruvate. <i>Journal of Biological Chemistry</i> , 1961 , 236, 1867-1871	5.4	29
1	The Metabolism of Hydroxypyruvate. <i>Journal of Biological Chemistry</i> , 1961 , 236, 1872-1875	5.4	8