

# Jerry L Hedrick

## List of Publications by Citations

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103  
papers

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39  
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77  
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104  
ext. papers

6,306  
ext. citations

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L-index

#	Paper	IF	Citations
103	Size and charge isomer separation and estimation of molecular weights of proteins by disc gel electrophoresis. <i>Archives of Biochemistry and Biophysics</i> , <b>1968</b> , 126, 155-64	4.1	1836
102	Determination of N-glycosylation sites and site heterogeneity in glycoproteins. <i>Analytical Chemistry</i> , <b>2003</b> , 75, 5628-37	7.8	223
101	Isolation, physicochemical properties, and macromolecular composition of zona pellucida from porcine oocytes. <i>Biochemistry</i> , <b>1980</b> , 19, 356-65	3.2	223
100	Formation and structure of the fertilization envelope in <i>Xenopus laevis</i> . <i>Developmental Biology</i> , <b>1974</b> , 36, 44-61	3.1	197
99	On the role of pyridoxal 5-phosphate in phosphorylase. I. Absence of classical vitamin B6-dependent enzymatic activities in muscle glycogen phosphorylase. <i>Biochemistry</i> , <b>1965</b> , 4, 1337-43	3.2	163
98	A molecular approach to fertilization. II. Viability and artificial fertilization of <i>Xenopus laevis</i> gametes. <i>Developmental Biology</i> , <b>1971</b> , 25, 348-59	3.1	156
97	On the role of pyridoxal 5-phosphate in phosphorylase. II. Resolution of rabbit muscle phosphorylase b. <i>Biochemistry</i> , <b>1966</b> , 5, 2108-16	3.2	151
96	Structure and function of the extracellular matrix of anuran eggs. <i>Journal of Electron Microscopy Technique</i> , <b>1991</b> , 17, 319-35		109
95	Isolation, physicochemical properties, and the macromolecular composition of the vitelline and fertilization envelopes from <i>Xenopus laevis</i> eggs. <i>Biochemistry</i> , <b>1976</b> , 15, 3671-8	3.2	103
94	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> , <b>1976</b> , 54, 52-60	3.1	102
93	On the macromolecular composition of the zona pellucida from porcine oocytes. <i>Developmental Biology</i> , <b>1987</b> , 121, 478-88	3.1	97
92	Zona pellucida-induced acrosome reaction in boar sperm. <i>Biology of Reproduction</i> , <b>1989</b> , 40, 525-30	3.9	81
91	Catalog-library approach for the rapid and sensitive structural elucidation of oligosaccharides. <i>Analytical Chemistry</i> , <b>1999</b> , 71, 3747-54	7.8	80
90	On the role of pyridoxal 5-phosphate in phosphorylase. 3. Physicochemical properties and reconstitution of apophosphorylase b. <i>Biochemistry</i> , <b>1966</b> , 5, 2117-25	3.2	75
89	Isolation and characterization of a lectin from the cortical granules of <i>Xenopus laevis</i> eggs. <i>Biochemistry</i> , <b>1986</b> , 25, 6013-20	3.2	72
88	Reconstitution of apophosphorylase with pyridoxal 5-phosphate analogs. <i>Biochemistry</i> , <b>1969</b> , 8, 5189-96	3.2	71
87	Hatching in the toad <i>Xenopus laevis</i> : morphological events and evidence for a hatching enzyme. <i>Developmental Biology</i> , <b>1974</b> , 38, 1-13	3.1	70

86	Neutral oligosaccharide structures linked to asparagines of porcine zona pellucida glycoproteins. <i>Biochemistry</i> , <b>1991</b> , 30, 2078-87	3.2	66
85	The macromolecular composition of <i>Xenopus laevis</i> egg jelly coat. <i>Biochemistry</i> , <b>1975</b> , 14, 3101-7	3.2	66
84	An immunocytochemical localization of the cortical granule lectin in fertilized and unfertilized eggs of <i>xenopus laevis</i> . <i>Gamete Research</i> , <b>1978</b> , 1, 13-18		66
83	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> , <b>1977</b> , 201, 73-83		65
82	Conformation changes and the mechanism of resolution of glycogen phosphorylase b. <i>Biochemistry</i> , <b>1969</b> , 8, 2422-9	3.2	60
81	The vitelline envelope to fertilization envelope conversion in eggs of <i>Xenopus laevis</i> . <i>Developmental Biology</i> , <b>1986</b> , 116, 1-7	3.1	59
80	Reevaluation of the molecular weights of glycogen phosphorylases a and b using Sephadex gel filtration. <i>Biochemistry</i> , <b>1967</b> , 6, 3489-97	3.2	59
79	Proteases released from <i>Xenopus laevis</i> eggs at activation and their role in envelope conversion. <i>Developmental Biology</i> , <b>1989</b> , 135, 202-11	3.1	58
78	Differences in the macromolecular composition of the zona pellucida isolated from pig oocytes, eggs, and zygotes. <i>The Journal of Experimental Zoology</i> , <b>1987</b> , 241, 257-62		55
77	A molecular approach to fertilization. 3. Development of a bioassay for sperm capacitation. <i>Developmental Biology</i> , <b>1971</b> , 25, 360-76	3.1	54
76	cDNA cloning and sequence analysis of the <i>Xenopus laevis</i> egg envelope glycoprotein gp43. <i>Development Growth and Differentiation</i> , <b>1997</b> , 39, 457-67	3	53
75	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> , <b>1971</b> , 25, 337-47	3.1	53
74	Independent and hetero-oligomeric-dependent sperm binding to egg envelope glycoprotein ZPC in <i>Xenopus laevis</i> . <i>Biology of Reproduction</i> , <b>2000</b> , 62, 766-74	3.9	52
73	Limited and specific proteolysis of the zona pellucida by acrosin. <i>The Journal of Experimental Zoology</i> , <b>1985</b> , 233, 479-83		49
72	Strategy for profiling and structure elucidation of mucin-type oligosaccharides by mass spectrometry. <i>Analytical Chemistry</i> , <b>2004</b> , 76, 5990-6001	7.8	48
71	Anuran and pig egg zona pellucida glycoproteins in fertilization and early development. <i>International Journal of Developmental Biology</i> , <b>2008</b> , 52, 683-701	1.9	47
70	The coelomic envelope to vitelline envelope conversion in eggs of <i>Xenopus laevis</i> . <i>Journal of Cellular Biochemistry</i> , <b>1986</b> , 30, 341-50	4.7	47
69	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> , <b>1999</b> , 60, 989-95	3.9	46

68	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> , <b>1997</b> , 250, 18-28	3.1	43
67	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> , <b>1996</b> , 333, 326-32	4.1	43
66	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> , <b>1992</b> , 31, 4466-72	3.2	43
65	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> , <b>1985</b> , 235, 335-40		42
64	The Synthesis and Localization of Envelope Glycoproteins in Oocytes of <i>Xenopus laevis</i> using Immunocytochemical Methods. <i>Development Growth and Differentiation</i> , <b>1989</b> , 31, 85-94	3	38
63	Physicochemical characterization of progressive changes in the <i>Xenopus laevis</i> egg envelope following oviductal transport and fertilization. <i>Biochemistry</i> , <b>1990</b> , 29, 609-15	3.2	38
62	A gel eluter for recovery of proteins separated by polyacrylamide gel electrophoresis. <i>Analytical Biochemistry</i> , <b>1982</b> , 126, 116-21	3.1	38
61	Method for the comparative glycomic analyses of O-linked, mucin-type oligosaccharides. <i>Analytical Chemistry</i> , <b>2004</b> , 76, 5186-97	7.8	37
60	Identification and characterization of a unique <i>Xenopus laevis</i> egg envelope component, ZPD. <i>Development Growth and Differentiation</i> , <b>2002</b> , 44, 205-12	3	37
59	Isolation and characterization of the hatching enzyme from the amphibian, <i>Xenopus laevis</i> . <i>Archives of Biochemistry and Biophysics</i> , <b>1981</b> , 206, 424-31	4.1	37
58	Proteolysis of <i>Xenopus laevis</i> egg envelope ZPA triggers envelope hardening. <i>Biochemical and Biophysical Research Communications</i> , <b>2004</b> , 324, 648-54	3.4	35
57	Stereospecific requirements for carbonyl reagents in the resolution and reconstitution of phosphorylase b. <i>Biochemistry</i> , <b>1969</b> , 8, 2429-36	3.2	35
56	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> , <b>2001</b> , 43, 305-13	3	34
55	O-linked neutral sugar chains of porcine zona pellucida glycoproteins. <i>FEBS Journal</i> , <b>1993</b> , 214, 763-9		34
54	Gel filtration, aggregation, and the enzymatic activity of glycogen phosphorylase. <i>Biochemistry</i> , <b>1970</b> , 9, 2048-58	3.2	33
53	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> , <b>2003</b> , 69, 1822-30	3.9	31
52	Isolation of extracellular matrix structures from <i>Xenopus laevis</i> oocytes, eggs, and embryos. <i>Methods in Cell Biology</i> , <b>1991</b> , 36, 231-47	1.8	30
51	Isolation and characterization of ovochymase, a chymotrypsin-like protease released during <i>Xenopus laevis</i> egg activation. <i>Developmental Biology</i> , <b>1995</b> , 167, 513-6	3.1	29

50	[78] Preparation of reduced phosphorylase by use of sodium borohydride. <i>Methods in Enzymology</i> , <b>1967</b> , 11, 671-675	1.7	29
49	The Metabolism of Hydroxypyruvate. <i>Journal of Biological Chemistry</i> , <b>1961</b> , 236, 1867-1871	5.4	29
48	N-acetyl- $\beta$ -D-glucosaminidase activity in the cortical granules of <i>Xenopus laevis</i> eggs. <i>Gamete Research</i> , <b>1985</b> , 12, 305-312		28
47	Enzymatic and envelope-converting activities of pars recta oviductal fluid from <i>Xenopus laevis</i> . <i>Developmental Biology</i> , <b>1990</b> , 138, 169-76	3.1	27
46	Characterization of the aggregated states of glycogen phosphorylases by gel electrophoresis. <i>Biochemistry</i> , <b>1969</b> , 8, 4012-9	3.2	27
45	Profiling the morphological distribution of O-linked oligosaccharides. <i>Analytical Biochemistry</i> , <b>2004</b> , 334, 20-35	3.1	26
44	Targeted use of exoglycosidase digestion for the structural elucidation of neutral O-linked oligosaccharides. <i>Journal of the American Society for Mass Spectrometry</i> , <b>2001</b> , 12, 877-84	3.5	26
43	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> , <b>1998</b> , 15, 447-56	3	25
42	Vitelline envelope of <i>Bufo arenarum</i> : biochemical and biological characterization. <i>Biology of Reproduction</i> , <b>2002</b> , 66, 1203-9	3.9	22
41	Subunit structure of a cortical granule lectin involved in the block to polyspermy in <i>Xenopus laevis</i> eggs. <i>FEBS Letters</i> , <b>1986</b> , 206, 353-7	3.8	21
40	Egg envelope conversion following fertilization in <i>Bufo japonicus</i> . <i>Developmental Biology</i> , <b>1988</b> , 130, 37-44	3.1	20
39	The incorporation and fate of [35-S]-sulfate in the jelly coat of <i>Xenopus laevis</i> eggs. <i>Biology of Reproduction</i> , <b>1974</b> , 11, 534-42	3.9	20
38	Identification of <i>Xenopus laevis</i> sperm and egg envelope binding components on nitrocellulose membranes. <i>The Journal of Experimental Zoology</i> , <b>1988</b> , 245, 286-93		19
37	The hatching enzyme from <i>Xenopus laevis</i> : limited proteolysis of the fertilization envelope. <i>Journal of Supramolecular Structure and Cellular Biochemistry</i> , <b>1981</b> , 15, 111-7		19
36	THE NONOXIDATIVE DECARBOXYLATION OF HYDROXYPYRUVATE IN MAMMALIAN SYSTEMS. <i>Archives of Biochemistry and Biophysics</i> , <b>1964</b> , 105, 261-9	4.1	19
35	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> , <b>2001</b> , 18, 309-20	3	18
34	Localization of a chymotrypsin-like protease to the perivitelline space of <i>Xenopus laevis</i> eggs. <i>Developmental Biology</i> , <b>1992</b> , 154, 433-6	3.1	18
33	Radioiodination studies of the envelopes from <i>Xenopus laevis</i> eggs. <i>Journal of Cellular Biochemistry</i> , <b>1983</b> , 22, 235-44	4.7	18

32	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 &amp; Integrative Physiology</i> , <b>2004</b> , 137, 115-29	2.6	16
31	An optical rotary dispersion study of glycogen phosphorylase. <i>Archives of Biochemistry and Biophysics</i> , <b>1966</b> , 114, 216-22	4.1	16
30	Structure determination by MALDI-IRMPD mass spectrometry and exoglycosidase digestions of O-linked oligosaccharides from <i>Xenopus borealis</i> egg jelly. <i>Glycobiology</i> , <b>2011</b> , 21, 877-94	5.8	15
29	Collision-induced dissociation tandem mass spectrometry for structural elucidation of glycans. <i>Methods in Molecular Biology</i> , <b>2009</b> , 534, 133-45	1.4	15
28	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> , <b>1987</b> , 244, 145-150		14
27	The inhibition of boar acrosin amidase activity by sulfated polysaccharides. <i>Biological Chemistry Hoppe-Seyler</i> , <b>1988</b> , 369, 727-32		14
26	Proteolysis of the zona pellucida by acrosin: the nature of the hydrolysis products. <i>The Journal of Experimental Zoology</i> , <b>1985</b> , 236, 239-43		14
25	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> , <b>1998</b> , 281, 132-138		13
24	The disulfide bond pattern of salmon egg lectin 24K from the Chinook salmon <i>Oncorhynchus tshawytscha</i> . <i>Archives of Biochemistry and Biophysics</i> , <b>2007</b> , 463, 1-11	4.1	13
23	<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> , <b>1988</b> , 245, 78-85		13
22	Infrared multiphoton dissociation mass spectrometry for structural elucidation of oligosaccharides. <i>Methods in Molecular Biology</i> , <b>2009</b> , 534, 23-35	1.4	12
21	Identification and structural elucidation of lectin-binding oligosaccharides by bioaffinity matrix-assisted laser desorption/ionization Fourier transform mass spectrometry. <i>Analytical Chemistry</i> , <b>2001</b> , 73, 3556-61	7.8	12
20	The Enzymatic Characteristics and the Control of Glycogen Phosphorylase during Early Amphibian Development. <i>Journal of Biological Chemistry</i> , <b>1972</b> , 247, 6603-6609	5.4	11
19	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> , <b>2009</b> , 20, 1603-16	3.5	9
18	Distribution of lectin binding sites in <i>Xenopus laevis</i> egg jelly. <i>Developmental Biology</i> , <b>1999</b> , 210, 428-39	3.1	9
17	Effect of prostaglandins on the velocity of the reaction between human renin and homologous renin substrate. <i>Journal of Clinical Endocrinology and Metabolism</i> , <b>1974</b> , 39, 530-5	5.6	9
16	Active-site studies on rabbit liver nicotinamide deamidase. <i>Biochemistry</i> , <b>1972</b> , 11, 1508-17	3.2	8
15	The Metabolism of Hydroxypyruvate. <i>Journal of Biological Chemistry</i> , <b>1961</b> , 236, 1872-1875	5.4	8

14	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> , <b>1979</b> , 100, 352-6	3.1	7
13	[79] Preparation of apophosphorylase b by use of deforming agents. <i>Methods in Enzymology</i> , <b>1967</b> , 11, 675-677	1.7	7
12	Crystallization and X-ray analysis of the salmon-egg lectin SEL24K. <i>Acta Crystallographica Section F: Structural Biology Communications</i> , <b>2007</b> , 63, 396-8		6
11	Dichromatic staining of electrophoretically separated extracellular matrix macromolecules. <i>Analytical Biochemistry</i> , <b>1999</b> , 271, 91-3	3.1	6
10	Structure-Function Properties of the Sperm Enzyme Acrosin. <i>ACS Symposium Series</i> , <b>1989</b> , 215-229	0.4	6
9	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> , <b>2017</b> , 203, 132-140	2.3	5
8	A micromethod for the estimation of oligosaccharides containing glycosidically linked sialic acid or hexoses, or both, in glycoproteins. <i>Carbohydrate Research</i> , <b>1988</b> , 176, 195-203	2.9	5
7	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> , <b>1994</b> , 36, 615-620	3	4
6	Localization of cortical granule lectin ligand in <i>Xenopus laevis</i> egg jelly. <i>Development Growth and Differentiation</i> , <b>1996</b> , 38, 647-652	3	3
5	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> , <b>2000</b> , 12, 105-11	1.8	2
4	Immunoelectrophoretic Identification of Jelly Coat Ligands Bound by the Cortical Granule Lectin from <i>Xenopus laevis</i> Eggs. <i>Development Growth and Differentiation</i> , <b>1992</b> , 34, 91-98	3	2
3	Fertilisation in fish: a cortical alveolar lectin and its potential role in the block to polyspermy. <i>Zygote</i> , <b>1999</b> , 8, S66-S66	1.6	1
2	Effects of high-energy shock waves on rapidly proliferating cells: African clawed toad ( <i>Xenopus laevis</i> ) zygote model. <i>Journal of Endourology</i> , <b>1993</b> , 7, 371-3	2.7	1
1	Analysis and Content of ATP in Spermatozoa of Honeybees. <i>Journal of Apicultural Research</i> , <b>1987</b> , 26, 150-155	2	