Essays of an Information Scientist, Vol:3, p.76-83, 1977-78 Current Contents, #13, p.5-12, March 28, 1977

Highly Cited Articles. 37. Biomedical Articles Published in the 1940s.

Number 13, March 28, 1977

In recent weeks we have listed still highly-cited articles of the 1940s from the fields of biochemistry and physics. Here we conclude our survey of the 1940s with a list of biomedical articles. Each was cited at least 150 times in the period 1961-1975. The average is about 325 times. Most were cited more than that, and are still being cited heavily after three decades. On the average each article was cited 23 times in both 1974 and 1975. This is more than ten times the citation rate for the average article cited in one year of the *Science Citation Index®* . Indeed, it is ten times the expected rate of citation for the five year *Science Citation Index* cumulative!

Figure 1 shows the 54 journals in which the articles appeared. Seven journals account for about a third: *American Journal of Physiology* (6); *Journal of Biological Chemistry* and *Proceedings of the Society for Experimental Biology and Medicine* (both 5); *Anatomical Record, Journal of Clinical Investigation, Journal of General Physiology,* and *Science* (4 each). It should be noticed that most of the journals listed in Figure 1 have impacts well above average.

Ten of the 104 articles were authored or coauthored by Nobelists: Cournand and Richards, who shared the 1956 prize for medicine (articles 9 and 39); Beadle and Tatum, who shared the prize for medicine in 1958 (article 12); A.V. Hill, 1922 laureate for medicine (article 43); A.L. Hodgkin, laureate for medicine in 1963 (articles 44 and 45); B. Katz, laureate for medicine in 1970 (article 44); G.E. Palade, laureate for medicine in 1974 (article 46); Luria and Delbruck, who shared the prize for medicine in 1969 (article 63); Sir Peter Medawar, who won the medical prize in 1960 (article 64); and Linus Pauling, laureate in chemistry in 1954 (article 73). Pauling is on the list with a medical-research paper concerning the etiology of sickle cell anemia.

The articles are listed alphabetically by first author in Figure 2. The list shows total citations for the period 1961-1975, average citations per year, and citation counts for the years 1974 and 1975. It is striking to find that about 60 of these 104 articles have citation counts for 1974 and/or 1975 that matched or exceeded their yearly

Figure 1. Journals that published the highly cited 1940s articles listed in Figure 2. **A** = number of articles. **B** = 1974 impact factor. (Present titles of journals are given in parentheses.)

A	B	Journal
1	1.042	Acta Chem. Scand.
1	1.124	Acta Med. Scand.
2	0.809	Acta Path. Microb. Scand.
2	2.204	Acta Physiol. Scand.
2	1.791	Amer. Heart J.
2	1.378	Amer. J. Botany
2	1.348	Amer. J. Clin. Pathol.
1	4.411	Amer. J. Med.
2	2.807	Amer. J. Pathology
6	2.414	Amer. J. Physiology
1	1.264	Amer. J. Psychiatry
4	2.884	Anatomical Record
1	1.181	Ann. New York Acad. Sci.
1	2.792	Arch. Exp. Path. Pharm. (Naunyn-Schmiedebergs Arch.)
1	1.521	Arch. Pathology
3	3.627	Biochemical Journal
1	3.120	Biochim. Biophys. Acta
1	0.813	Biometrics
3	3.516	Brit. J. Pharmacology
1	— —	Bull. Amer. Mus. Nat. Hist.
1	1.498	EEG Clin. Neurology
3	4.337	Endocrinology
1	5.394	Gastroenterology
1	2.835	Genetics
1	1.015	J. Abnormal Soc. Psychol.
1	3.068	J. Amer. Med. Assoc.
1	1.284	J. Anatomy
5	5.843	J. Biol. Chemistry
2	3.737	J. Cell Comp. Physiology (J. Cell. Physiology)
3	5.170	J. Clin. Endocrinol. Metab.
4	6.992	J. Clin. Invest.
2	11.874	J. Exp. Med.
1	1.027	J. Exp. Psychology
1	1.412	J. Exp. Zoology
2	2.160	J. Gen. Microbiology
4	4.308	J. Gen. Physiology
1	5.112	J. Immunology
1	2.802	J. Lab. Clin. Med.
3	3.289	J. Nat. Cancer Inst.
1	4.537	J. Neurophysiology
2	1.816	J. Pathol. Bacteriol. (J. Pathol.; J. Med. Microbiol.)
2	3.576	J. Pharmacol. Exp. Ther.
2	4.495	J. Physiology
2	4.188	Medicine
1	3.636	Nature
1	9.577	Pharmacol. Reviews
1	13.861	Physiol. Reviews
1	8.989	Proc. Nat. Acad. Sci. USA
3	2.493	Proc. Roy. Soc. London B
5	1.471	Proc. Soc. Exp. Biol. Med.
1	4.156	Psychol. Reviews
4	5.412	Science
1	— —	Trans. Ophth. Soc. Australia
1	1.953	Zschr. Zellforsch. Mikr. Anat.

averages. The most astonishing in this respect is article 79 by G. Scatchard. This article on the attractions of proteins for molecules and ions was published in 1949. From 1961 to 1964 it was cited only 45 times. Every year thereafter it has been cited more frequently--about 40 times a year in 1965-1969; about 130 times a year in 1970-1972; and about 310 times a year 1973-1975. Its count of 352 for 1975--almost thirty years after publication--is in fact its highest yet. Hopefully we can get the author to comment on this citation classic one day.

The most frequently cited paper

(article 61), by Litchfield and Wilcoxon, was cited 2,238 times from 1961 to 1975. Its average yearly citation rate for those years is 149. Like the paper by Scatchard, its citation rate has increased in 1974 and 1975. We recently published Litchfield's commentary on this citation classic.[1] In this week's *Citation Classics* Selye comments upon his classic paper (number 82), which I've discussed before.[2]

Current researchers in the field of biomedicine constantly refer back to these papers published over 30 years ago. Time has failed to decrease the significance of these papers, clearly reflected in their increasing citation counts. One should keep in mind, however, that often times there is a comparable if not greater failure to cite such well-known papers by those who are entitled to take them for granted as part of the common wisdom of their field. Another detail to keep in mind for a paper like number 41 (Harlow on learning sets), is that our coverage of psychology was not as complete in the early years of the *Science Citation Index*. Furthermore, there is a distinct possibility that the citation count for this paper will increase when we include data from the *Social Sciences Citation Index*. The appearance of a paper like number 85 (Simpson on classification) brings up an important point to remember. The *Bulletin of the American Museum of Natural History* is not a journal one would ordinarily expect to find on these lists. It is important to observe why.

I have observed elsewhere that the size of a particular field is not the main determinant in the average citation rate. Rather the number of references cited in the average paper is significant. But certainly the size of a field will influence the number of papers that achieve any arbitrary citation threshold. There could never have been 50,000 formal citations of the Lowry method had there not been several hundred thousand papers published on this subject. The entire literature of certain small fields may consist of only one or two thousand papers--or even less. From this it should be obvious that citation frequency is a relative measure. Thus, no comparison between any of the papers on this list is intended. Further, it is certain that other papers published in the forties, but not mentioned on this list would probably turn up were we able to have access to citation indexes for that period. It is a matter of considerable interest to science historians to know whether paper number 7 by Avery et al. was heavily cited in the forties and fifties.

REFERENCES

1. **Litchfield J T.** *Citation Classics.* A simplified method of evaluating dose-effect experiments. *Current Contents®* No. 7, 14 February 1977, p. 8.
2. **Garfield E.** Citation indexes for science. A new dimension in documentation through association of ideas. *Science* 122:108-11, 1955.

Figure 2. Highly cited articles in biological sciences and medicine published in the 1940s. A = item number. B = total citations 1961-1975. C = average yearly citations 1961-1975. D = citations in 1974. E = citations in 1975. Articles are listed alphabetically by first author

A	B	C	D	E	Bibliographic Data
1.	247	16	21	30	**Abercrombie M.** Estimation of nuclear population from microtome sections. **Anatomical Record 94**:239-47, 1946.
2.	1198	79	69	62	**Ahlquist R P.** A study of the adrenotropic receptors. **Amer. J. Physiol. 153**:586-600, 1948.
3.	163	10	12	18	**Alexander R S.** Tonic and reflex functions of medullary sympathetic cardiovascular centers. **J. Neurophysiology 9**:205-17, 1946.
4.	252	16	21	16	**Anderson E H.** Growth requirements of virus-resistant mutants of *Escherichia coli* strain "B". **Proc. Nat. Acad. Sci. USA 32**:120, 1946.
5.	214	14	10	10	**Andrewes C H & Horstmann D M.** The susceptibility of viruses to ethyl ether. **J. Gen. Microbiology 3**:290-7, 1949.
6.	157	10	16	14	**Asch S E.** Forming impressions of personality. **J. Abnorm. Soc. Psychol. 41**:258-90, 1946.
7.	242	16	12	10	**Avery O T, MacLeod C & McCarty M.** Studies on the chemical nature of the substance inducing transformation of pneumococcal types. **J. Exp. Med. 79**:137-58, 1944.
8.	224	14	16	17	**Bailey K.** Tropomyosin; a new asymmetric protein component of the muscle fibril. **Biochem. J. 43**:271-79, 1948.
9.	426	28	18	12	**Baldwin E D, Cournand A & Richards D W.** Pulmonary insufficiency. **Medicine 27**:243-78, 1948.
10.	205	13	5	17	**Bargmann W.** Uber die neurosekretorische Verknüpfung von Hypothalmus and Neurohypophyse (*Neurosecretory linkage of hypothalamus and pituitary*). **Zschr. Zellforsch. Mikrosk. Anat. 34**:610-34, 1949.
11.	314	20	11	13	**Barr M L & Bertram E G.** A morphological distinction between neurones of the male and female, and the behavior of the nucleolar satellite during accelerated nucleoprotein synthesis. **Nature 163**:676-77, 1949.
12.	247	16	15	8	**Beadle G W & Tatum E L.** *Neurospora.* 2. Methods of producing and detecting mutations concerned with nutritional requirements. **Amer. J. Botany 32**:678-86, 1945.
13.	257	17	14	9	**Bean J W.** Effects of oxygen at increased pressure. **Physiol. Revs. 25**:1-147, 1945.
14.	390	26	20	24	**Bollman F L, Cain J C, Grindlay J H & VanHook E.** Techniques for the collection of lymph from the liver, small intestine, or thoracic duct of the rat. **J. Lab. Clin. Med. 33**:1349-52, 1948.
15.	272	18	10	8	**Boyle P J & Conway E J.** Potassium accumulation in muscle and associated changes. **J. Physiology 100**:1-63, 1941.
16.	252	16	18	17	**Bradley S E, Ingelfinger F J, Bradley G P & Curry J J.** The estimation of hepatic blood flow in man. **J. Clin. Invest. 24**:890-97, 1945.
17.	264	17	20	22	**Bucher T.** Ueber ein phosphatübertragendes Gärungsferment (On a phosphate-transporting respiratory enzyme). **Biochim. Biophys. Acta 1**:292-314, 1947.
18.	395	26	45	22	**Bulbring E.** Observations on the isolated phrenic nerve diaphragm preparation of the rat. **Brit J. Pharmacology 1**:38-61, 1946.
19.	354	23	33	31	**Chalkey H W.** Method for the quantitative morphologic analysis of tissues. **J. Nat. Cancer Inst. 4**:47-53, 1943.
20.	197	13	8	10	**Chase M W.** The cellular transfer of cutaneous hypersensitivity to tuberculin. **Proc. Soc. Exp. Biol. Med. 59**:134-5, 1945.

Figure 2 (cont.)

21.	207	13	6	11	**Coons A H, Joner R N & Berliner E.** The demonstration of pneumococcal antigen in tissues by the use of fluorescent antibody. **J. Immunology 45**:159-70, 1942.
22.	156	10	10	13	**Dietrick J E, Whedon G D & Shorr E.** Effects of immobilization upon various metabolic and physiologic functions of normal men. **Amer. J. Med. 4**:3-36, 1948.
23.	281	18	14	12	**Duguid J B.** Thrombosis as a factor in the pathogenesis of coronary atherosclerosis. **J. Pathol. Bacteriol. 58**:207-12, 1946.
24.	167	11	12	20	**Eadie G S.** The inhibition of cholinesterase by physostigmine and prostigmine. **J. Biol. Chem. 146**:85-93, 1942.
25.	527	35	35	34	**Earle W R, Schilling E L, Stark T H, Straus N P, Brown M F & Shelton E.** Production of malignancy *in vitro*. 4. The mouse fibroblast cultures and changes seen in the living cells. **J. Nat. Cancer Inst. 4**:165-212, 1943.
26.	256	17	17	13	**Estes W K & Skinner B F.** Some quantitative properties of anxiety. **J. Exp. Psychol. 29**:390-400, 1941.
27.	158	10	17	16	**Everett J W.** Progesterone and estrogen in the experimental control of ovulation time and other features of the estrous cycle in the rat. **Endocrinology 43**:389-405, 1948.
28.	195	13	13	4	**Friedman M & Freed S C.** Microphonic manometer for indirect determination of systolic blood pressure in the rat. **Proc. Soc. Exp. Biol. Med. 70**:670-72, 1949.
29.	219	14	4	6	**Fulton F & Dumbell K R.** The serological comparison of strains of influenza virus. **J. Gen. Microbiology 3**:97-111, 1949.
30.	200	13	17	18	**Gall E A & Mallory T B.** Malignant lymphoma; a clinicopathologic survey of 618 cases. **Amer. J. Pathol. 18**:381-415, 1942.
31.	520	34	41	67	**Goldman D E.** Potential, impedance, and rectification in membranes. **J. General Physiology 27**:37-59, 1943.
32.	188	12	15	13	**Goldstein A.** The interactions of drugs and plasma proteins. **Pharmacol. Revs. 1**:102-65, 1949.
33.	300	20	10	17	**Gomori G.** Observations with differential stains on human islets of Langerhans. **Amer. J. Pathology 17**:395-406, 1941.
34.	168	11	12	11	**Gomori G.** The distribution of phosphatase in normal organs and tissues. **J. Cell. Comp. Physiol. 17**:71-84, 1941.
35.	175	11	7	12	**Gomori G.** Distribution of acid phosphatase in the tissues under normal and under pathologic conditions. **Arch. Pathol. 32**:189-99, 1941.
36.	241	16	21	12	**Greenspan F S.** Bioassay of hypophyseal growth hormone; the tibia test. **Endocrinology 45**:455-63, 1949.
37.	354	23	19	18	**Gregg N M.** Congenital cataract following German measles in the mother. **Trans. Opthalmol. Soc. Australia 3**:35-46, 1941.
38.	218	14	9	9	**Hahn P F.** Abolishment of alimentary lipemia following injection of heparin. **Science 98**:19-20, 1943.
39.	189	12	6	3	**Hamilton W F, Riley R L, Attyah A H, Cournand A, Fowell D M, Himmelstein A, Noble R P, Remington J W, Richards D W, Wheeler N C & Witham A C.** Comparison of the Fick and dye injection methods of measuring the cardiac output in man. **Amer. J. Physiol. 153**:309-21, 1948.
40.	531	35	54	44	**Hanks J H & Wallace R E.** Relation of oxygen and temperature in the preservation of tissues by refrigeration. **Proc. Soc. Exp. Biol. Med.** 71:196-200, 1949.
41.	195	13	9	11	**Harlow H F.** The formation of learning sets. **Psychol. Review 56**:51-65, 1949.
42.	235	15	11	13	**Hegsted D M, Mills R C, Elvehjew C A & Hart E B.** Choline in the nutrition of chicks. **J. Biol. Chem. 138**:459-66, 1941.
43.	230	15	8	11	**Hill A V.** The abrupt transition from rest to activity in muscle. **Proc. Roy Soc. London B 136**:399-420, 1949.

Figure 2 (cont.)

44.	709	47	58	52	**Hodgkin A L & Katz B.** The effect of sodium ions on the electrical activity of the giant axon of the squid. **J. Physiology 108**:37-77, 1949.
45.	256	17	15	18	**Hodgkin A L & Rushton W A H.** The electrical constants of a crustacean nerve fiber. **Proc. Roy. Soc. London B 133**:444-79, 1946.
46.	361	24	11	18	**Hogeboom G H, Schneider W C & Palade G E.** Cytochemical studies of mammalian tissues. 1. Isolation of intact mitochondria from rat liver; some *biochemical properties of mitochondria and submicroscopic particulate* material. **J. Biol. Chem. 172**:619-36, 1948.
47.	154	10	2	10	**Holmberg C G & Laurell C B.** Investigations of serum copper. 2. Isolation of the copper containing protein, and a description of some of its properties. **Acta Chem. Scand. 2**:550-56, 1948.
48.	341	22	22	21	**Holton P & Kennedy C R.** The treatment of experimental tuberculosis with sulphetrone. **Brit. J. Pharmacology 3**:29-36, 1948.
49.	373	24	29	14	**Kekwick R A.** The serum proteins in multiple myelomatosis. **Biochem. J. 34**:1248-57, 1940.
50.	267	17	21	13	**Kety S S.** Measurement of regional circulation by the local clearance of radioactive sodium. **Amer. Heart J. 38**:321-8, 1949.
51.	228	15	13	12	**Kety S S & Schmidt C F.** The determination of cerebral blood flow in man by the use of nitrous oxide in low concentrations. **Amer. J. Physiology 143**:53-66, 1945.
52.	443	29	16	23	**Kety S S & Schmidt C F.** The effects of altered arterial tensions of carbon dioxide and oxygen on cerebral blood flow and cerebral oxygen consumption of normal young men. **J. Clin. Invest. 27**:484-92, 1948.
53.	403	26	24	26	**Kety S S & Schmidt C F.** The nitrous oxide method for the quantitative determination of cerebral blood blow in man; theory, procedure and normal values. **J. Clin. Invest. 27**:476-83, 1948.
54.	240	16	7	10	**Klinefelter H F, Albright F & Griswold G C.** Experience with a quantitative test for normal or decreased amounts of follicle-stimulating hormone in the urine in endocrinological diagnosis. **J. Clin. Endocrinology 3**:529-44, 1943.
55.	234	15	25	17	**Konzett H & Rossler R.** Versuchsanordnung zu Untersuchung an der Bronchialmuskulatur (Experimental procedure in studies of the bronchial musculature). **Arch. Exp. Path. Pharmakol. 195**:71-74, 1940.
56.	881	58	68	61	**Kunitz M.** Crystalline soybean trypsin inhibiter. 2. General properties. **J. General Physiology 30**:291-320, 1947.
57.	277	18	13	14	**Leblond C P & Stevens C E.** The constant renewal of the intestinal epithelium in the albino rat. **Anatomical Record 10**:357-71, 1948.
58.	156	10	17	16	**Lindemann E.** Symptomatology and management of grief. **Amer. J. Psychiatry 101**:141-8, 1944.
59.	255	17	10	10	**Ling G & Gerard G L.** The normal membrane potential of frog sartorius fibers. **J. Cell. Comp. Physiol. 34**:383-96, 1949.
60.	206	13	28	20	**Litchfield J T.** A method for rapid graphic solution of time-per cent effect curves. **J. Pharmacol. Exp. Ther. 97**:399-408, 1949.
61.	2238	149	190	186	**Litchfield J T Jr & Wilcoxon F A.** A simplified method of evaluating dose-effect experiments. **J. Pharmacol. Exp. Ther. 96**:99-113, 1949.
62.	246	16	10	6	**Long C N H, Katzin B & Fry E G.** The adrenal cortex and carbohydrate metabolism. **Endocrinology 26**:309-44, 1940.
63.	238	15	26	21	**Luria S E & Delbruck M.** Mutations of bacteria from virus sensitivity to virus resistant. **Genetics 28**:491-511, 1943.
64.	207	13	9	7	**Medawar P B.** The behavior and fate of skin autographs and skin homographs in rabbits. **J. Anatomy 78**:176-99, 1944.

Figure 2 (cont.)

65.	180	12	29	20	**Merlis J K.** The effect of changes in the calcium content of the cerebrospinal fluid on spinal reflex activity in the dog. **Amer. J. Physiology 131**:67-72, 1940.
66.	487	32	49	32	**Miller L C & Tainter M L.** Estimation of the ED^{50} and its error by means of logarithmic-probit graph paper. **Proc. Soc. Exp. Biol. Med. 57**:261-4, 1944.
67.	190	12	11	6	**Mirsky A E & Pollister A W.** Chromosin, a desoxyribose nucleoprotein complex of the cell nucleus. **J. General Physiol 30**:117-47, 1946.
68.	603	40	26	45	**Moruzzi G & Magoun H W.** Brain stem reticular formation and activation of the EEG. **Electroencephalography Clin. Neurol.** 1:455-73, 1949.
69.	839	55	50	75	**Ouchterlony O.** Antigen-antibody reactions in gels. **Acta. Path. Microb. Scand. 26**:507-15, 1949.
70.	497	33	36	25	**Ouchterlony O.** *In vitro* method for testing the toxin-producing capacity of diphtheria bacteria. **Acta Path. Microb. Scand. 25**:186-91, 1948.
71.	183	12	10	4	**Owen R D.** Immunogenetic consequences of vascular anastomoses between bovine twins. **Science 102**:400-01, 1945.
72.	204	13	26	12	**Pappenheimer J R & Soto-Rivera A.** Effective osmotic pressure of the plasma and other quantities associated with the capillary circulation in the hindlimbs of cats and dogs. **Amer. J. Physiology 152**:471-91, 1948.
73.	279	18	19	19	**Pauling L. Itano H A, Singer S J & Wells I C.** Sickle cell anemia, a molecular disease. **Science 110**:543-48, 1949.
74.	198	13	13	8	**Reifenstein E C, Albright F & Wells S L.** The accumulation, interpretation, and presentation of data pertaining to metabolic balances, notably those of calcium, phosphorus, and nitrogen. **J. Clin. Endocrinol.** 5:367-95, 1945.
75.	197	13	10	7	**Robinson J R.** Some effects of glucose and calcium upon the metabolism of kidney slices from adult and newborn rats. **Biochem. J. 45**:68-74, 1949.
76.	289	19	11	5	**Rocha e Silva M, Beraldo W T & Rosenfeld G.** Bradykinin, a hypotensive and smooth muscle stimulating factor released from plasma globulin by snake venoms and by trypsin. **Amer. J. Physiology 156**:261-73, 1949.
77.	205	13	15	13	**Sabin A B & Feldman H A.** Dyes as microchemical indicators of a new immunity phenomenon affecting a protozoon parasite (*Toxoplasma*). **Science 108**:660-63, 1948.
78	234	15	13	8	**Sanford K K, Earle W R & Likely D.** The growth *in vitro* of single isolated tissue cells. **J. Nat. Cancer Inst. 9**:229-46, 1948.
79	1575	105	329	352	**Scatchard G.** The attractions of proteins for small molecules and ions. **Ann. New York Acad. Sci. 51**:660-72, 1949.
80	270	18	24	19	**Schild H O.** pA, a new scale for the measurement of drug antagonism. **Brit. J. Pharmacol. 2**:189-206, 1947.
81	202	13	4	2	**Schwert G W, Neurath H, Kaufman S & Snoke J E.** The specific esterase activity of trypsin. **J. Biol. Chem. 172**:221, 1948.
82.	167	11	5	6	**Selye H.** The general adaptation syndrome and the diseases of adaptation. **J. Clin. Endocrinol. 6**:117-230, 1946.
83	289	19	30	24	**Shay H, Komorov S A, Fels S S, Meranze D, Gruenstein M & Siplet H.** A simple method for the uniform productions of gastric ulceration in the rat. **Gastroenterology 5**:43-61, 1945.
84	209	13	18	12	**Shumway W.** Stages in the normal development of *Rana pipiens*. I. External form. **Anatomical Record 78**:139-48, 1940.
85	209	13	14	17	**Simpson G G.** The principles of classification and a classification of mammals. **Bull. Amer. Mus. Nat. Hist. 85**:1-350, 1945.

Figure 2 (cont.)

86.	352	23	7	5	**Singer R B & Hastings A B.** An improved clinical method for the estimation of disturbances of the acid-base balance of human blood. **Medicine 27**:223-42, 1948.
87.	782	52	41	39	**Smith H W, Finklestein N, Aliminosa L, Crawford B & Grabar M.** The renal clearances of substituted hippuric acid derivatives and other aromatic acids in dog and man. **J. Clin. Invest. 24**:388-404, 1945.
88.	182	12	6	9	**Sokolow M & Lyon T P.** The ventricular complex in left ventricular hypertrophy as obtained by unipolar precordial and limb leads. **Amer. Heart J. 37**:161-86, 1949.
89.	237	15	25	27	**Steinbrocker O, Traeger C H & Batterman R C.** Therapeutic criteria in rheumatoid arthritis. **J. Amer. Med. Assoc. 140**:659-62, 1949.
90.	203	13	9	6	**Stetten M R.** Some aspects of the metabolism of hydroxyproline studied with the aid of isotopic nitrogen. **J. Biol. Chem. 181**:31-37, 1949.
91.	229	15	23	13	**Strom G.** The influence of anoxia on lactate utilization in man after prolonged muscular work. **Acta. Physiol. Scand. 17**:440-51, 1949.
92.	296	19	22	18	**Swift H F, Wilson A T & Lancefield R C.** Typing group A hemolytic streptococci by M precipitin reactions in capillary pipettes. **J. Exp. Med. 78**:127-34, 1943.
93.	283	18	27	24	**Taylor A C & Kollros J J.** Stages in the normal development of *Rana pipiens* larvae. **Anatomical Record 94**:7-24, 1946.
94.	197	13	24	23	**Thomas J E.** An improved cannula for gastric and intestinal fistulas. **Proc. Soc. Exp. Biol. Med. 46**:260-61, 1941.
95.	228	15	18	15	**Ussing H H.** The distinction by means of tracers between active transport and diffusion; the transfer of iodide across the isolated frog skin. **Acta. Physiol. Scand. 19**:43-56, 1949.
96.	400	26	26	24	**Verney E B.** The antidiuretic hormone and factors which determine its release. **Proc. Roy. Soc. London B Biol. 135**:25-106, 1947.
97.	194	12	9	10	**Waldenstrom J.** Incipient myelomatosis or "essential" hyperglobulinemia with fibrinogenopenia; a new syndrome. **Acta Med. Scand. 117**:216-47, 1944.
98.	426	28	24	20	**Weichselbaum T E.** Studies on experimental hypertension. 12. The experimental production and pathogenesis of hypertension due to renal ischemia. **Amer. J. Clin. Pathol. 10**:40-72, 1946.
99.	245	16	12	20	**Weichselbaum T E, Levine M G & Hoyt R E.** The use of pectin and gelatin in the processing of plasma in the blood bank. **Amer. J. Clin. Pathol. 16**:40-44, 1946.
100.	275	18	26	19	**Weiss P & Hiscoe H B.** Experiments on the mechanism of nerve growth. **J. Exp. Zoology 107**:315-95, 1948.
101.	287	19	16	18	**Westergaard M & Mitchell H K.** *Neurospora.* 5. A synthetic medium favoring sexual reproduction. **Amer. J. Botany 34**:573-7, 1947.
102.	426	28	33	32	**Wilcoxon F.** Individual comparisons by ranking methods. **Biometrics 1**:80-3, 1945.
103.	166	11	11	12	**Wright H P.** The adhesiveness of blood platelets in normal subjects with varying concentrations of anticoagulants. **J. Pathol. Bacteriol. 53**:255-62, 1941.
104.	251	16	14	12	**Zilversmit D B, Entenman C & Fishler M C.** On the calculation of "turnover time" and "turnover rate" from experiments involving the use of labeling agents. **J. General Physiology 26**:325-32, 1943.