

## A CENSUS OF PHARMACEUTICAL RESEARCH.

BY H. V. ARNY.\*

At the 1924 meeting of the National Conference of Pharmaceutical Research the Executive Committee of that organization was directed to take a census of pharmaceutical research. Accordingly a questionnaire was prepared for distribution asking for the following information.

- 1 and 2. Name and address of person filling out sheet.
3. Are you personally engaged in research work intended for publication?
4. If so, please give subject of your research.
5. Kindly mention names of persons under your supervision with subjects upon which they are working.
6. Kindly give names and addresses of persons not under your supervision whom you think should obtain this questionnaire.
7. Kindly mention topics of interest to you in your daily work upon which you think further research should be done.

This questionnaire was sent all delegates and committee members of the Research Conference; to the officers of the national associations affiliated with the Research Conference and to the deans of the schools belonging to the American Conference of Pharmaceutical Faculties as well as of the five New York colleges; to the members of the U. S. P. and N. F. revision committees; to the members of the Scientific Section of the American Drug Manufacturers' Association; and to the three pharmaceutical committees of the National Research Conference.

This list after elimination of duplicates numbered slightly over 100 names. Question No. 6 brought a number of responses and when the persons whose names were received returned the questionnaire sheets sent to them, they in turn suggested other persons to whom the questionnaire should be sent; so that in all, some 270 questionnaire sheets were sent out. By that time, the returns to Question No. 6 became so distinctly non-pharmaceutical, that the Census was brought to a close, since there was no desire to "pad" the Census with extraneous material.

The Census as presented on the pages which follow, records the names of 239 research workers who may be classified as follows:

Hospital pharmacists.....	3
Retail pharmacists.....	10
Pharmacists, engaged in medical school and chemical school work..	16
Governmental scientists, doing pharmaceutical research.....	19
Non-pharmaceutical teachers and their students doing pharmaceutical research (chiefly on the synthesis of medicinal chemicals)..	28
Manufacturing pharmacists.....	72
Pharmaceutical teachers and their students.....	91
TOTAL	239

A goodly company of seekers after truth, united in the bond of service for humanity; all striving for the relief of bodily ills.

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\* Chairman, National Conference on Pharmaceutical Research.

CENSUS OF PHARMACEUTICAL RESEARCH.  
Index numbers intended to indicate coöperative work.

<i>Index No.</i>	<i>Name.</i>	<i>Laboratory.</i>	<i>Town.</i>	<i>Subject.</i>	<i>Remarks.</i>
1	Adams, Roger	Chemistry Bldg., University of Ill.	Urbana, Ill.	Chaulmoogra acids Arseno-organics Local anesthetics	
2	Allison, Catharine	Chemistry Bldg., University of Ill.	Urbana, Ill.	Silico-tungstic acid	See No. 11
3	Andrews, M. J.	College Pharmacy, Univ. of Maryland	Baltimore, Md.	pH of compound tincture of gentian	See No. 133
4	Army, H. V.	College Pharmacy, Columbia Univ.	New York, N. Y.	Colorimetric tests with standardized colored fluids Syrup of hydriodic acid and syrup of ferrous iodide	See Nos. 211 and 220
5	Balandra, F. J.	Massachusetts Col- lege of Pharmacy	Boston, Mass.	Quantitative microscopic analysis	See No. 236
6	Ballard, C. W.	College Pharmacy, Columbia Univ.	New York, N. Y.	Pharmacognosy of the genus Erythroxylo	
7	Barol, A.	H. K. Mulford Co.	Philadelphia, Pa.	Silver protein compounds	
8	Base, Daniel	Hynson, Westcott & Dunning	Baltimore, Md.	See Dunning	
9	Bateman, Miss D.	Chemistry Bldg., Univ. of Illinois	Urbana, Ill.	Pressor Anesthetics	See No. 151
10	Beaber, N. J.	Chem. Laboratory, Iowa State College	Ames, Iowa	Local Anesthetics	See No. 73
11	Beal, G. D.	Chemistry Bldg., Univ. of Illinois	Urbana, Ill.	Alkaloidal analytic meth- ods Emodin drugs Unsaturated fatty acids Silico-tungstic acid Caffeine citrate	See Nos. 2, 21, 41, 87, 125, 154, 186 and 215
12	Bebie, Jules	Monsanto Chem. Works	St. Louis, Mo.		
13	Beringer, G. M.	Retail Pharmacy	Camden, N. J.	U. S. P. and N. F. revision problems	
14	Billing, W. M.	W. S. Merrell Co.	Cincinnati, O.	Isoelectric point of tissue fibrinogen	See Nos. 31, 62, 70, 83 and 165
15	Bird, Edwin	LaWall Laboratory	Philadelphia, Pa.	Lead in zinc oxide	See No. 140
16	Bliss, A. R.	Medical College., Univ. Tenn.	Memphis, Tenn.	Pharmacologic studies	See Nos. 22, 115 and 224
17	Bogert, M. T.	Havemeyer Lab., Columbia Univ.	New York, N. Y.	Synthesis of medicinal chemicals	
18	Bonisteel, W. J.	College Pharmacy, Columbia Univ.	New York, N. Y.	Columbian cinchonas	
19	Bowman, H. E.	Mass. College Phar- macy	Boston, Mass.	Effect of pasteurizing ma- chines on dairy products	See No. 236
20	Bradley, T. J.	Mass. College Phar- macy	Boston, Mass.	U. S. P. revision problems	
21	Bramlet, H. B.	Chemistry Bldg., University of Ill.	Urbana, Ill.	Silico-tungstic acid	See No. 11
22	Brown, M. F.	Medical College, Univ. Tenn.	Memphis, Tenn.	Pharmacology of Western oil of chenopodium	See No. 16
23	Browne, C. A.	Bureau of Chemistry	Washington, D. C.	Chemical, biological and pharmacological re- search	See Nos. 28, 35, 38, 60, 150, 158, 161, 191, 194, 227 and 228
24	Brunner, H.	Lehn & Fink	Bloomfield, N. J.	Synthesis of thymol	See No. 50
25	Bugbee, E. P.	Parke, Davis & Co.	Detroit, Mich.	Biological standardization of glandular products	See No. 213
26	Burlage, H. N.	College Pharmacy, Univ. Washington	Seattle, Wash.	Commercial production of benzaldehyde	See No. 147
27	Bye, Mortimer	Frederick Stearns & Co.	Detroit, Mich.	Benzyl compounds Insulin	See Nos. 171, 184 and 202
28	Capen, Ruth G.	Bureau of Chemistry	Washington, D. C.	Moisture in crude drugs	See No. 38
29	Case, F. H.	Sterling, Laboratory, Yale University	New Haven, Conn.	Local anesthetics	See No. 104

<i>Index No.</i>	<i>Name.</i>	<i>Laboratory.</i>	<i>Town.</i>	<i>Subject.</i>	<i>Remarks.</i>
30	Caspe, Sol.	H. A. Metz & Co.	New York, N. Y.	See Dubin	
31	Catherman, R. F.	W. S. Merrell Co.	Cincinnati, O.	Biochemical products	See No. 14
32	Cawley, Ellen	Phila. Coll. Pharm. and Science	Philadelphia, Pa.	Digitalis	See No. 221
33	Chase, Marcus	College Pharmacy, S. D. State College	Brookings, S. D.	Grindelia squarrosa	
34	Cheng, P. V.	College Pharmacy, Univ. Washington	Seattle, Wash.	Pacific coast drug plants	See No. 147
35	Chesnut, V. H.	Bureau of Chemistry	Washington, D. C.	Chemistry of the cotton plant	See No. 172
36	Christensen, B. V.	College Pharmacy, Univ. Wisconsin	Madison, Wis.	Chemistry of hyoseyamus	See No. 134
37	Cleveland, T. K.	Sterling Laboratory, Yale Univ.	New Haven, Conn.	Hypnotics	See No. 104
38	Clevenger, J. F.	Bureau of Chemistry	Washington, D. C.	Cactus grandiflorus Melting points Moisture in crude drugs	See No. 28
39	Coghill, Robert	Sterling Laboratory, Yale University	New Haven, Conn.	Chemistry of Tubercle bacilli	See No. 122
40	Cole, Irvin	H. A. Metz & Co.	New York, N. Y.	See Dubin	
41	Coleman, G. H.	Chem. Bldg., Univ. of Illinois	Urbana, Ill.	Silico-tungstic acid	See No. 11
42	Cook, E. F.	Philadelphia College Pharm. and Sc.	Philadelphia, Pa.	U. S. P. & N. F. revision problems	
43	Cox, Mildred	Sterling Laboratory, Yale University	New Haven, Conn.	Local anesthetics of the holocaine type	See No. 104
44	Corbett, H. B.	H. A. Metz & Co.	New York, N. Y.	See Dubin	
45	Cortland, George	Upjohn Co.	Kalamazoo, Mich.	Ovarian constituents	See No. 103
46	Crockett, W. G.	Medical College of Va.	Richmond, Va.	Rate of decomposition of ethyl nitrate in copaiba mixtures Use of isopropyl alcohol in spirit of nitrous ether	
47	Culley, John	Retail Pharmacy	Ogden, Utah.	U. S. P. revision problems	
48	Cusick, W. P.	College Pharmacy, Univ. Michigan	Ann Arbor, Mich.	Assay of sulphur ointment	See No. 75
49	Diner, Jacob	College Pharmacy, Fordham Univ.	New York, N. Y.	Action of pancreatin on normal and diabetic animals	
50	Dittmar, M.	Lehn & Fink	Bloomfield, N. J.	General research problems	See Nos. 24, 138, 180, 196, 206, 217 and 232
51	Dixon, H. C.	Phila. Coll. Pharm. and Science	Philadelphia, Pa.	Digitalis	See No. 221
52	Dohme, A. R. L.	Sharp & Dohme	Baltimore, Md.	U. S. P. revision problems	
53	Dorjahn, J. A.	College Pharmacy, Univ. of Illinois	Chicago, Ill.	Tragacanth evaluation	See No. 71 and 234
54	Dox, A. W.	Parke, Davis & Co.	Detroit, Mich.	Synthetic hypnotics	See No. 213
55	Downie, R. R.	College Pharmacy, Univ. of Wisconsin	Madison, Wis.	U. S. P. peppermint problems	See No. 134
56	Dubin, H. E.	H. A. Metz & Co.	New York, N. Y.	Active principles of cod liver oil Synthetic odd-carbon fats in diabetes Synthetic suprareum Insulin	See Nos. 30, 40 and 44
57	DuMez, A. G.	Hygienic Laboratory	Washington, D. C.	Studies in drug addiction U. S. P. revision problems	
58	Dunning, H. A. B.	Hynson, Westcott, & Dunning	Baltimore, Md.	Dyes, Sulphonphthalein compounds, heparin, ovarian products, stibno-organics mercurio-organis	See Nos. 8 and 230
59	Eldridge, R. W.	Sterling Chem. Lab., Yale Univ.	New Haven, Conn.	Local anesthetics Iodine compounds	See No. 104
60	Emery, W. O.	Bureau of Chemistry	Washington, D. C.	Vitamin picrates from yeast Chlorination products of antipyrine	See No. 23

<i>Index No.</i>	<i>Name.</i>	<i>Laboratory.</i>	<i>Town.</i>	<i>Subject.</i>	<i>Remarks.</i>
61	Engelhardt, Herman	Sharp & Dohme	Baltimore, Md.	N. F. Revision problems	
62	Ewe, George	Wm. S. Merrell Co.	Cincinnati, O.	Research in pharmaceutical products	See No. 14
63	Fanslau, C. E.	N. J. College Pharm.	Newark, N. J.	Preservation of solution of Magnesium Citrate	See No. 65
64	Farwell, O. A.	Parke, Davis & Co.	Detroit, Mich.	Histology of medicinal drugs	See No. 213
65	Fischelis, R. P.	N. J. College Pharm.	Newark, N. J.	Local flora of Michigan Recipe Book problems Preservation of Solution of Magnesium Citrate	See No. 63
66	Fischer, E. B.	College Pharmacy, Univ. Minnesota	Minneapolis, Minn.	Volatile oil yield from plants grown at Univ. Minn. Assay of Minnesota digitalis and other varieties	See Nos. 159 and 235
67	Fisk, F. B.	Pitman, Moore Co.	Indianapolis, Ind.	Antiseptic value of different dyes	
68	Fullerton, Bryant	Upjohn Co.	Kalamazoo, Mich.	Ovarian constituents	See No. 103
69	Gaston, Dorothy	College Pharmacy, Univ. Washington	Seattle, Wash.	Relaxing properties of aromatic esters	See No. 147
70	Gates, Miss E.	Wm. S. Merrell Co.	Cincinnati, O.	Research in pharmaceutical products	See No. 14
71	Gathercoal, E. N.	College Pharmacy, Univ. of Illinois	Chicago, Ill.	Quantitative determination of vegetable powders	See Nos. 53 and 234
72	Gilfillan, F. A.	School of Pharm., State College	Corvallis, Oregon	Cascara Catalytic dehydration and hydrogenation of organic compounds	See No. 111
73	Gilman, Henry	Dept. Chem., Iowa State Coll.	Ames, Iowa	Local anesthetics Antiseptics	See Nos. 10 and 100
74	Githens, T. S.	Phila. Coll. Pharm. and Science	Philadelphia, Pa.	Digitalis	See No. 221
75	Glover, C. C.	College Pharmacy, Univ. Michigan	Ann Arbor, Mich.	General pharmaceutical research	See Nos. 48, 98, 99 and 208
76	Glycart, C. K.	U. S. Food & Drug Laboratory	Chicago, Ill.	Arsenicals Alkaloidal assays	
77	Goeckel, H. J.	Private Laboratory	Cranford, N. J.	Chemico-pathological and biological research	
78	Goeckel, Leah	Private Laboratory	Cranford, N. J.	Chemico-pathological and biological research	
79	Goodrich, F. J.	College Pharmacy, Univ. Washington	Seattle, Wash.	Hypnotics of the urethane type	See No. 147
80	Gordon, S. M.	Course in Pharm., Univ. Wisconsin	Madison, Wisconsin	Biochemistry of the mints	See No. 134
81	Graber, H. T.	Digestive Ferments Co.	Detroit, Mich.	Endocrine constituents	
82	Graffin, Margaret	Sterling Laboratory, Yale Univ.	New Haven, Conn.	Antiseptics	See No. 122
83	Grant, E. H.	W. S. Merrell Co.	Cincinnati, O.	Pharmaceutical products	See No. 14
84	Gray, William	Presbyterian Hospital	Chicago, Ill.	Recipe Book problems	
85	Griffith, Morris	Stetson Hospital	Philadelphia, Pa.	See I. Griffith	
86	Griffith, Ivor	Stetson Hospital	Philadelphia, Pa.	Substitutes for ethanol as drug solvents Soluble carbohydrates as accessory solvents	
87	Haas, E. S.	Chem. Bldg., Univ. Illinois	Urbana, Ill.	Silicotungstic Acid	See No. 11
88	Hall, W. A.	Retail Pharmacy	Detroit, Mich.	Spirit of Nitrous Ether Infusion of Digitalis	
89	Hamilton, H. C.	Parke, Davis & Co.	Detroit, Mich.	Digitalis	See No. 213
90	Handy, J. A.	Larkin Co. Inc.	Buffalo, N. Y.	Diethylphthalate	See No. 116

<i>Index No.</i>	<i>Name.</i>	<i>Laboratory.</i>	<i>Town.</i>	<i>Subject.</i>	<i>Remarks.</i>
91	Hansen, L.	Sterling Laboratory, Yale University	New Haven, Conn.	Ethylamine derivatives	See No. 104
92	Harrison, C. W.	U. S. Food and Drug Laboratory	Chicago, Ill.	Acetylsalicylic acid	
93	Harrison, J. W. E.	Phila. Coll. Pharm. and Science	Philadelphia, Pa.	Isopropyl alcohol Orange juice	See No. 140
94	Hart, Fanchon	College Pharmacy, Columbia Univ.	New York, N. Y.	Microscopy of official herbs and their substitutes Micro-assay methods	
95	Hart, M. C.	Upjohn Co.	Kalamazoo, Mich.	Ovarian constituents	See No. 103
96	Havenhill, L. D.	College Pharmacy, Univ. Kansas	Lawrence, Kansas	Kansas podophyllum	
97	Hay, Marjory	College Pharmacy, Univ. Washington	Seattle, Wash.	Bibliography of local anes- thetics	See No. 147
98	Hayman, J. L.	College Pharmacy, Univ. Michigan	Ann Arbor, Mich.	Physical constants of acetylsalicylic acid	See No. 75
99	Heard, J. T.	College Pharmacy, Univ. Michigan	Ann Arbor, Mich.	Preservation of certain U. S. P. preparations	See No. 75
100	Hechert, L. C.	Dept. Chem., Iowa State Coll.	Ames, Iowa	Local anesthetics and anti- septics	See No. 73
101	Hettler, Donald	Sterling Laboratory, Yale University	New Haven, Conn.	Chemistry of Tubercle bacilli	See No. 122
102	Hewitt, H. G.	Course in Pharmacy, Univ. Wisconsin	Madison, Wis.	Life history of <i>Monarda</i> <i>fistulosa</i>	See No. 134
103	Heyl, F. W.	Upjohn Co.	Kalamazoo, Mich.	Constituents of <i>Corpus</i> <i>luteum</i> , ovarian residues and follicular fluid	See Nos. 45, 68, 95 and 164
104	Hill, A. J.	Sterling Laboratory, Yale University	New Haven, Conn.	Local anesthetics	See Nos. 29, 37, 43, 59, 91, 126, 141, 209, 229
105	Hilton, S. L.	Retail Pharmacy	Washington, D. C.	U. S. P. & N. F. problems	
106	Hjort, A. M.	Parke, Davis & Co.	Detroit, Mich.	Calcium metabolism	See No. 213
107	Hoch, J. H.	Phila. Coll. Pharm. and Science	Philadelphia, Pa.	Digitalis	See No. 221
108	Hochstetler, R. W.	Parke, Davis & Co.	Detroit, Mich.	Physiologic assay methods Pharmacologic problems	See Nos. 181 and 213
109	Hogstad, Anton	Coll. Pharm., South Dakota State Coll.	Brookings, S. D.	Chenopodium and its oil	
110	Holmes, A. D.	E. L. Patch Co.	Boston, Mass.	Vitamin potency of cod liver oil	See Nos. 168 and 231
111	Hopkins, L. B.	Coll. Pharm., Oregon State College	Corvallis, Oregon	Poisonous mushrooms of the Willamet Valley	See No. 72
112	Horn, Millard	Dept. Chem., Univ. Maryland	College Park, Md.	Organo metallic com- pounds	See Kharasch
113	Houseman, P. A.	MacAndrews and Forbes Co.	Camden, N. J.	Constituents of licorice root	See No. 210
114	Howard, J. W.	Dept. Chem., Univ. Montana	Missoula, Mont.	Studies of antiseptic action of isopropyl alcohol and its trichloro derivative	See No. 207
115	Howze, H. H.	Medical Coll., Univ. Tenn.	Memphis, Tenn.	Vegetable cathartics	See No. 16
116	Hoyt, L. F.	Larkin Co., Inc.	Buffalo, N. Y.	Diethylphthalate	See No. 90
117	Hunt, Reid	Medical School, Har- vard Univ.	Boston, Mass.	Standardization of thyroid	
118	Hyde, E. K.	Mentholatum Co.	Buffalo, N. Y.	Production of menthol from American pepper- mint oil	
119	Isbel, Horace	Dept. Chem., Univ. Maryland	College Park, Md.	Chemo-therapy of tuber- culosis	See No. 128
120	Jenison, J. C.	Course in Pharm., Univ. Wisconsin	Madison, Wis.	Biochemistry of mints	See No. 134
121	Jenkins, G. L.	Course in Pharm., Univ. Wisconsin	Madison, Wis.	Chemistry of <i>Datura</i> <i>Stramonium</i>	See No. 134
122	Johnson, Treat B.	Sterling Chem. Lab., Yale University	New Haven, Conn.	Antiseptics Tubercle bacilli	See Nos. 39, 82, 101 and 176
123	Jordan, C. B.	College Pharmacy, Purdue Univ.	Lafayette, Ind.	Toxic ingredient of white snakeroot Gelatin as an emulsifier	See Nos. 130, 195 and 238

<i>Index No.</i>	<i>Name.</i>	<i>Laboratory.</i>	<i>Town.</i>	<i>Subject.</i>	<i>Remarks.</i>
124	Kamm, Oliver	Parke, Davis & Co.	Detroit, Mich.	Pharmacology of pituitrin and of benzyl alcohol	See Nos. 106, 149 and 213
125	Katti, M. C. T.	Dept. Chem., Univ. Illinois	Urbana, Ill.	Assay of emodin	See No. 11
126	Keach, D. F.	Sterling Chem. Lab., Yale University	New Haven, Conn.	Hypnotics	See No. 104
127	Kelly, E. F.	College Pharmacy, Univ. Maryland	Baltimore, Md.	U. S. P. revision problems	
128	Kharasch, M. S.	Dept. Chem., Univ. Maryland	College Park, Md.	Chemo-therapy	See Nos. 112 and 119
129	Kilmer, F. B.	Johnson & Johnson	New Brunswick, N. J.	The mydriatic solanums	
130	Klemme, C. J.	College Pharmacy, Purdue Univ.	Lafayette, Ind.	Toxic ingredients of white snakeroot	See No. 123
131	Klemme, Mrs. M. S.	Dept. Chem., Univ. Colorado	Boulder, Col.	Nitration products of piperonal Mother substance of camphor	
132	Kocù, J. A.	College Pharmacy, Univ. Pittsburgh	Pittsburgh, Pa.	Syntheses with dichlorodiethyl ether	See No. 170
133	Krantz, J. C.	College Pharmacy, Univ. Maryland	Baltimore, Md.	Hydrogen-ion concentration and alkaloidal assays Effect of $pH$ on emulsification Preservation of Dakin's solution Stability of compound tincture of gentian	See No. 3
134	Kremers, Edward	Course in Pharm., Univ. Wisconsin	Madison, Wis.	Phytochemical research	See Nos. 36, 55, 80, 102, 120, 121, 135, 155, 173, 190, 216 and 219
135	Kuester, H. L.	Course in Pharm., Univ. Wisconsin	Madison, Wis.	U. S. P. podophyllum problems	See No. 134
136	Langenhau, H. A.	College Pharmacy, Univ. Washington	Seattle, Wash.	Acetylsalicylic acid	See No. 199
137	Lanwermeyer, C. F.	Milliken & Co.	St. Louis, Mo.	See Ruddiman	
138	Laschinger, H.	Lehn & Fink	Bloomfield, N. J.	Assay of synthetic camphor	See No. 50
139	Lascoff, J. L.	Retail Pharmacy	New York, N. Y.	Recipe Book problems	
140	LaWall, C. H.	Phila. Coll. Pharm. and Science	Philadelphia, Pa.	Commercial dextrin	See Nos. 15 and 93
141	Lazzell, C. R.	Sterling Chem. Lab., Yale University	New Haven, Conn.	Local anesthetics	See No. 104
142	LeBlanc, Floyd	School Pharm., S. D. State College	Brookings, S. D.	Alkaloidal assays Elimination of chlorophyll from alkaloidal extracts	
143	Lemon, A. B.	College Pharmacy, Univ. Buffalo	Buffalo, N. Y.	The Commonwealth study of pharmacy	See No. 156
144	Lichtenberg, H. C.	Mentholatum Co.	Buffalo, N. Y.	Menthol	
145	Lloyd, J. U.	Lloyd Bros.	Cincinnati, O.	Phytochemical problems Adsorption problems in pharmacy	
146	Lofgren, F. V.	College Pharmacy, Univ. Washington	Seattle, Wash.	Local anesthetics of the amine type	See No. 147
147	Lynn, E. V.	College Pharmacy, Univ. Washington	Seattle, Wash.	Oxygenation by use of nitrosyl chloride	See Nos. 26, 34, 69, 79, 97, 146, 177 and 239
148	Lyons, A. B.	Nelson Baker & Co.	Detroit, Mich.	U. S. P. revision problems	
149	Lyons, Edward	Parke, Davis & Co.	Detroit, Mich.	Mercurials	See No. 213
150	Marciniak, E. S.	Bureau of Chemistry	Washington, D. C.	Bio-assays and other pharmacologic problems	See No. 23
151	Marvel, C. S.	Dept. Chem., Univ. Illinois	Urbana, Ill.	Mercurated dyes Pressor anesthetics	See Nos. 9 and 203

<i>Index No.</i>	<i>Name.</i>	<i>Laboratory.</i>	<i>Town.</i>	<i>Subject.</i>	<i>Remarks.</i>
152	Masucci, Peter	H. K. Mulford Co.	Philadelphia, Pa.	Toxicity of iron cacodylate Antiseptic power of silver salts	See Nos. 169 and 197
153	Mayer, J. L.	Liggett Laboratory	New York, N. Y.	Problems in the analytical chemistry of the U. S. P.	
154	McGregor, R. R.	Dept. Chem., Univ. Illinois	Urbana, Ill.	Unsaturated fatty acids	See No. 11
155	Miller, L. P.	Course in Pharm., Univ. Wisconsin	Madison, Wis.	Chemistry of <i>Cnicus benedictus</i>	See No. 134
156	Monell, L. M.	College Pharmacy, Univ. Buffalo	Buffalo, N. Y.	The Commonwealth study of pharmacy	See Nos. 143, 185 and 226
157	Moraw, H. O.	U. S. Food & Drug Laboratory	Chicago, Ill.	Assay of chloroform and chloral hydrate in pharmaceuticals	
158	Munch, J. C.	Bureau of Chemistry	Washington, D. C.	Bio-assays and other pharmacologic problems	See No. 23
159	Newcomb, E. L.	College Pharmacy, Univ. Minnesota	Minneapolis, Minn.	Minnesota digitalis Cultivation of <i>Cactus grandiflorus</i> and of <i>aspidium</i>	
160	Nitardy, F. W.	E. R. Squibb & Sons	New York, N. Y.	U. S. P. revision problems	
161	Palkin, Samuel	Bureau of Chemistry	Washington, D. C.	The spectroscope in drug chemistry Alkaloidal assay methods Automatic extraction devices Identification and assay of synthetics	See Nos. 23, 227 and 228
162	Paul, A. E.	U. S. Food & Drug Laboratory	Chicago, Ill.	Camphor and monobromated camphor	
163	Pauley, A. W.	St. Louis College of Pharmacy	St. Louis, Mo.	Survey of drug store conditions	
164	Payne, Wilbur	Upjohn Co.	Kalamazoo, Mich.	Biological study of ovarian constituents	See No. 103
165	Perkins, A. T.	E. S. Merrell Co.	Cincinnati, O.	Bio-chemical problems	See No. 14
166	Perkins, G. W.	Phila. Coll. Pharm. and Science	Philadelphia, Pa.	Digitalis	See No. 221
167	Pfeife, H. W.	Parke, Davis & Co.	Detroit, Mich.	Physiologic assay methods Pharmacologic problems	See Nos. 181 and 213
168	Piggott, Madeleine, G.	E. L. Patch Co.	Boston, Mass.	Vitamin potency of cod liver oil	See No. 110
169	Pittenger, P. A.	H. K. Mulford Co.	Philadelphia, Pa.	Standardization of glandular products Pituitary assay methods Stability of infusion of digitalis Deterioration of glandular preparations	See Nos. 152 and 197
170	Pittenger, Wm.	College Pharmacy, Univ. Pittsburgh	Pittsburgh, Pa.	Synthesis of dichloro-diethyl-ether	See No. 132
171	Pitz, Walter	Frederick Stearns & Co.	Detroit, Mich.	Insulin	See No. 27
172	Power, F. B.	Bureau of Chemistry	Washington, D. C.	Chemical investigation of the cotton plant	See No. 35
173	Rang, K. H.	Course in Pharm., Univ. Wisconsin	Madison, Wis.	Life history of <i>Monarda punctata</i>	See No. 134
174	Raubenheimer, H. C.	Retail Pharmacy	Brooklyn, N. Y.	Prescription problems	
175	Raubenheimer, Otto	Retail Pharmacy	Brooklyn, N. Y.	Galenicals Historical pharmacy	
176	Renfrew, Alice	Sterling Chem. Lab., Yale University	New Haven, Conn.	Antiseptic combinations	See No. 122
177	Rhodes, Leonard	College Pharmacy, Univ. Washington	Seattle, Wash.	Analysis of coffee	See No. 147
178	Rogers, C. H.	College Pharmacy, Univ. Minnesota	Minneapolis, Minn.	Colorimetric assay of vitamin Alkaloidal qualitative sep.	See No. 235

<i>Index No.</i>	<i>Name.</i>	<i>Laboratory.</i>	<i>Town.</i>	<i>Subject.</i>	<i>Remarks.</i>
179	Rosin, Joseph	Powers - Weightman Rosengarten Co.	Philadelphia, Pa.	U. S. P. organic chemicals	
180	Ross, V.	Lehn & Fink	Bloomfield, N. J.	Isolation of the toxin of Pneumococcus	See No. 50
181	Rowe, L. W.	Parke, Davis & Co.	Detroit, Mich.	Physiologic assay methods Pharmacologic problems	See Nos. 108, 167 and 213
182	Ruddiman, E. A.	J. T. Milliken Co.	St. Louis, Mo.	Toxicity of mixtures of quinine and aspirin	See No. 137
183	Rusby, H. H.	College Pharmacy, Columbia Univ.	New York, N. Y.	Medical flora of South America	
184	Russell, Jason	Frederick Stearns & Co.	Detroit, Mich.	Insulin Benzyl compounds	See No. 27
185	Saalbach, Louis	College Pharmacy, Univ. Pittsburgh	Pittsburgh, Pa.	Commonwealth study of Pharmacy	See No. 156
186	Salzberg, H. L.	Dept. Chem., Univ. Illinois	Urbana, Ill.	Silicotungstic acid	See No. 11
187	Sayre, L. E.	College Pharmacy, Univ. Kansas	Lawrence, Kansas	Extraction of theobromine from cacao	See No. 205
188	Schaefer, H. H.	College Pharmacy, Columbia Univ.	New York, N. Y.	Composition of shellac Stability of spirit of nitrous ether	
189	Schneider, Albert	School Pharmacy, North Pacific Col- lege	Portland, Oregon	Calcium compounds and sodium cinnamate in tuberculosis Cancer research Micro-analytic methods in forensic medicine	
190	Schulz, E. R.	Course in Pharm., Univ. Wisconsin	Madison, Wis.	Chemistry of Berberis vul- garis	See No. 134
191	Schwartz, E. W.	Bureau of Chemistry	Washington, D. C.	Bio-assays and other phar- macologic problems	See No. 23
192	Scoville, W. L.	Parke, Davis & Co.	Detroit, Mich.	Cause of precipitation in tincture and fluidex- tracts	See No. 213
193	Selzer, L. A.	Retail Pharmacy	Detroit, Mich.	U. S. P. & N. F. revision problems	
194	Shepherd, Miss C. M.	Bureau of Chemistry	Washington, D. C.	Bio-assays and other phar- macologic problems	See No. 23
195	Shireman, Miss A. F.	College Pharmacy, Purdue University	Lafayette, Ind.	Assay of phosphates	See No. 123
196	Shternov, V	Lehn & Fink	Bloomfield, N. J.	Therapeutic value of va- rious varieties of aconite root	See No. 50
197	Slothower, G. B.	H. K. Mulford Co.	Philadelphia, Pa.	Microcrystalline detection of endocrine extracts Toxicity of iron cacodylate	See Nos. 152 and 169
198	Smythe, E. E.	College Pharmacy, Univ. Minnesota	Minneapolis, Minn.	Preparation of herbarium material	See No. 235
199	Snidow, Harriet V.	College Pharmacy, Univ. Washington	Seattle, Wash.	Pharmaceutical study of acetyl salicylic acid	See No. 136
200	Snow, C. M.	College Pharmacy, Univ. Illinois	Chicago, Ill.	U. S. P. & N. F. revision problems	
201	Snyder, J. P.	Norwich Pharmal Co.	Norwich, N. Y.	Analytic standards for hy- podermic tablets	
202	Sowary, Carl	Frederick Stearns & Co.	Detroit, Mich.	Insulin Benzyl compounds	See No. 27
203	Spencer, V. E.	Dept. Chem., Univ. Illinois	Urbana, Ill.	Mercurated dyes	See No. 151
204	Spevakov, N.	Digestive Ferments Co.	Detroit, Mich.	See Graber	
205	Sterling, Chas.	College Pharmacy, Univ. Kansas	Lawrence, Kansas	U. S. P. microscopic prob- lems	See No. 187
206	Stern, J. T.	Lehn & Fink	Bloomfield, N. J.	See Ulrich	See No. 50
207	Stimpert, F. D.	Dept. Chem., Univ. Montana	Missoula, Mont.	See Howard	
208	Stocking, C. H.	College Pharmacy, Univ. Michigan	Ann Arbor, Mich.	Effect of formaldehyde on the refractive index of milk serum	See No. 75



<i>Index No.</i>	<i>Name.</i>	<i>Laboratory.</i>	<i>Town.</i>	<i>Subject.</i>	<i>Remarks.</i>
236	Youngken, W.	H. Massachusetts College Pharmacy	Boston, Mass.	Morphology of species Aconite Viburnum nudum as adulterant of V. prunifolium. Commercial sources of crude drugs	See Nos. 5, 19 and 233
237	Zeigler, W. H.	Pharm. Dept., Med. Coll., S. C.	Charleston, S. C.	Action of intraperitoneal injections of certain drugs	
238	Zufall, C. J.	College Pharmacy, Purdue Univ.	Lafayette, Ind.	Constituents of hastata Variation in constituents of Grindelia	See No. 123
239	Zumwalt, H. O.	College Pharmacy, Univ. Washington	Seattle, Wash.	Determination of alcohol in pharmaceuticals	See No. 147

This Census, although gratifying, is by no means complete. Several deans of pharmacy schools and several heads of the research departments of great manufacturing plants failed to respond and information concerning these had to be obtained indirectly. The list is, however, typical and fairly comprehensive, ranging from the standpoint of facilities from great university laboratories costing millions, to the simple dispensing room of a retail pharmacy (such as used in the past by Scheele, Sertürner and Procter) and from the standpoint of types from organic syntheses to statistical research such as the great work now being performed for pharmacy by the Commonwealth Foundation. Of notable service, fairly wrung by the writer out of modest workers is the research performed as a matter of duty by the members of the committees preparing the United States Pharmacopœia, the National Formulary and the A. PH. A. Recipe Book.

An interesting outcome of the Census was the variety of topics suggested for research brought out by question No. 7. This will be the subject of a separate paper.

In conclusion, the Census answers unequivocally the questions whether there is such a thing as pharmaceutical research and whether such type of research is being done. That pharmaceutical research is an attractive field is shown by the great work being done by non-pharmacists in the preparation of medicinal chemicals; that pharmaceutically trained persons are available is shown by the record of 91 pharmaceutical teachers and their students and 72 manufacturing pharmacists now actually performing research work.

It is expected that a Census of Pharmaceutical Research will become an annual duty of the Research Conference and that future returns will be even more comprehensive than the one tabulated above.

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Following in the footsteps of her parents, **Miss I. Curie** has earned the degree of Doctor of Sciences, her thesis being on "Researches on the Alpha Rays of Polonium, Oscillation Rate of Emission and Ionizing Power."

**Prof. A. E. Goris** succeeds Prof. Grimbart as chief pharmacist at the Central Pharmacy of the Paris hospitals. The latter has attained

the age limit and retires for that reason.

Pharmacist **Virgilio Lucas** was recently awarded the Cezar Diogo Prize, and he has handed over the value of this to the Brazilian Association of Pharmacists to be invested as a fund out of which a gold medal is to be awarded every two years for the best work published on Analytical Chemistry as Applied to Pharmacy.