this difficult problem and that then other medical colleges will promptly follow his lead. Thinking medical men with large general experience and laymen who realize the need could materially aid matters by disseminating information along these lines.

(3) If a solution is not found and found promptly, we will soon have a shortage of well-trained general practitioners of medicine and in that event quacks and cultists will almost surely receive legislative sanction, and they and other poorly trained persons will take over some of the important functions now performed by the general practitioner. If this happens incalculable injury to the public is bound to result.

The problem of medical education is such an important one because the kind of medical education the undergraduate students of to-day receive will determine very largely the quality of medical service which the citizens of this country will receive from ten to forty years hence.

THREE POSTULATES

Next to the stability of government, honesty of administration and the general intelligence of the people, the welfare of the nation depends more upon the quality of medical service which is rendered to the people than upon any other one thing.

The longevity, health, efficiency and happiness of the people depend more upon the integrity, ability and industry of its medical profession than upon anything else.

The allied professions of medicine, dentistry and pharmacy are to-day giving the American people the best all-around medical service that any nation has ever had in the history of the world, and that by men very largely trained according to the system above proposed.

If the three above postulates are true, and we believe they are, it is the plain duty of those who see the matter as we do to strive incessantly until medical colleges are again rendering the service to the public for which they were primarily organized—namely, to supply an adequate number of well-trained general practitioners of medicine.

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DOCTORATES CONFERRED IN THE SCIENCES BY AMERICAN UNIVERSITIES, 1922–1925[1]

THE Research Information Service of the National Research Council, through the courtesy of the various American universities granting the doctor's degree, has compiled annually since 1919–20 a classified list of the theses of the recipients of this degree in the sciences, with a table showing the comparative statistics for the last ten years. (From 1921–22 through 1922–23, the data for the arts were included, but these were dropped in 1923–24 as too voluminous a compilation of material and as outside the scope of the council's activities.)

The compilations for the first three years were published,[2] but since 1923 the amount of space required has made it impossible to present the data in printed form.

The following tables give the statistical analysis, by university and by subject, of the doctorates conferred during the past ten years. The list of the theses is on file in the Research Information Service and information regarding them will be furnished on request.[3]

The total number of doctorates granted continues to grow slowly, the increase during the years 1923–1925 being much less than during the preceding three years, during which time the universities were recovering from the war period. The totals, however, are much larger than those of the pre-war period. That interest in higher education is greater than ever before is clearly indicated by the following table, which gives the total number of doctorates granted by year during the past twenty-five years. The number in 1925 is almost exactly six times that of 1900.

1900	102	1909	194	1918	293
1901	127	1910	180	1919	180
1902	103	1911	239	1920	325
1903	134	1912	273	1921	334
1904	129	1913	234	1922	442
1905	143	1914	244	1923	572
1906	140	1915	314	1924	597
1907	143	1916	336	1925	621
1908	184	1917	372		

It is interesting to note that Chicago, which has held the lead in sciences for many years, now gives way to Wisconsin. During the past two years eleven universities have granted twenty or more doctorates, and eighteen, ten or more.

Chemistry maintains a very considerable lead over any other science. This is undoubtedly due to the many ramifications of the subject, both scientific and industrial. During the past year ten universities

[1] Compiled by Research Information Service, National Research Council.

[2] SCIENCE, 52: 478–83, 514–7 (1920); 55: 271–9 (1922); *School and Society*, 17: 57–63, 106–9, 132–9 (1923).

[3] Statistics regarding the doctorates in chemistry and a list of dissertations covering the period 1922–23 to 1924–25 will appear in the *Journal of Chemical Education*.

granted ten or more doctorates in this subject: Columbia, 30; Missouri, 26; Ohio State, 23; Illinois, 18; Massachusetts Institute of Technology, 17; Yale, 16; Chicago, 14; Cornell, 14; Harvard, 13; Johns Hopkins, 10. Fifty or more doctorates were granted in psychology, physics, botany and zoology, twenty or more in bacteriology, mathematics and geology, and ten or more in geography, agriculture and physiology.

TABLE I

DOCTORATES CONFERRED IN THE SCIENCES

	'16	'17	'18	'19	'20	'21	'22	'23	'24	'25
Wisconsin	22	17	16	9	24	15	32	44	41	64
Chicago	53	39	55	28	43	42	61	71	75	59
Columbia	34	37	24	11	25	26	31	58	57	51
Yale	24	25	9	4	23	27	22	34	22	41
Cornell	24	38	30	21	35	33	36	41	60	39
Johns Hopkins	22	24	7	7	21	21	28	58	44	36
Ohio State	2	8	7	3	6	8	13	21	20	33
Illinois	26	24	23	15	22	19	28	33	29	32
California	17	23	16	16	14	22	24	27	20	31
Harvard	16	39	15	14	28	25	21	31	35	25
Minnesota	7	9	10	8	4	16	16	17	23	23
Iowa University	2	3	9	4	5	7	12	12	16	19
Mass. Inst. Tech.	3	4	4	1	8	7	8	11	18	18
Michigan	10	13	8	4	9	7	20	15	25	15
Princeton	19	5	8	3	10	8	12	9	17	15
Stanford	0	4	0	2	4	5	7	8	14	15
Iowa State Col.	—	—	—	—	—	—	—	—	9	12
Pennsylvania	16	7	10	8	5	5	9	8	12	12
Brown	2	3	9	2	2	4	3	3	3	8
Indiana	3	2	4	1	5	1	3	5	5	8
Pittsburgh	0	5	1	2	2	2	7	7	5	8
Cincinnati	2	1	1	1	2	2	5	3	4	7
Nebraska	0	2	1	2	0	4	2	2	5	7
Clark	9	12	4	5	4	6	6	8	3	6
George Wash.	5	8	3	3	9	2	8	13	5	6
New York	0	6	0	2	2	4	3	10	2	5
Virginia	2	1	0	0	1	0	2	1	3	5
Kansas	0	0	0	0	1	1	0	2	2	4
Missouri	3	2	3	0	2	0	4	0	5	4
Catholic	1	2	4	0	1	1	0	1	3	3
Radcliffe	0	1	0	1	1	3	3	3	2	3
Washington	–	0	1	0	0	0	2	0	1	3
Northwestern	3	3	2	0	0	0	7	2	6	2
Bryn Mawr	3	2	1	1	1	2	7	0	1	1
Colorado	0	0	0	0	0	0	1	1	0	1
Wash. Univ., St. Louis	0	2	2	1	3	3	2	8	2	0
North Carolina	2	0	1	1	0	2	1	2	1	0
Boston	0	1	0	0	0	0	0	1	0	0
Mass. Agr. Col.	3	0	0	0	0	1	2	1	1	0
Texas	0	0	0	0	0	0	0	1	0	0
Syracuse	0	0	4	0	2	1	1	0	0	0
Notre Dame	—	—	—	—	—	—	—	—	1	0
Totals	336	372	293	180	325	334	450	572	597	621

TABLE II

DOCTORATES CONFERRED ACCORDING TO SUBJECTS

	'16	'17	'18	'19	'20	'21	'22	'23	'24	'25
Chemistry	115	108	75	54	97	133	155	182	246	244
Zoology	34	30	33	24	38	37	39	45	42	71
Botany	37	37	39	23	48	29	37	64	56	65
Physics	35	32	17	18	19	28	56	54	51	56
Psychology	19	32	30	21	38	26	32	46	51	51
Geology	17	24	14	5	17	11	22	34	41	25
Mathematics	34	30	23	7	19	16	20	28	30	22
Bacteriology	5	11	11	6	7	19	15	32	12	20
Physiology	14	18	11	1	13	8	18	20	17	17
Agriculture	6	19	18	12	8	3	9	10	11	13
Geography	3	3	1	0	3	5	3	7	3	13
Pathology	2	6	8	6	3	1	27	21	12	5
Anatomy	1	3	5	0	3	4	5	10	5	4
Mineralogy	0	0	0	0	0	0	0	1	1	4
Astronomy	6	5	0	1	4	5	4	6	7	3
Metallurgy	1	0	1	1	0	2	1	2	2	3
Anthropology	1	4	2	0	2	4	0	3	3	2
Engineering	3	5	4	1	6	3	4	5	5	2
Paleontology	3	4	0	0	0	0	1	2	2	1
Meteorology	0	1	1	0	0	0	2	0	0	0
Totals	336	372	293	180	325	334	450	572	597	621

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THE PROPOSED NATIONAL ARBORETUM AT WASHINGTON

IN response to the request of SCIENCE for an article on the National Arboretum which is proposed to be established in the District of Columbia, I present the following condensed explanation of the project:

SUMMARY

Nature. The proposed national arboretum at Washington would contain a permanent living collection of trees and other outdoor plants for purposes of scientific research and education. It would include the trees, shrubs, and perennials used in forestry and horticulture, and the wild relatives of these plants. It would be a bureau of standards for horticulture. It would contain a water garden and a wildrice preserve, and it would serve incidentally as a bird sanctuary.

Economic value. The arboretum would make the work of the Department of Agriculture more valuable to the country in many ways, but especially through plant breeding. The development of faster-growing timber trees, improved fruits, and disease-resistant plants generally, through the facilities afforded by the arboretum, would increase profoundly the agricultural wealth and welfare of the United States.

Location. The Mount Hamilton and Hickey Hill tracts in the District of Columbia, together with the Anacostia River flats above Benning Bridge, constitute an admir-