	Preparation.				Average percent- age.		above	ber re- porting	Sug- gested N. F. standard.
Tinct.	Ferr. Pomat	3	95	10	10	1	0	2	10
**	Gall	3	85	89	85	0	1	2	85
**	Guaiac. Co	4	40	46	46	<b>2</b>	0	2	45
**	Humul	4	45	46		2	$^2$		45
**	Ignat	5	70	83	80	1	<b>2</b>	$^2$	80
"	Iod. Fort	6	60	70	65	3	1	<b>2</b>	65
**	Iod. Decolor	8	70	85	75	<b>2</b>	3	3	75
"	Ipecac et Opii	6	12	45	13	1	3	<b>2</b>	12
"	Jalap	3	56	61	60	1	1	1	60
44	Jalap. Co	3	60	62	60	0	1	$^2$	60
**	Kramer	7	35	46	46	2	0	5	45
"	Opii Crocat	3	45	46	45	1	0	$^2$	45
**	Passiflor	6	43	48	45	1	1	4	45
46	Pectoral	3	45	50	48	1	1	1	48
**	Persion	6	55	73	66	1	3	2	65
**	Persion. Co	4	25	30	30	3	0	1	28
*1	Pulsatil	5	55	71	70	1	1	3	70
44	Quillaj	4	27	33	32	1	1	2	30
44	Rhei Aq	3			10			3	10
44	Rhei Dulc	5	42	46	46	1		4	45
"	Rhei et Gent	4	45	46	46	1	0	3	45
44 1	Sabal. et Santal	3	72	75	74	1	1	1	74
"	Serpent	5	55	60	60	1	0	4	60
"	Sumbul	4.	60	65	60	0	1	3	60
"	Vanill	9	38	44	40	1	3	5	38
"	Viburn. Opul. Co	7 ·	65	71	70	4	0	3	68

 $^1$  5 reported 40%.  $^2$  2 reported 80%, 2 reported 90%.  $^3$  4 reported 50%, 4 reported 55%.  $^4$  10 reported 60 to 65%.  $^5$  One reported 30%.  $^6$  5 reported 65%, 4 reported 70%.  $^7$  4 reported 42%.  $^8$  3 reported 45%.  $^9$  4 reported 20%, 4 reported 25%.  $^{10}$  4 reported 52%.  $^{11}$  4 reported 38%.  $^{12}$  Reports very variable.  $^{13}$  4 reported 65%, 4 reported 70%.  $^{14}$  Only one reported below 50%.  $^{15}$  Only one below 39%, and 1 above 43%.  $^{16}$  3 reported 80%, 3 reported 85%.

DETROIT, JUNE 1922.

## THE OPINION OF TEACHERS CONCERNING DEGREES IN PHARMACY.

BY J. G. BEARD.\*

In November of 1921 a postal questionnaire was sent to all Conference teachers of professorial rank that had for its object the obtainment of their opinions on the subject of degrees in pharmacy. Ninety-six replies have been received and as this number represents nearly eighty percent of the professors addressed and as these answers are representative of opinion generally it seems unnecessary to delay further in reporting the facts received.

The queries listed on the questionnaire were six in number and were phrased substantially as follows:

Query No. 1. Do you believe the doctor's degree should be offered in pharmacy?

Query No. 2. If so, how many years of study should be required of applicants for the degree?

<sup>\*</sup> School of Pharmacy, University of North Carolina.

Query No. 3. What abbreviation should be used for the degree?

Query No. 4. Are you satisfied that the present Ph.G. degree is the proper undergraduate degree?

Query No. 5. If not, what is your preference?

Query No. 6. As a four-year degree what is your preference?

The chart below lists the names of the professors and their answers to questions 1, 2, 3, 4, 5 and 6. Numerous footnotes are necessary because so many teachers qualified their answers or else couched their replies in a fashion not to be condensed in the spaces provided by the chart. In so far as possible the phrase-ology of the replies is retained in the footnotes.

Name.	1.	2.	3.	4.	5.	6.
Alabama Polytechnic Institute						
L. S. Blake	Yes	$6^{1}$	P.D.	Yes		B.S. (Phar.)
Brooklyn College of Pharmacy						
W. C. Anderson	Yes	5	Phar.D.	Yes		B.S. (Phar.)
A. P. Lohness	Yes	4	Phar.D.	$No^2$	Phar.D. or Ph.C.	Phar.D.
J. L. Mayer	Yes	5	Phar.D.	Yes		B.Sc. (Phar.)
Buffalo University (N. Y.)						, .
W. G. Gregory	Yes	6	Phar.D.	Yes		Phar.B.3
A. B. Lemon	Yes	64	Phar.D.	No	Phar.B.	Ph.C.
University of Southern California						
L. J. Stabler	No			Yes		B.S. (Phar.)
Columbia University						
H. V. Arny	Yes	5	Phar.D.	Yes		B.S. (Phar.)
C. W. Ballard	Yes	6	Phar.D.		5	B.Sc. (Phar.)
G. C. Diekman	Yes	6.	Phar.D.	Yes		B.S. (Phar.)
J. Hostmann	Yes	4 or 66	Phar.D.	Yes		B.S. (Phar.)7
W. B. Simpson	Yes	6	Phar.D.			B.S. (Phar.)
C. P. Wimmer	Yes	6	Phar.D.	Yes		B.S. (Phar.)
Creighton University (Neb.)						
V. J. Fitz-Simon	No			Yes		Ph.C.9
H. C. Newton	No			Yes		B.S. (Phar.)
W. J. Nolan	No			Yes		B.S. (Phar.)
Des Moines Univer- sity (Iowa)						
E. O. Kagy	Yes	4	Phar.D,	Yes		Phar.D.

<sup>&</sup>lt;sup>1</sup> 2 years beyond B.S. degree.

<sup>&</sup>lt;sup>2</sup> Never favored Ph.G. degree.

<sup>&</sup>lt;sup>3</sup> Prefer Ph.C. as 3-year degree.

<sup>&</sup>lt;sup>4</sup> As required by National Syllabus.

<sup>&</sup>lt;sup>5</sup> Would rather consider it a "diploma title" and not as a degree.

<sup>&</sup>lt;sup>6</sup> 4 years, 6 days, or 6 years as in Columbia.

<sup>&</sup>lt;sup>7</sup> B.S. for 6-year degree.

<sup>8</sup> For 3 years' work.

<sup>&</sup>lt;sup>9</sup> For 4 years' work.

Fordham University (N. Y.)							
J. Diner	Yes	6	Phar.D.	No	B.S. (Phar.)	B.S. (Phar.)	
G. Horstmann	Yes	6	Phm.D.	No	Ph.B.	Ph.M.	
George Washington	1 65	U	Time.D.	110	111,15,	1 11.101.	
University							
H. E. Kalusowski	Yes	. 10	Phar.D.	No	11	B.S. (Phar.)	
University of						` ,	
Illinois							
W. B. Day	$Yes^{12}$	8	Ph.D. (Phar.)	Yes <sup>13</sup>	Ph.C.3	B.S. (Phar.)	
E. N. Gathercoal	Yes	8	Ph.D. or	Yes	Ph.C.3	B.S. (Phar.)	
			Phar.D.				
C. M. Snow	Yes	7	Ph.D.	Yes		B.S. (Phar.)14	
State University of							
Iowa							
C. S. Chase	Yes	6	Phar.D.	Yes		No choice	
Z. M. Cooper	Yes	6	Phar.D.	$N_0$	Ph.C.	B.S. (Phar.)	
					and	`	
R. A. Kuever	Yes	7	Ph.D.	No	B.S. (Phar.	•	
W. J. Teeters	Y es No	=	,	No	Ph.C. <sup>3</sup>	B.S. (Phar.) B.S. (Phar.)	
-	No	• •		NO	Fil.C.	D.S. (PHar.)	
University of Kansas	37	e	Dl D	37 16		D1 D	
B. D. Havenhill	Yes	6 <b>4</b>	Phr.D. Phar.D.	Yes <sup>16</sup> Yes		Phr.B. B.S. <sup>17</sup>	
L. E. Sayre G. N. Watson	Might well Yes	6	Phar.D.	Yes	• • • •	Ph.B. <sup>18</sup>	
Louisville College of	Yes	Ų	FIII.D.	1 65	• • • •	FII.D.	
Pharmacy (Ky.)							
O. C. Dilly	Yes	4	Phar.D.	Yes		Phar.D.	
H. O. Haeusgen	Yes	4	Phar.D.	Yes		Phar.D.	
University of Mary-	1 (3	-	Than.D.	1 03	• • • •	I Hai.D.	
land							
C. C. Plitt	Yes	6 or 7	Phar.D. or	Yes		Ph.B.	
C. C. Thit	1 03	0 01 1	Ph.D. (Phar.)	1 03	••••	TH.D.	
Massachusetts College			,				
of Pharmacy							
T. J. Bradley	$No^{19}$	6	Phm.D.	Yes		B.S. (Phar.)	
J. O. Jordan	No			Yes		Ph.C.	
E. H. LaPierre	No			Yes		Phar.D.	
H. H. Smith	Yes	$4^{20}$	Phar.D.	Yes		Phar.D.	
University of Michigan							
H. W. Emerson	No	6	Phm.D.	No		Ph.B.	
A. F. Schlichting	12	7	Ph.D.	$No^{21}$	B.S. (Phar.)		
C. H. Stocking	Yes	6	Phat.D.	Yes		B.S.	

<sup>10</sup> It should be given after graduation for any work of distinction.

<sup>11</sup> Any degree corresponding to university degree given for a specified amount of study.

<sup>&</sup>lt;sup>12</sup> Only as Doctor of Philosophy in Pharmacy.

<sup>13</sup> For 2 years.

<sup>14</sup> Should not differ from other sciences.

<sup>15</sup> Indeed not. Minimum course of 4 years leading to the degree of B.S. (Phar.).

<sup>16</sup> Phr.G.

<sup>&</sup>lt;sup>17</sup> B.S. superimposed upon a Ph.C. (3-year course).

<sup>&</sup>lt;sup>18</sup> A Ph.M. should be offered for 5 years of study.

<sup>19</sup> No, except for graduate work-2 years of graduate work after 4 years of undergraduate.

<sup>20</sup> With at least 2 years of preliminary college course.

<sup>&</sup>lt;sup>21</sup> No. A 4-year minimum.

University of Minne- sota						
G. Bachman	Yes	6	Phm.D.	Yes		Phm.B.
E. D. Brown	Yes	22	Phm.D.	No	Ph.B.	Ph.M. or Ph.C.
E. L. Newcomb	Yes	5 or 6	Phar.D. or Phm.D. or	Yes	Ph.C. <sup>23</sup>	B.S. (Phar.)
			Pharm.D.			
C. H. Rogers	Yes	24	Sc.D. (Phar.)	No	Ph.C.	B.S. (Phar.)
		]	or Ph.D. (Phar.)			
F. J. Wulling	Yes	6	Phm.D.	No	B.S. (Phm.) 25	B.S. (Phm.)
University of Missis- sippi						
H. M. Faser	Yes	6	Phm.D.	No	Ph.C.23	B.S. (Phar.)
University of Montana						,
J. Sucky	Yes	7	Phar.D.	No	Ph.C.	Ph.B.
University of Nebraska						
R. A. Lyman	Yes	4 or 626	Phar.D.	27		B.Sc. (Phar.)28
A. Schneider	Yes	5 or $6$	P.D.	Yes		Ph.B. or B.S.
University of North Carolina						
E. V. Howell	Yes	4	P.D.	Yes		P.D.
J. G. Beard	Yes	4	P.D.	Yes		P.D.
North Pacific College (Ore.)						
H. C. Miller	Yes	329	$P.D.^{30}$	$No^{31}$		32
			or Ph.C.			
Notre Dame (Ind.)						
R. L. Green	No			No	33	Ph.B.
State University of Ohio						
C. A. Dye	$No^{34}$	6	Ph.D.	No		B.Sc. (Phar.)
State University of Oklahoma						
D. B. R. Johnson	Yes	6	P.D.	No	3	Ph.B. or B.S.
	Yes	6	P.D.	No	3	Ph.B. or B.S.

<sup>22 3</sup> years after Ph.G. degree—same as in medicine.

<sup>23</sup> For 3-year course.

<sup>&</sup>lt;sup>24</sup> Sc.D. (Phar.)—6 year, Ph.D. (Pharmacy-major)—7 year.

<sup>&</sup>lt;sup>26</sup> Would abolish Ph.C., Ph.B., Ph.M. and give only B.S. at end of minimum course of 4 years. A doctor's degree should only be offered as a post-graduate degree.

<sup>&</sup>lt;sup>26</sup> Not less than 4 or perhaps 6. It ought to represent an amount of study equal to that required in medicine.

<sup>&</sup>lt;sup>27</sup> Ph.G. is not a degree and never can be. As a "designation" I think it preferable to any for short course.

<sup>&</sup>lt;sup>28</sup> B.Sc. in Pharmacy only logical one and comparable to what is offered in Agriculture, Engineering, etc.

<sup>29</sup> After proper foundation has been laid.

<sup>30</sup> According to course given.

<sup>31</sup> Abandon Ph.G.

<sup>32</sup> Increase requirements for admission and complete professional training in 3 years.

<sup>33</sup> Certificate of proficiency.

<sup>34</sup> Not as such.

Agr. College of Oregon						
H. B. McWilliams	$No^{12}$	6	Ph.D.	Yes³5		B.S. (Phar.)
A. Ziefle	Yes	6	Phar.D.	Yes <sup>36</sup>		B.S. (Phar.)
Philadelphia College	* 65	•	1 1111.2.	100	• • • •	2.6. (2 1
of Pharmacy and						
Science (Pa.)						
E. F. Cook	Yes	6	Phar.D.37	Yes		Ph.B.
R. P. Fischelis	Yes	6	Phar.D.	Yes		B.S. (Phar.)
C. H. LaWall	Yes	619	Phar.D.	No		B.Sc. (Phar.)
J. W. Sturmer	Yes	6:.9	Phar.D.	No		B.Sc. (Phar.)
C. E. Vanderkleed	Yes	19	Phar.D.	Yes <sup>8</sup>		B.S. (Phar.)
H. W. Youngken	Yes	6	Phar.D.	Yes		B.Sc. (Phar.)
University of Pitts-						
burgh (Pa.)						
J. H. Beal	Yes	3 or 4	Phr.D	Yes		Phr.D.
F. J. Blumenschein	Yes	4	Phr.D.	Yes		Phar.D. (Phr.)
L. K. Darbaker	Yes	4	Phar.D.	Yes		Phar.D.
A. F. Judd	Yes	. 4	Phar.D.	Yes		
J. A. Koch	Yes	4	Phar.D.	Yes		Phar.D.
L. Saalbach	Yes	6	Phr.D.	Yes		Phr.B.
Purdue University (Ind.)						
W. F. Gidley	No	38	Phar.D.	Yes		B.S. (Phar.)
C. O. Lee	No	6 or 7	Phar.D.	Yes		B.S. (Phar.)
C. B. Jordan	12	7	Ph.D.	Yes		B.S. (Phar.)
Medical College of						
South Carolina						
W. G. Harper	Yes	4:	Phar.D.	$ m Yes^{30}$		Phar.D.
W. H. Zeigler	Yes	4:	Phar.D.	Yes		Phar.D.
St. Louis College of						
Pharmacy (Mo.)						
H. M. Whepley	No	• •		Yes		Ph.C.
State College of Agri-						
culture of S. D.						
E. R. Serles	$\mathbf{Y}$ es	40	Phar.D.	Yes <sup>8</sup>		B.Sc. (Phar.)
University of Tennessee			_, _			<b>7.</b> 7.
R. L. Crowe	Yes	4	Phar.D.	No	Ph.C.	Phar.D.
Tulane University (La.)	37		. TO	37		D1 D
O. W. Bethea	Yes	4	Phar.D.	Yes		Phar.D.
G. S. Brown	Yes	4	Phar.D.	Yes		Phar.D.
A. B. Dinwiddie	No	• •	Phar.D.	Yes		Phar.D.
Union University						
(N. Y.)	Yes	6.	Phar.D.	Yes		B.S. (Phar.)
H. C. Muldoon <sup>41</sup>	res	6 -	riiar.D.	1 65		b.s. (rnar.)
Medical College of						
Virginia W. G. Crockett	Yes <sup>12</sup>		Ph.D.	Yes		B.S. (Phar.)
P. F. Fackenthall	Yes <sup>12</sup>		Ph.D.	Yes		B.S. (Phar.)
M. Phipps	Yes <sup>12</sup>		Ph.D.	Yes		B.S. (Phar.)
R. W. Miller	Yes <sup>12</sup>		Ph.D.	Yes		B.S. (Phar.)
W. F. Rudd	Yes <sup>12</sup>	•	Ph.D.	Yes		B.S. (Phar.)

<sup>35</sup> Also Ph.C. for 3-year course.

<sup>36</sup> Provided the curriculum is thorough.

<sup>&</sup>lt;sup>37</sup> To avoid confusion with Ph.D.

<sup>38</sup> If given, not less than 6, preferably 7 years.

<sup>39</sup> With a few changes it is sufficient.

<sup>40</sup> At least 2 years beyond an M.S. degree.

<sup>41</sup> Now at Valparaiso.

State College of Wash- ington						
P. H. Dirstine	Yes	7	Phar.D.	Yes	35	B.S.
University of Washing-						
ton						
C. W. Johnson	Yes	42	Ph.D.	No	43	B.S. (Phar.)
A. W. Linton <sup>44</sup>	Yes	46	Ph.D. (Phar.)	No	35	B.S. (Phar.)
E. V. Lynn	Yes	7	Ph.D. (Phar.)	Yes		B.S. (Phar.)
Western Reserve (Ohio)						
E. Spease	No46	6 or 747	D.Sc.	٠.		B.S.
			or			
			Ph.D.			
E. E. Stanford	$No^{48}$	7	Ph.D.	Yes		B.S. (Phar.)
University of West						
Virginia						
G. A. Bergy	Yes	6	P.D.	No	B.S. Pharm.	B.S. (Phar.)
University of Wiscon-						
sin						
R. H. Denniston	No			Yes		B.S. (Phar.)
E. Kremers	Yes12	7	Ph.D.	No		B.S. (Phar.)
W. O. Richtmann	Yes	7 Pi	n.D. (Pharm.)	No	B.S. Pharm.	B.S. (Phar.)

It is to be observed that prevailing opinion in teaching circles favors the award of the doctor's degree after the completion of six to seven years of study. It is to be noticed further that the abbreviation preferred by a majority of those answering is Phar.D.; that sixty-five of the ninety-six teachers are content with the Ph.G. degree for a two-year course; and that the B.S. as a four-year degree satisfies fifty-eight of those replying.

A large number of teachers added as a footnote that high school graduation should be a prerequisite to any degree work in pharmacy.

CHAPEL HILL, N. C. April 25, 1922.

## TEAM-WORK.\*

Primitive man was rather a rough character if we can judge from the savage races still to be found in out-of-the-way places in the world to-day. He lived and toiled alone; he fought for what he had to eat and wear. The chase supplied him

<sup>42</sup> Same requirement as Ph.D. in leading universities. Ph.D. (Major in Pharmacy).

<sup>&</sup>lt;sup>43</sup> Anything less than a bachelor's degree should be called a certificate.

<sup>44</sup> Deceased

<sup>45</sup> Depending upon time required for thesis work. Approximately 3 years beyond B.S.

<sup>46</sup> D.Sc. or Ph.D. should be offered instead.

<sup>&</sup>lt;sup>47</sup> From 2 to 3 years beyond that of the A.B. or B.S. degree.

<sup>48</sup> Minimum of 3 years. Post-graduate study to include an achievement of discovery of recognized scientific value.

<sup>\*</sup> A talk to the New England Branch of the American Pharmaccutical Association on May 3, 1922, by Charles W. Pearson, Lecturer on Commercial Pharmacy, at the Massachusetts College of Pharmacy.