## Top 50 Authors in Dermatology by Publication Rate (2017-2022)

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## PRACTICE POINTS

- Academic scholarship often is measured by number of citations and h-index. Using these measures, female dermatologists are infrequently represented on top author lists.
- Using the Scopus database to search for the 50 most published dermatology authors from January 1, 2017, to October 7, 2022, 30% were female.
- Higher proportions of female dermatology trainees as well as efforts to increase mentorship and research support for female dermatologists may improve equality in top lists of dermatology citations and h-index values.

## To the Editor:

Citation number and Hirsch index (h-index) have long been employed as metrics of productivity for academic scholarship. The h-index is defined as the highest number of publications (the maximum h value) of an author who has published at least h papers, each cited by other authors at least h times. In a bibliometric analysis of the most frequently cited authors in dermatology from 1974 to 2019 (N=378,276), females comprised 12% of first and 11% of senior authors of the most cited publications, and 6 of the most cited authors in dermatology were women. In another study analyzing the most prolific dermatologic authors based on h-index, 0% from 1980 to 1989 and 19% from 2010 to 2019 were female (N=393,488). Because citation number and h-index favor longer-practicing

dermatologists, we examined dermatology author productivity and gender trends by recent publication rates.

The Scopus database was searched for dermatology publications by using the field category "dermatology" from January 1, 2017, to October 7, 2022. Nondermatologists and authors with the same initials were excluded. Authors were ranked by number of publications, including original articles, case reports, letters, and reviews. Sex, degree, and years of experience were determined via a Google search of the author's name. The h-index; number of citations; and percentages of first, middle, and last authorship were recorded.

Of the top 50 published dermatologists, 30% were female (n=15) and 56% (n=28) held both MD and PhD degrees (Table). The mean years of experience was 26.27 years (range, 6–44 years), with a mean of 29.23 years in females and 25.87 years in males. The mean h-index was 27.96 (range, 8–88), with 24.87 for females and 29.29 for males. The mean number of citations was 4032.64 (range, 235–36,908), with 2891.13 for females and 4521.86 for males. Thirty-one authors were most frequently middle authors, 18 were senior authors, and 1 was a first author. On average (SD), authors were senior or first author in 47.97% (20.08%) of their publications (range, 6.32%–94.93%).

Our study shows that females were more highly represented as top dermatology authors (30%) as measured by publication numbers from 2017 to 2022 than in studies measuring citation rate from 1974 to 2019 (12%)<sup>2</sup> or h-index from 2010 to 2019 (19%).<sup>3</sup> Similarly, in a study of dermatology authorship from 2009 to 2019,

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Rank	Author last name, first/ middle initial(s)	No. of publications Sex		Academic degree(s)	Times Experience, <sup>b</sup> Scopus cited, y	Sco h-ir	Times Scopus cited, h-index n	Rank	Author last name, first/middle initial(s)	No. of publications	Sex	Academic degree(s)	Experience, <sup>b</sup>	Scopus h-index	Times cited, n
_	Fabbrocini, G	511	L	MD, PhD	23	30	4185	16	Biedermann, T	, 253	Σ	MD	Unknown	58	2563
2	Feldman, SR	446 N	Σ	MD, PhD	33	27	2868	17	Maurer, M	252	Σ	MD	21	46	7403
m	Lotti, T	431 N	Σ	MD	41	8	2427	81	Bagot, M	250	ш	MD, PhD	39	24	3415
	Silverberg, JI	391 N	Σ	MD, PhD	0	51	13,297	19	Misery, L	249	Σ	MD, PhD	27	28	3276
2	Wollina, U	382 N	Σ	MD	36	19	2218	20	Parodi, A	246	ш	MD	Unknown	19	1637
9	Pellacani, G	367 N	Σ	MD, PhD	23	29	3465	21	Quaglino, P	243	Σ	MD	24	25	2979
	Argenziano, G	343 N	Σ	MD, PhD	26	27	3216	55	Peris, K	242	ш	M	31	28	3173
ω	Schadendorf, D	336	Σ	MD, PhD	28	88	36,908	23	Zalaudek, I	240	ட	MD	9	27	3367
ි ග	Thyssen, JP	306 N	Σ	MD, PhD	13	39	5482	24	Akiyama, M	239	Σ	MD, PhD	Unknown	20	1674
10	Kabashima, K	302	Σ	MD, PhD	26	36	6073	25	Wu, JJ	229	Σ	MD	16	29	3485
=	Bianchi, L	280 N	Σ	MD	40	25	2497	26	Tchernev, G	224	Σ	MD, PhD	14	13	836
12	Augustin, M	276 N	Σ	MD	31	30	3721	27	Ribero, S	223	Σ	MD, PhD	9	22	1705
6.	Szepietowski, JC	264	Σ	MD, PhD	26	91	5040	28	Egeberg, A	219	Σ	MD, PhD	Unknown	31	3716
14	Lipner, SR	255 F	F	MD, PhD	13	16	1191	59	Paller, AS	216	Н	MD	36	42	5931
15	Ruiz-	255 N	Σ	MD, PhD	19	15	1438	30	Fujimoto, M	211	Σ	MD, PhD	26	22	1764

Figure 2   Figure 3   Figure 3	TABL	Author last name, first/middle	No. of	3	Academic	xperience, <sup>b</sup>		Times s cited,	200	Author last name, first/middle	No. of	ò	Academic	Experience, b	Scopus	
Girolomoni, G. 208         M.         M.D. Ph.D.         36         28         4222 Grant-Kels.         428 Grant-Kels.         428 Grant-Kels.         43         French, LE 197         M.         M.D. Ph.D.         24         27         29           Longo, C.         208         F         MD, Ph.D.         16         20         1960         43         French, LE 197         M.         MD, Ph.D.         26         27         26         189         45         Grant-Kels.         195         M.         MD, Ph.D.         29         44         15         MD         44         15         48         20         44         15         44         15         44         15         44         15         44         15         44         15         44         15         44         15         44         15         44         15         44         15         44 <td< th=""><th>7</th><th></th><th>211</th><th><u> </u></th><th>MD, PhD</th><th>17</th><th>64</th><th>8496</th><th>14</th><th>Rudnicka, L</th><th>198</th><th></th><th>MD, PhD</th><th>Unknown</th><th>24</th><th></th></td<>	7		211	<u> </u>	MD, PhD	17	64	8496	14	Rudnicka, L	198		MD, PhD	Unknown	24	
Longo, C         208         F         MD, PhD         16         20         1960         43         French, LE         197         M         MD, PhD         26         27           Shimizu, H         205         F         MD, PhD         35         1599         45         Grant-Kels, 195         F         MD, PhD         44         15           Worm, M         204         F         MD, PhD         29         32         4107         46         Griffiths, 195         M         MD, PhD         36         37           Sato, S         203         M         MD, PhD         25         19         47         Puig, S         193         F         MD, PhD         30         8           Zillikens, D         203         M         MD, PhD         25         41         Rodo, S         193         F         MD, PhD         30         29           Qarbe, C         199         M         MD, PhD         35         41         8605         49         Tosti, A         192         F         MD         MD, PhD         25         4206         50         Vinay, K         191         M         MD         MD         M         20         Vinay, K         1	32	Girolomoni, G		Σ	MD	36	28	4222	42	Yosipovitch, G	198	Σ	MD	24	29	2756
Patrizi, A         205         F         MD, PhD         42         1214         45         Carant-Kels, 195         197         M         MD, PhD         35         159         45         Grant-Kels, 195         Ph         MD, PhD         44         15           Worm, M         204         F         MD, PhD         29         32         4107         46         Griffiths, 195         M         MD, PhD         35         37           Sato, S         203         M         MD, PhD         25         19         1341         47         Puig, S         193         F         MD, PhD         30         8           Zillikens, D         203         M         MD, PhD         35         41         8605         49         Tosti, A         192         M         MD, PhD         30         29           Puig, L         198         M         MD, PhD         35         4206         Vinay, K         191         M         MD, PhD         30         Vinay, K         191         M         MD         MD         M         MD	33	Longo, C	208	ш	MD, PhD	16	20	1960	43	French, LE	197	Σ	MD	26	27	3267
Shimizu, H         205         M         MD, PhD         35         4107         46         Grint-Kels, 195         195         M         MD, PhD         35         4107         46         Griffiths, GEM         195         M         MD, PhD         35         37           Sato, S         203         M         MD, PhD         25         19         1341         47         Puig, S         193         F         MD, PhD         30         8           Garbe, C         199         M         MD, PhD         35         41         8605         49         Tosti, A         192         F         MD, PhD         30         29           Puig, L         198         M         MD, PhD         35         4206         49         Tosti, A         191         M         MD, PhD         10 <td>34</td> <td>Patrizi, A</td> <td>205</td> <td>ш</td> <td>MD, PhD</td> <td>42</td> <td></td> <td>1214</td> <td>44</td> <td>Lallas, A</td> <td>197</td> <td>Σ</td> <td>MD, PhD</td> <td>10</td> <td>24</td> <td>2901</td>	34	Patrizi, A	205	ш	MD, PhD	42		1214	44	Lallas, A	197	Σ	MD, PhD	10	24	2901
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Puig, L 198 M MD, PhD 35 32 4206 50 Vinay, K 191 M MD Unknown 12	39	Garbe, C	199	Σ	MD, PhD	35	41	8605	49	Tosti, A	192	ш	MD	41	21	1667
	10	Puig, L	198	Σ	MD, PhD	35	32	4206	50	Vinay, K	191	Σ	MD	Unknown	12	671

on average, females represented 51.06% first and 38.18% last authors.  $^{4}\,$ 

The proportion of females in the dermatology work-force has increased, with 3964 of 10,385 (38.2%) active dermatologists in 2007<sup>5</sup> being female vs 6372 of 12,505 (51.0%) in 2019.<sup>6</sup> The lower proportion of practicing female dermatologists in earlier years likely accounts for the lower percentage of females in dermatology citations and h-index top lists during that time, given that citation and h-index metrics are biased to dermatologists with longer careers.

Although our data are encouraging, females still accounted for less than one-third of the top 50 authors by publication numbers. Gender inequalities persist, with only one-third of a total of 1292 National Institutes of Health dermatology grants and one-fourth of Research Project Grant Program (R01) grants being awarded to females in the years 2009 to 2014.<sup>7</sup> Therefore, formal and informal mentorship, protected time for research, resources for childcare, and opportunities for funding will be critical in supporting female dermatologists to both publish highly impactful research and obtain research grants.

Limitations of our study include the omission of authors with identical initials and the inability to account for name changes. Furthermore, Scopus does not include all articles published by each author. Finally, publication number reflects quantity but may not reflect quality. By quantitating dermatology author publication numbers, we found better representation of female authors compared with studies measuring citation number and h-index. With higher proportions of female dermatology trainees and efforts to increase mentorship and research support for female dermatologists, we expect improved equality in top lists of dermatology citations and h-index values.

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