

## Correction: *Reasons for and time to retraction of genetics articles published between 1970 and 2018*

Dal-Ré R, Ayuso C. Reasons for and time to retraction of genetics articles published between 1970 and 2018. *J Med Genet* 2019;56:734–40. doi: 10.1136/jmedgenet-2019-106137.

Table 1 and 2 and supplementary files 1, 2, 3 and 5 require amendments.

In table 1, Reasons for retraction, Unreliable information the correct *n* is 179 (% 10.7, 95% CI 9.2 to 12.3); Authorship issues the correct *n* is 169 (% 10.7; 95% CI 9.2 to 12.3).

**Table 1** Retracted genetics articles (N:1582). Reasons for retraction\* and investigation, in 1970–2018

Reasons for retraction	N (%) (95% CI)	Reasons for retraction†	N (%) (95% CI)
Fabrication / falsification <sup>a</sup>	377 (23.8) (21.7 to 26.0)	Results not reproducible	117 (7.4) (6.2 to 8.8)
Plagiarism <sup>b</sup>	148 (9.4) (8.0 to 10.9)	Contamination <sup>g</sup>	27 (1.7) (1.1 to 2.5)
Duplication <sup>c</sup>	384 (24.3) (22.2 to 26.5)	Conflicts of interest	13 (0.8) (0.4 to 1.4)
Unreliable information <sup>d</sup>	170 (10.7) (9.2 to 12.3)	Fake peer review	182 (11.5) (10.0 to 13.2)
Authorship issues <sup>e</sup>	169 (10.7) (9.2 to 12.3)	Error by journal/publisher	33 (20.9) (1.4 to 2.9)
Investigation <sup>f</sup>	587 (37.1) (34.7 to 39.5)	Limited or no information	90 (5.7) (4.6 to 6.9)

The reasons for retraction and investigation of retracted articles as per the Retraction Watch database's nomenclature: (a) Falsification/fabrication of data, images and of results, and manipulation of results and of images; (b) Euphemism for plagiarism and plagiarism of article, data, images or text; (c) Duplication of article, data, image and of text and euphemism for duplication; (d) Unreliable data, image or results; (e) Breach of policy by author, concerns/ issues about authorship, forged authorship, lack of approval from author, breach of policy by author and objections by author; (f) Investigation by company/institution, journal/publisher, US Office of Research Integrity or by third party; (g) Of cell lines/issues, materials or reagents.

\*Description of all reasons for retraction are provided in online supplementary information-2.  
†Reasons with less than 50 retracted articles in one or both groups (medical genetics, non-medical genetics)  
n, number of retracted articles because of the specified reason; N, number of retracted articles.

In table 2, columns 1970–2018, Medical Genetics, Authorship issues, the correct *n* is 63 (% 9.1; 95% CI 7.0 to 11.3). Column 1970–2018, Non-medical genetics, 'Unreliable information' the correct *n* is 101 (% 11.3; 95% CI 9.2 to 13.4); 'Authorship issues' the correct *n* is 106 (% 11.9; 95% CI 9.8 to 14.0). These three errors did not impact neither the statistical analyses results nor the conclusions of the research.

**Table 2** Retracted medical genetics and non-medical genetics articles in the retraction watch database, in 1970–2018 and in five time periods. (A). reasons for retraction and investigation. (B). country of origin of authors of retracted articles. information pertaining to the seven top countries with the highest number of biomedical retracted articles<sup>1</sup>

**A. Reason for retraction and investigation of retracted articles**

Reason for retraction	1970–2018		1970–2000		2001–2005		2006–2010		2011–2015		2016–2018	
	Medical Genetics N:690 n (%) (95% CI)	Non-Medical Genetics N:892 n (%) (95% CI)	Medical Genetics N:55 n (%) (95% CI)	Non-Medical Genetics N:95 n (%) (95% CI)	Medical Genetics N:91 n (%) (95% CI)	Non-Medical Genetics N:122 n (%) (95% CI)	Medical Genetics N:159 n (%) (95% CI)	Non-Medical Genetics N:255 n (%) (95% CI)	Medical Genetics N:326 n (%) (95% CI)	Non-Medical Genetics N:301 n (%) (95% CI)	Medical Genetics N:59 n (%) (95% CI)	Non-Medical Genetics N:119 n (%) (95% CI)
Fabrication / falsification <sup>a</sup>	128 (18.6) <sup>g</sup> (15.7, 21.7)	249 (27.9) <sup>g</sup> (25.0 to 31.0)	17 (30.9) (19.1 to 44.8)	28 (29.5) (20.6 to 39.7)	19 (20.9) (13.1 to 30.7)	47 (38.5) (29.9 to 47.8)	55 (34.6) (27.2 to 42.5)	86 (33.7) (27.9 to 39.9)	33 (10.1) <sup>g</sup> (7.1 to 13.9)	83 (27.6) <sup>g</sup> (22.6 to 33.0)	4 (6.8) (1.9 to 16.5)	5 (4.2) (1.4 to 9.5)
Plagiarism <sup>b</sup>	71 (10.3) (8.1 to 12.8)	77 (8.6) (6.9 to 10.7)	2 (3.6) (0.4 to 12.5)	2 (2.1) (0.3 to 7.4)	8 (8.8) (3.9 to 16.6)	4 (3.3) (0.9 to 8.2)	12 (7.5) (4.0 to 12.8)	23 (9.0) (5.8 to 13.2)	36 (11.0) (7.9 to 15.0)	34 (11.3) (8.0 to 15.4)	13 (22.0) (12.3 to 34.7)	14 (11.8) (6.6 to 19.0)
Duplication <sup>c</sup>	149 (21.6) (18.6 to 24.9)	235 (26.3) (23.5 to 29.4)	0 (0.0) (0.0 to 6.5)	10 (10.5) (5.2 to 18.5)	33 (36.3) (26.4 to 47.0)	33 (27.0) (19.4 to 35.8)	46 (28.9) (22.0 to 36.6)	85 (33.3) (27.6 to 39.5)	60 (18.4) (14.3 to 23.0)	78 (25.9) (21.1 to 31.3)	10 (16.9) (8.4 to 29.0)	29 (24.4) (17.0 to 33.1)
Unreliable information <sup>d</sup>	69 (10.0) (7.9 to 12.5)	101 (11.3) (9.2–13.4)	10 (18.2) (9.1 to 30.9)	15 (15.8) (9.1 to 24.7)	14 (15.4) (8.7 to 24.5)	15 (12.3) (7.0 to 19.5)	19 (11.9) (7.4 to 18.0)	37 (14.5) (10.4 to 19.4)	18 (5.5) (3.3 to 8.6)	18 (6.0) (3.6 to 9.3)	8 (13.6) (6.0 to 25.0)	16 (13.4) (7.9 to 20.9)
Authorship issues <sup>e</sup>	63 (9.1) (7.0–11.3)	106 (11.9) (9.8–14.0)	8 (14.5) (6.5 to 26.7)	12 (12.6) (6.7 to 21.0)	7 (7.7) (3.1 to 15.2)	18 (14.8) (9.0 to 22.3)	10 (6.3) (3.1 to 11.3)	34 (13.3) (9.4 to 18.1)	27 (8.3) (5.5 to 11.8)	34 (11.3) (8.0 to 15.4)	11 (18.6) (9.7 to 30.9)	8 (6.7) (2.9 to 12.8)
Investigation <sup>f</sup>	312 (45.2) <sup>g</sup> (41.5 to 49.0)	275 (30.8) <sup>g</sup> (27.8 to 34.0)	16 (29.1) (17.6 to 42.9)	25 (26.3) (17.8 to 36.4)	23 (25.3) (16.7 to 35.5)	50 (41.0) (32.2 to 50.3)	71 (44.7) (36.8 to 52.7)	86 (33.7) (27.9 to 39.9)	182 (55.8) <sup>g</sup> (50.3 to 61.3)	97 (32.2) <sup>g</sup> (27.0 to 37.8)	20 (33.9) (22.1 to 47.4)	17 (14.3) (8.5 to 21.9)

**B. Country of origin of authors of retracted articles**

China	296	213	0	1	10	4	32	49	222	104	32	55
Germany	35	40	10	8	11	7	10	11	4	12	0	2
India	13	61	1	1	1	3	5	16	3	27	3	14
Japan	52	74	4	11	16	24	24	20	6	14	2	5
South Korea	27	37	1	2	11	6	6	8	8	17	1	4
UK	17	52	1	10	4	12	7	18	4	11	1	1
USA	197	329	30	51	36	70	64	107	57	79	10	22

(A) or number of retracted articles with at least one author working in the specified country (B). 95% CI: 95% CI. Many articles were authored by individuals working in more than 1 of the specified countries. Most articles were retracted because of 2 or more reasons.

The reasons for retraction and investigation of retracted articles as per the Retraction Watch database's nomenclature: (a) Falsification/fabrication of data, images and of results, and manipulation of results and of images; (b) Euphemism for plagiarism and plagiarism of article, data, images or text; (c) Duplication of article, data, image and of text and euphemism for duplication; (d) Unreliable data, image or results; (e) Breach of policy by author, concerns/ issues about authorship, forged authorship, lack of approval from author, breach of policy by author and objections by author; (f) Investigation by company/institution, journal/publisher, US Office of Research Integrity or by third party; (g) *p*<0.001.

<sup>1</sup>Comprises genetic articles with many other disciplines such as, for instance, anthropology, biology, biochemistry, botany, ecology, food science, microbiology, veterinary and zoology.  
n, number of retracted articles because of the specified reason; N, number of retracted articles.



## OPEN ACCESS

**Open access** This is an open access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited, appropriate credit is given, any changes made indicated, and the use is non-commercial. See: <http://creativecommons.org/licenses/by-nc/4.0/>.

© Author(s) (or their employer(s)) 2020. Re-use permitted under CC BY-NC. No commercial re-use. See rights and permissions. Published by BMJ.

*J Med Genet* 2020;**57**:435–436. doi:10.1136/jmedgenet-2019-106137corr1

