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The rapid, massive infection of the scientific literature and authors by COVID-19

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ABSTRACT

Importance: COVID-19 is a major global crisis and the scientific community has been mobilized to deal with this crisis.

Objective: To estimate the extent to which the scientific workforce in different fields has been engaged publishing papers relative to the COVID-19 pandemic.

Design, setting, and participants: We evaluated Scopus (data cut, December 1, 2020) for all indexed published papers and preprints relevant to COVID-19. We mapped this COVID-19 literature in terms of its authors across 174 subfields of science according to the Science Metrix classification. We also evaluated the extent to which the most influential scientists across science (based on a composite citation indicator) had published COVID-19-related research. Finally, we assessed the features of authors who published the highest number of COVID-19 publications and of those with the highest impact in the COVID-19 field based on the composite citation indicator limited to COVID-19 publications.

Main outcomes and measures: Publishing scientists (authors) and their published papers and citation impact.

Results: 84,180 indexed publications were relevant to COVID-19 including 322,279 unique authors. The highest rates of COVID-19 publications were seen for authors classified in Public Health and in Clinical Medicine, where 11.3% (6,388/56,516) and 11.1% (92,570/833,060) of authors, respectively, had published on COVID-19. Almost all (173/174) subfields (except for Automobile Design & Engineering) had some authors publishing on COVID-19. Among active scientists at the top 2% of citation impact, 15,803 (13.3%) had published on COVID-19 in their publications in the first 11 months of 2020.

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The rates were the highest in the fields of Clinical Medicine (27.7%) and Public Health (26.8%). In 83 of the 174 subfields of science, at least one in ten active, influential authors in that field had authored something on COVID-19. 65 authors had already at least 30 (and up to 133) COVID-19 publications each. Among the 300 authors with the highest composite citation indicator for COVID-19 publications, 26 were journalists or editors publishing news stories or editorials in prestigious journals; most common countries for the remaining were China (n=77), USA (n=66), UK (n=27), and Italy (n=20).

Conclusions and relevance: The scientific literature and publishing scientists have been rapidly and massively infected by COVID-19 creating opportunities and challenges. There is evidence for hyper-prolific productivity.

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The acute crisis of COVID-19 has led to a major effort by the scientific community to generate evidence about the new coronavirus and its pandemic. Here, we dissect the way that COVID-19 has spread like a rapid, widespread infection in the scientific literature and among researchers, as more and more papers and authors have focused on this exciting, timely topic. We aim to understand which scientific areas and which types of scientists have been most mobilized by the pandemic, and we discuss the implications of this rapid "covidization" of the research enterprise.

METHODS

We used a copy of the Scopus database[1] extracted on December 1, 2020. COVID-19 publications have been specified as those returned by the query: TITLE-ABS-KEY(sars-cov-2 OR "coronavirus 2" OR "corona virus 2" OR covid-19 OR {novel coronavirus} OR {novel corona virus} OR 2019-ncov OR covid OR covid19 OR ncovid-19 OR "coronavirus disease 2019" OR "corona virus disease 2019" OR corona-19 OR SARS-nCoV OR ncov-2019) AND PUBYEAR > 2018. We further filtered the dataset using the Elsevier International Center for the Study of Research (ICSR) Lab infrastructure to publications indexed (loaded) in Scopus in 2020 only, and with a publication year of 2020 or greater. In order to evaluate publication dates by month, we have used the publication month and year where available. When publication month was not available, and when the publication date exceeded the indexing date, we used the indexing date. This accounts, for example, for cases where an article is published today, but the official journal issue is due later. Our evaluation is targeted at the date at which publications became available to the public rather than official publication dates.

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We further focused on the 2,759,916 authors who have a Scopus-indexed publication in the first 11 months of 2020 and who have also authored in their entire career at least 5 Scopus-indexed papers classified as articles, reviews or conference papers. This allows exclusion of authors with limited presence in the scientific literature as well as some author IDs that may represent split fragments of the publication record of some more prolific authors.

Field classification

All authors were assigned to their most common field and subfield discipline of their career. We used the Science Metrix classification of science, which is a standard mapping of all science into 21 main fields and 174 subfield disciplines.[2,3]

Influential scientists

We also examine how COVID-19 has affected the publication portfolio of researchers whose work has the largest citation impact in the literature. On the one hand, these scientists are already well established and thus may have less need or interest to venture into a new field. On the other hand, these scientists are also more productive and competitive, therefore they may be faster in moving into a rapidly emerging, new important frontier. We used the career-long statistics calculated with the Scopus database of November 1, 2020, using the code as provided with the supplemental data recently published for the most cited authors across science.[4-6] Each author has been assigned to a main field and main subfield based on the largest proportion of publications across fields and analysis is restricted to the top 2% authors per Science Metrix subfield. We have developed a composite citation indicator[4,5] and accordingly 140,885 scientists can be classified as being in the top 2% of their main subfield discipline based on the citations

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that their work received in 2019. Of those, 118,916 were active and had published at least 1 paper also in 2020.

Topics of prominence

In order to visualize the growth and spread of the COVID-19 scientific literature across scientific fields and over time, we used a circle of scientific fields that has been previously developed[7] and which places the 333 Scopus journal categories sequentially around the perimeter of a circle. There are 27 high-level categories that are placed first and ordered in a manner that emerges naturally from a meta-analysis of the layouts of other science maps created using multiple databases and methods.[8] Each of the 27 categories is assigned a separate color. The remaining 306 lower-level journal categories are then ordered within the corresponding high-level categories using factor analyses based on citation patterns. Each of the 333 journal categories thus has a fixed position on the perimeter of the circle.

The full Scopus citation graph of well over 50 million articles and 1 billion citation links was used to cluster articles into over 90,000 topics using established methods.[9] Each topic is assigned a position within the circle based on triangulation of the positions of its constituent papers, each of which takes on the positional characteristics of its journal category. Topics are colored by their dominant journal category and area-sized proportionally based on the number of objects (e.g., papers, authors) being counted for the particular analysis. This circle of science and topic visualization are used in Elsevier's SciVal tool. For the display of authors per topic, we have assigned authors to one topic by taking the topic with the highest proportion of publications per author.

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Prolific authors and authors with high citation impact of their COVID-19 publication record

We also mapped the most prolific authors of the published COVID-19 corpus and the authors whose COVID-19 publications to-date had had the highest citation impact.

For prolific productivity, we ranked the authors according to decreasing number of COVID-19 published items. We show detailed data on extremely prolific authors with over 30 COVID-19 published items to-date.

Citation impact was assessed with the previously proposed citation indicator[4-6] that combines information on 6 indices: total citations, Hirsch h-index, Schreiber hm-index, citations to single-authored papers, citations to first- or single-authored papers, and citations to first-, single- or last-authored papers. This avoids focusing simply on a single traditional metric such as citations, where it is expected that the authors of the earliest highly-cited papers would practically monopolize the top of the list, even if they had published a single paper and they were co-authors among many other authors. Self-citations are excluded from all calculations.[5,6] We present descriptive data on the institution, country and two most common scientific subfields (per Science Metrix classification) for the top-300 authors in that list.

We avoid comparisons based on statistical tests, as the analyses presented here were aimed to be descriptive and exploratory.

RESULTS

COVID-19 papers and authors

As of December 1, 2020, Scopus classified 84,180 papers as relevant to COVID-19, which accounts for 2.8% of the 2,986,038 papers across all science published and

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indexed in Scopus in the first 11 months of 2020. The 84,180 published items were classified by Scopus as articles (43,965, 52%), letters (13,757, 16%), reviews (9,302, 11%), notes (6,647, 8%), editorials (5,833, 7%), preprints from ArXiv, BioRxiv and ChemRxiv (2,027, 2%), conference papers (906, 1%), and other items (1,743, 2%).

The overall share of COVID-19 papers has steadily increased over time and has exceeded 3.7% among papers published in November 2020. The 84,180 COVID-19 papers include 322,279 unique authors (with different Scopus IDs), amounting to 4.5% of the 7,102,710 author IDs who have published at least 1 paper of any type and on any topic in 2020. Most common countries of these 322,279 authors were USA (n=63,777), China (n=40,539), Italy (n=25,044), UK (n=21,755), India (n=13,524) and Spain (n=12,784) accounting for a total of 177,423 authors (55%). China had more authors involved in COVID-19 papers until May, but USA surpassed China afterwards.

Among the 2,759,916 authors who have published anything that is Scopus-indexed in the first 11 months of 2020 and who have also authored in their entire career at least 5 Scopus-indexed papers that are classified as articles, reviews or conference papers, by the end of November 2020, 144,403 of these authors (5.2%), had at least one published and indexed COVID-19 paper.

Scientific fields and subfields

Among the 2,959,916 authors, at the field level the highest “infection” rates with COVID-19 publications were seen in authors whose main field in their career had been Public Health and in Clinical Medicine: 11.3% (6,388/56,516) and 11.1% (92,570/833,060) of authors in these two fields, respectively, were “infected” by the end of November. However, authors “infected” with COVID-19 were seen across all 21 major

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fields. The lowest percentage was seen in the field of Physics & Astronomy (0.7%), from which even 1,779 authors had their work "infected" by COVID-19. At the subfield discipline level, the highest "infection" rate of authors was seen (Table 1) in Emergency and Critical Care Medicine (26.3%). However, "infection" rates were higher than 10% (i.e. at least one in ten authors in that field had authored something on COVID-19) in 32 subfield disciplines and higher than 5% (at least one in twenty authors) in 71 subfield disciplines. Almost all (173/174) subfields (except for Automobile Design & Engineering) had some authors publishing on COVID-19. Supplementary Table 1 gives detailed data for COVID-19 "infection rates" of authors across all subfield disciplines.

27% of the authors published their COVID-19 research primarily in a subfield discipline that was not among the top 3 subfield disciplines where they had published most commonly during their career. Sometimes the fields of expertise of authors seemed remote from COVID-19, e.g. an expert on solar cells publishing on COVID-19 in healthcare personnel. Even experts specializing in their past work on very remote disciplines such as fisheries, ornithology, entomology or architecture had published on COVID-19.

Influential scientists and COVID-19 publications

Influential scientists were even more likely to be "infected" with COVID-19 (Supplementary Table 2). Among the 118,916 influential scientists active in publishing in 2020, 15,803 (13.3%) had been "infected" by COVID-19 in their publications in the first 11 months of 2020. The "infection" rate was the highest in the fields of Clinical Medicine (27.7%) and Public Health (26.8%). Among subfield disciplines, the highest "infection" rate of such active, influential authors was seen (Table 2) in Emergency & Critical Care Medicine (58.1%), Allergy (50.2%) and Virology (48.0%). However, "infection" rates

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were higher than 10% (i.e. at least one in ten authors in that field had authored something on COVID-19) in 83 of 174 subfield disciplines across science and higher than 5% (at least one in twenty authors) in 116 subfield disciplines.

Topics of prominence

Figure 1 shows the growth and spread of COVID-19 papers, authors of COVID-19 papers, and high-impact authors of COVID-19 papers (those who belong to the top-2% of impact, as discussed previously) across scientific topics. As shown, there is a strong response of the literature and of the scientific workforce in some specific thematic areas, but there is also increasing and substantial involvement of scientists and respective publications, even in remote topics.

Productivity for COVID-19 publications

A total of 1,560 author IDs in Scopus had 10 or more Scopus-indexed published items. Setting a threshold of at least 15, 20, 25, and 30 items, the number of such extremely prolific authors was 483, 216, 107, and 67. Table 2 shows the 65 authors with the highest productivity (30 or more COVID-19 published items indexed in Scopus; 2 authors had their papers split in two ID profiles each, which we merged). Of these 65 authors, 3 were BMJ news journalists, one was an anonymous Lancet editorial column, and one was an audio interview editor at the New England Journal of Medicine. Among the remaining 60 scientists, the most common countries were Italy (n=10), China (n=9), USA (n=8), Hong Kong (n=6), India (n=5), and UK (n=5).

Authors with highest citation impact for COVID-19 publications

Supplementary Table 3 shows the characteristics of COVID-19 authors ranked with the highest citation impact based on the composite citation indicator for their COVID-

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19-related publications. Among the 300 authors with the highest composite citation indicator scores, 26 were journalists or editors publishing news stories or editorials in their high-impact general medical or science journals. Most common countries for the remaining authors were China (n=77), USA (n=66), UK (n=27), Italy (n=20), Hong Kong (n=11), and India (n=11). Of the 274 scientists, Microbiology was one of their top 2 publishing Science Metrix subfields for 89 (32.5%), followed by General & Internal Medicine (n=59, 21.5%), Virology (n=53, 19.3%), and Immunology (n=35, 12.8%).

DISCUSSION

Approximately 2.8% of the scientific literature published in the first 11 months of 2020 and more than 4% of all scientists publishing in that period were "infected" in their published work by COVID-19. The relative proportion of COVID-19 papers increased rapidly over time. The most influential scientists across science were even more commonly engaged with COVID-19 research. Roughly one in seven active, influential scientists quickly added or adjusted their publishing portfolio to include COVID-19. Scientists in some scientific fields were highly engaged with COVID-19 work, with rates exceeding 1 in 10 for scientists publishing in Clinical Medicine and Public Health, and exceeding 1 in 4 when the most influential scientists working in these fields were considered. Some subfields have even more massive involvement of scientists in COVID-19 work. However, almost every single subfield had some scientists publishing on COVID-19. The spread of COVID-19 interests across the map of science was rapid and extensive.

Our data probably even underestimate the explosive growth of COVID-19-related work, since some papers are published but not yet indexed, while some others have been released only as preprints (a popular method of disseminating information in the COVID-

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19 era)[10,11] and most COVID-19 preprints appear in medRxiv,[12] a repository not yet covered by Scopus. Probably over 100,000 COVID-19 papers are published in 2020. Undoubtedly many more papers will continue to be published in 2021 and beyond. Therefore, while 4.5% of the publishing scientific community and 13.3% of the most influential scientists had already authored COVID-19 publications at the time of our analysis, these proportions may become much larger in the future.

Many authors had published an astonishingly large number of COVID-19 items, and 65 had published 30 or more in such minimal time. Given delays in indexing, these numbers may underestimate the hyper-prolific productivity. The concentration of hyper-prolific authors in countries like China, Hong Kong, and Italy may be related to the early outbreak of the pandemic in these countries, as well as prevalent co-authorship practices in these countries. Importantly, meritorious productivity versus sloppiness is difficult to disentangle without examining each case in depth.

We also addressed the citation impact of authors for their COVID-19 work. The top ranks included many journalists and editors who publish many news stories and editorials in their highly visible general medical and science journals. This news/editorial function may be helpful. These published items may be readily used for citations, as they are often published well in advance of the scientific work to which they refer. However, the quality, standards and validity of rapidly deployed non-peer-reviewed items is unknown. Flashy news, media, and editorializing may be prominent during the pandemic.[13-16] It is unknown whether non-peer-reviewed news stories and in-house editorials in major journal help against the “infodemic” or sometimes contribute to make things worse. Excluding journalists and editors of prestigious journals, the key countries of

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the authors with the highest composite citation indicator tended to be similar to the countries of the most prolific authors. A few subfields accounted for the lion's share of the authors with the highest composite citation indicator.

The rapid response of the scientific community to the COVID-19 crisis is largely a welcome phenomenon. Many scientists quickly focused their attention to an urgent situation and an entirely new pathogen and disease. This demonstrates that the scientific community has sufficient flexibility to shift attention rapidly to major issues. Much was swiftly learned on COVID-19. On the other hand, the quality of the published work was not assessed in our analysis, but several evaluations raise concerns about many of the COVID-19 publications being of low quality.[17-19] Massive productivity has been described in the pre-COVID era, as affecting researchers across many fields[20] and may be also a feature for COVID-19 research. Extreme productivity would be worrisome if it sacrifices quality.

The spread of COVID-19 publications in topics and authors traditionally working beyond key relevant disciplines further testifies the great attractiveness of COVID-19 as a field of investigation. The favorable aspect of this expansion is the ability to bring in specialists with expertise in diverse fields, thus fostering interdisciplinarity in a multi-dimensional crisis. However, if many scientists have ventured to work and publish in areas where they lack fundamental expertise, their contributions may be problematic or outright erroneous.

Furthermore, there has been a rapid mobilization of funding into COVID-19 research, with some areas, e.g. vaccine development, earmarked for urgent work. This may have worked as an additional attractor of scientists to this rapidly expanding field.

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However, urgency does not guarantee good quality and robustness. Much of the produced publication record may not be very informative and some may be fundamentally flawed. Flaws go beyond retractions, which account for <0.1% of published COVID-19 work.[21,22]

Certain limitations should be discussed. First, current Scopus data have high precision and recall (98.1% and 94.4%, respectively),[1] but some authors may be split in two or more records and some ID records may include papers from two or more authors. These errors may affect single authors but are unlikely to affect the overall picture obtained in these analyses. Second, field and subfield classification follows a well-known established method, though published items are not precisely categorizable in scientific fields. Third, data on citation impact of COVID-19 authors are too early to appraise with confidence, and the ranking of specific scientists is highly tenuous and can quickly change with relatively small changes in citation counts. The bigger picture of author characteristics rather than specific names should be the focus of these data. Fourth, since many COVID-19 accepted papers and preprints are not yet indexed in Scopus, fields with slower publication and indexing may be relatively under-represented in the analyses.

As the pandemic matures, the science of COVID-19 should also mature. Important remaining questions can be raised about the extent and duration of this "covidization" of research. Will scientists continue to flock from different disciplines into COVID-19 research? What consequences might this have for other areas of important investigation – could non-COVID-19 topics be unfairly neglected? Is the response proportional to the magnitude of the crisis? What is the validity and utility of all these publications? Tracking both the pandemic and the scientific response to the pandemic will be useful to make

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decisions about planning for the growth, reallocation of interest, and old-versus-new priorities for science.

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Table 1. Subfields with highest rates of authors publishing on COVID-19*

Subfield	Number of authors	Authors with COVID-19 paper(s)	%	Number of influential authors	Influential authors with COVID-19 paper(s)	%
Emergency & Critical Care Medicine	12620	3317	26.3%	516	300	58.1%
Anesthesiology	11874	2712	22.8%	608	196	32.2%
Applied Ethics	1956	432	22.1%	87	39	44.8%
Virology	23307	4633	19.9%	1030	494	48.0%
Allergy	5408	1023	18.9%	271	136	50.2%
Respiratory System	20245	3740	18.5%	939	428	45.6%
Epidemiology	2965	521	17.6%	160	60	37.5%
General & Internal Medicine	37069	6271	16.9%	1853	744	40.2%
Surgery	30363	4898	16.1%	1394	489	35.1%
Geriatrics	3585	574	16.0%	168	76	45.2%
Otorhinolaryngology	11754	1724	14.7%	533	184	34.5%
Cardiovascular System & Hematology	61073	8916	14.6%	2729	1062	38.9%

*the subfields shown are those with the highest proportions of authors with COVID-19 papers among all authors. See Methods for definition of being an influential author.

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Table 2. Extremely prolific authors with at least 30 COVID-19 publications indexed in Scopus by December 1, 2020

AUTHOR	INSTITUTION	COUNTRY	COVID-19 ITEMS
Wiwanitkit, Viroj	Hainan Medical University	China	133
Mahase, Elisabeth	BMJ		129
Iacobucci, Gareth	BMJ		105
Rodriguez-Morales, Alfonso J.	Universidad Tecnológica de Pereira	Colombia	89
Lippi, Giuseppe	Università degli Studi di Verona	Italy	87
Rimmer, Abi	BMJ		69
Dhama, Kuldeep	Indian Veterinary Research Institute	India	65
Goldust, Mohamad	Universitätsspital Basel	Switzerland	55
Joob, Beuy	Sanitation 1 Medical Academic Center	Thailand	50
Henry, Brandon M.	Cincinnati Children's Hospital Medical Center	USA	48
Rezaei, Nima	Tehran University of Medical Sciences	Iran	48
Zhong, Nanshan	Guangzhou Medical University	China	47
Liu, Lei	Second Affiliated Hospital of Southern University of Science and Technology	China	46
Raoult, Didier	Aix Marseille Université	France	45
Lechien, Jerome R.	Universitat de Barcelona	Spain	45
Hasan, Syed Shahzad	The University of Newcastle, Australia	Austria	45
Baden, Lindsey	Brigham and Women's Hospital	USA	44
Buonsenso, Danilo	Fondazione Policlinico Universitario Agostino Gemelli IRCCS Università Cattolica del Sacro Cuore	Italy	43
Kow, Chia Siang	International Medical University	Malaysia	43
Lu, Hongzhou	Fudan University	China	42
Chan, Jasper Fuk Woo	The University of Hong Kong, State Key Laboratory of Emerging Infectious Diseases	Hong Kong	42
Harky, Amer	Liverpool Heart and Chest Hospital	UK	42
Saussez, Sven	Université de Mons	Belgium	41
To, Kelvin Kai Wang	The University of Hong Kong, State Key Laboratory of Emerging Infectious Diseases	Hong Kong	40
Rubin, Eric J.	Harvard T.H. Chan School of Public Health	USA	40
Lotti, Torello	Università degli Studi di Roma La Sapienza	Italy	39
Sahu, Kamal Kant	Saint Vincent Hospital Worcester	USA	38
Fabbrocini, Gabriella	Università degli Studi di Napoli Federico II	Italy	38
Landoni, Giovanni	IRCCS San Raffaele Scientific Institute	Italy	38
The Lancet	The Lancet		37
Bruno, Raffaele	Università degli Studi di Pavia	Italy	37
Morrissey, Stephen	New England Journal of Medicine		37
Sah, Ranjit	Tribhuvan University Teaching Hospital	Nepal	36
Zangrillo, Alberto	IRCCS San Raffaele Scientific Institute	Italy	35
He, Daihai	Hong Kong Polytechnic University	Hong Kong	35
Sheng, Jifang	The State Key Laboratory for Diagnosis and Treatment of Infectious Diseases	China	35

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Yuen, K. Y.	The University of Hong Kong Li Ka Shing Faculty of Medicine	Hong Kong	34
Zhao, Shi	Chinese University of Hong Kong	Hong Kong	34
Bonilla-Aldana, D. Katterine	Universidad Tecnológica de Pereira	Colombia	34
Greninger, Alexander L.	University of Washington, Seattle	USA	34
Nau, Jean Yves	Haschich	Switzerland	34
Plebani, Mario	Azienda Ospedaliera Di Padova	Italy	33
Bragazzi, Nicola L.	Università degli Studi di Genova	Italy	33
Gostin, Lawrence O.	Georgetown Law	USA	32
Young, Barnaby Edward	Tan Tock Seng Hospital	Singapore	32
Hopkins, Claire	Guy's and St Thomas' NHS Foundation Trust	UK	32
Hung, Ivan Fan Ngai	The University of Hong Kong Li Ka Shing Faculty of Medicine	China	32
Vaishya, Raju	Indraprastha Apollo Hospitals	India	32
Wang, Xinghuan	Zhongnan Hospital of Wuhan University	China	32
Griffiths, Mark D.	Nottingham Trent University	UK	32
Signorelli, Carlo	Università Vita-Salute San Raffaele	Italy	32
Tiwari, Ruchi	College of Veterinary Science India	India	32
Jerome, Keith R.	Fred Hutchinson Cancer Research Center	USA	32
Cowling, Benjamin J.	The University of Hong Kong Li Ka Shing Faculty of Medicine	Hong Kong	31
Memish, Ziad A.	Ministry of Health Saudi Arabia	Saudi Arabia	31
Leo, Yee Sin	Tan Tock Seng Hospital	Singapore	31
Eggo, Rosalind M.	London School of Hygiene & Tropical Medicine	UK	31
Grover, Sandeep	Postgraduate Institute of Medical Education & Research, Chandigarh	India	31
Drosten, Christian	Charité – Universitätsmedizin Berlin	Germany	30
Khunti, Kamlesh	University of Leicester	UK	30
Hu, Yu	Tongji Medical College	China	30
Gholamrezanezhad, Ali	Keck School of Medicine of USC	USA	30
Yang, Lin	Hong Kong Polytechnic University	China	30
Chiesa-Estomba, Carlos M.	Universitat de Barcelona	Spain	30
Bhatnagar, Sushma	Institute Rotary Cancer Hospital India	India	30

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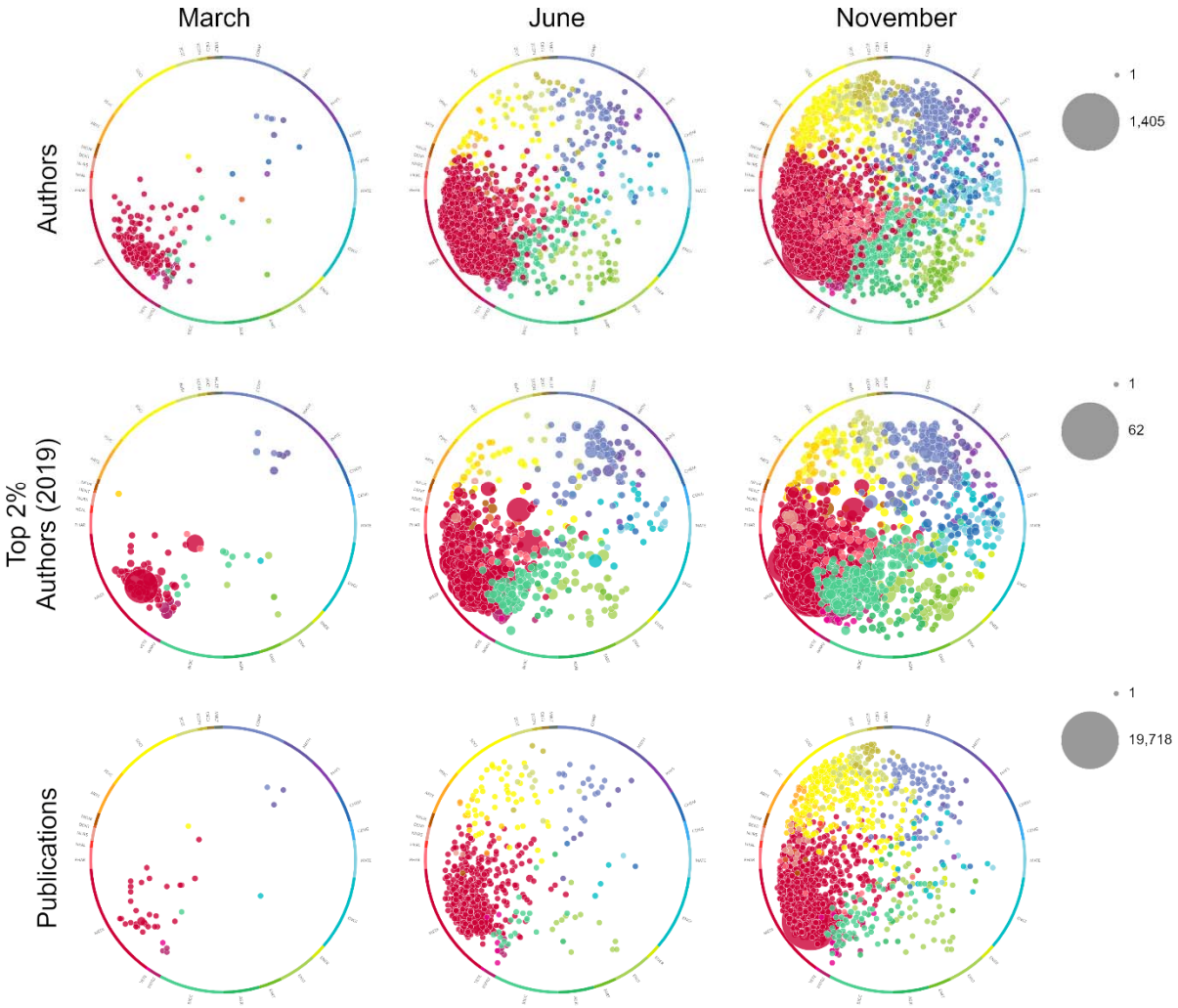

Figure 1 Topics of prominence for COVID-19 authors and publications. The columns represent the progress of the spread at 3 different measuring points: by end of March, June and November. The first row represents the spread of authors of COVID-19 papers. The authors are assigned to their most dominant topic in their career. The data is filtered to include only topics with >=5 authors assigned. The second row shows similarly the topics of the top 2% authors by field (2019) according to a composite citations indicator.

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Only topics with 2 or more authors are displayed. The third row displays the spread of COVID-19 publications across topics. The minimum threshold for a topic to be displayed is set to 5 COVID-19 publications.

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Supplementary Table 1. Number of authors and number of authors with at least 1 COVID-19-related publication. Data are limited to authors who have published anything that is Scopus-indexed in the first 11 months of 2020 and who have also authored in their entire career at least 5 Scopus-indexed papers that are classified as articles, reviews or conference papers, by the end of November 2020. Of a total of 2,759,916 such authors, 144,403 had at least one published and indexed COVID-19 paper. The Table shows data on 2,750,728 and 144,259 authors who can be classified in a subfield (the most common subfield for the papers that they have published in their career).

SUBFIELD	FIELD	Number of authors	Authors with COVID-19 paper(s)	%
Emergency & Critical Care Medicine	Clinical Medicine	12620	3317	26,3%
Anesthesiology	Clinical Medicine	11874	2712	22,8%
Applied Ethics	Philosophy & Theology	1956	432	22,1%
Virology	Biomedical Research	23307	4633	19,9%
Allergy	Clinical Medicine	5408	1023	18,9%
Respiratory System	Clinical Medicine	20245	3740	18,5%
Epidemiology	Public Health & Health Services	2965	521	17,6%
General & Internal Medicine	Clinical Medicine	37069	6271	16,9%
Surgery	Clinical Medicine	30363	4898	16,1%
Geriatrics	Clinical Medicine	3585	574	16,0%
Otorhinolaryngology	Clinical Medicine	11754	1724	14,7%
Cardiovascular System & Hematology	Clinical Medicine	61073	8916	14,6%
Public Health	Public Health & Health Services	22942	3168	13,8%
Medical Informatics	Information & Communication Technologies	4642	636	13,7%
Microbiology	Biomedical Research	57643	7879	13,7%
Urology & Nephrology	Clinical Medicine	23611	3224	13,7%
Pediatrics	Clinical Medicine	18589	2525	13,6%
Dermatology & Venereal Diseases	Clinical Medicine	13924	1824	13,1%
Gastroenterology & Hepatology	Clinical Medicine	27848	3586	12,9%

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Arthritis & Rheumatology	Clinical Medicine	12853	1640	12,8%
Gerontology	Public Health & Health Services	3497	438	12,5%
General Clinical Medicine	Clinical Medicine	4063	508	12,5%
Environmental & Occupational Health	Clinical Medicine	3277	406	12,4%
Tropical Medicine	Clinical Medicine	11433	1414	12,4%
Psychiatry	Clinical Medicine	23870	2936	12,3%
Health Policy & Services	Public Health & Health Services	6733	790	11,7%
Nursing	Public Health & Health Services	13651	1472	10,8%
Development Studies	Economics & Business	1340	143	10,7%
Immunology	Clinical Medicine	44219	4712	10,7%
Substance Abuse	Public Health & Health Services	5085	529	10,4%
Clinical Psychology	Psychology & Cognitive Sciences	4564	474	10,4%
Obstetrics & Reproductive Medicine	Clinical Medicine	23953	2421	10,1%
Sport, Leisure & Tourism	Economics & Business	3294	327	9,9%
Nuclear Medicine & Medical Imaging	Clinical Medicine	32747	3110	9,5%
Demography	Social Sciences	1055	97	9,2%
Legal & Forensic Medicine	Clinical Medicine	3380	292	8,6%
Endocrinology & Metabolism	Clinical Medicine	27361	2281	8,3%
Social Work	Social Sciences	2410	196	8,1%
Social Psychology	Psychology & Cognitive Sciences	7615	616	8,1%
Political Science & Public Administration	Social Sciences	7065	564	8,0%
Oncology & Carcinogenesis	Clinical Medicine	109975	8562	7,8%
Ophthalmology & Optometry	Clinical Medicine	19390	1507	7,8%
Bioinformatics	Enabling & Strategic Technologies	8031	623	7,8%
Law	Social Sciences	2238	168	7,5%
Neurology & Neurosurgery	Clinical Medicine	101228	7355	7,3%
Dentistry	Clinical Medicine	20842	1491	7,2%
Complementary & Alternative Medicine	Clinical Medicine	4026	287	7,1%
Agricultural Economics & Policy	Economics & Business	2223	158	7,1%
Sociology	Social Sciences	3182	213	6,7%
Information & Library Sciences	Social Sciences	2620	175	6,7%
Pathology	Clinical Medicine	6089	405	6,7%
Pharmacology & Pharmacy	Clinical Medicine	31268	2068	6,6%
Industrial Relations	Economics & Business	721	47	6,5%
Orthopedics	Clinical Medicine	24133	1565	6,5%
Rehabilitation	Public Health & Health Services	8585	548	6,4%
Communication & Media Studies	Communication & Textual Studies	3676	230	6,3%

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Family Studies	Social Sciences	1074	66	6,1%
Science Studies	Social Sciences	1546	95	6,1%
Nutrition & Dietetics	Biomedical Research	14175	845	6,0%
International Relations	Social Sciences	2013	119	5,9%
Criminology	Social Sciences	3804	223	5,9%
Economics	Economics & Business	15657	913	5,8%
History of Science, Technology & Medicine	Historical Studies	556	32	5,8%
Sport Sciences	Clinical Medicine	11318	648	5,7%
General Psychology & Cognitive Sciences	Psychology & Cognitive Sciences	997	57	5,7%
Urban & Regional Planning	Built Environment & Design	3948	222	5,6%
Econometrics	Economics & Business	560	31	5,5%
Statistics & Probability	Mathematics & Statistics	9073	487	5,4%
Toxicology	Biomedical Research	15751	808	5,1%
Business & Management	Economics & Business	16190	819	5,1%
Geography	Social Sciences	5437	274	5,0%
Medicinal & Biomolecular Chemistry	Chemistry	28199	1375	4,9%
Developmental & Child Psychology	Psychology & Cognitive Sciences	6970	339	4,9%
Anatomy & Morphology	Biomedical Research	1777	86	4,8%
Gender Studies	Social Sciences	615	29	4,7%
Marketing	Economics & Business	4905	227	4,6%
Information Systems	Information & Communication Technologies	5481	246	4,5%
Biophysics	Biomedical Research	5201	224	4,3%
Anthropology	Historical Studies	2561	107	4,2%
Biochemistry & Molecular Biology	Biomedical Research	43945	1833	4,2%
Social Sciences Methods	Social Sciences	964	40	4,1%
Psychoanalysis	Psychology & Cognitive Sciences	623	25	4,0%
Strategic, Defence & Security Studies	Enabling & Strategic Technologies	5691	222	3,9%
Education	Social Sciences	22159	854	3,9%
Developmental Biology	Biomedical Research	46014	1713	3,7%
Genetics & Heredity	Biomedical Research	12863	475	3,7%
Veterinary Sciences	Agriculture, Fisheries & Forestry	17316	607	3,5%
Experimental Psychology	Psychology & Cognitive Sciences	11769	404	3,4%
Physiology	Biomedical Research	6196	207	3,3%
Cultural Studies	Social Sciences	1402	46	3,3%
Accounting	Economics & Business	1914	61	3,2%
Finance	Economics & Business	4477	137	3,1%

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Human Factors	Psychology & Cognitive Sciences	4973	151	3,0%
Logistics & Transportation	Economics & Business	8846	268	3,0%
Religions & Theology	Philosophy & Theology	1651	47	2,8%
Fluids & Plasmas	Physics & Astronomy	17674	500	2,8%
Environmental Sciences	Earth & Environmental Sciences	33010	926	2,8%
Artificial Intelligence & Image Processing	Information & Communication Technologies	92623	2490	2,7%
Applied Mathematics	Mathematics & Statistics	7231	191	2,6%
Operations Research	Engineering	10099	263	2,6%
Speech-Language Pathology & Audiology	Public Health & Health Services	3497	91	2,6%
Biomedical Engineering	Engineering	19096	496	2,6%
Mycology & Parasitology	Biomedical Research	8680	222	2,6%
Meteorology & Atmospheric Sciences	Earth & Environmental Sciences	26306	642	2,4%
Evolutionary Biology	Biology	11772	269	2,3%
Architecture	Built Environment & Design	229	5	2,2%
Economic Theory	Economics & Business	733	16	2,2%
History of Social Sciences	Historical Studies	598	13	2,2%
Numerical & Computational Mathematics	Mathematics & Statistics	6317	132	2,1%
Ecology	Biology	25093	516	2,1%
Drama & Theater	Visual & Performing Arts	200	4	2,0%
Analytical Chemistry	Chemistry	31961	634	2,0%
Software Engineering	Information & Communication Technologies	6910	136	2,0%
Behavioral Science & Comparative Psychology	Psychology & Cognitive Sciences	3838	74	1,9%
Distributed Computing	Information & Communication Technologies	3012	56	1,9%
Biotechnology	Enabling & Strategic Technologies	18585	341	1,8%
Mathematical Physics	Physics & Astronomy	2017	37	1,8%
Languages & Linguistics	Communication & Textual Studies	4400	75	1,7%
Geological & Geomatics Engineering	Engineering	19978	332	1,7%
Microscopy	Biomedical Research	807	13	1,6%
Chemical Physics	Physics & Astronomy	27566	437	1,6%
Philosophy	Philosophy & Theology	2807	42	1,5%
History	Historical Studies	2137	31	1,5%

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Networking & Telecommunications	Information & Communication Technologies	56227	813	1,4%
Environmental Engineering	Engineering	17124	247	1,4%
Organic Chemistry	Chemistry	40706	555	1,4%
Building & Construction	Built Environment & Design	11876	157	1,3%
General Chemistry	Chemistry	11963	158	1,3%
Food Science	Agriculture, Fisheries & Forestry	22825	300	1,3%
Design Practice & Management	Built Environment & Design	2852	34	1,2%
Computation Theory & Mathematics	Information & Communication Technologies	7676	90	1,2%
Folklore	Visual & Performing Arts	86	1	1,2%
Acoustics	Physics & Astronomy	9055	97	1,1%
Industrial Engineering & Automation	Engineering	34144	340	1,0%
Dairy & Animal Science	Agriculture, Fisheries & Forestry	19125	187	1,0%
Nanoscience & Nanotechnology	Enabling & Strategic Technologies	41310	401	1,0%
Literary Studies	Communication & Textual Studies	2061	20	1,0%
Chemical Engineering	Engineering	20051	185	0,9%
Classics	Historical Studies	462	4	0,9%
Plant Biology & Botany	Biology	50847	426	0,8%
Computer Hardware & Architecture	Information & Communication Technologies	5051	41	0,8%
Inorganic & Nuclear Chemistry	Chemistry	19345	156	0,8%
Energy	Enabling & Strategic Technologies	69935	562	0,8%
Fisheries	Agriculture, Fisheries & Forestry	12513	94	0,8%
Art Practice, History & Theory	Visual & Performing Arts	267	2	0,7%
Music	Visual & Performing Arts	404	3	0,7%
Marine Biology & Hydrobiology	Biology	17028	125	0,7%
Entomology	Biology	9946	70	0,7%
Polymers	Chemistry	27068	190	0,7%
Ornithology	Biology	2161	15	0,7%
General Physics	Physics & Astronomy	22850	142	0,6%
Agronomy & Agriculture	Agriculture, Fisheries & Forestry	24841	150	0,6%
Zoology	Biology	6379	38	0,6%

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Forestry	Agriculture, Fisheries & Forestry	9365	54	0,6%
Nuclear & Particle Physics	Physics & Astronomy	49810	277	0,6%
Mechanical Engineering & Transports	Engineering	36046	190	0,5%
Horticulture	Agriculture, Fisheries & Forestry	1768	9	0,5%
General Mathematics	Mathematics & Statistics	24846	126	0,5%
Geochemistry & Geophysics	Earth & Environmental Sciences	30332	146	0,5%
Archaeology	Historical Studies	4501	20	0,4%
Optics	Physics & Astronomy	21071	90	0,4%
Electrical & Electronic Engineering	Engineering	26785	112	0,4%
Optoelectronics & Photonics	Enabling & Strategic Technologies	25577	99	0,4%
Mining & Metallurgy	Engineering	7837	30	0,4%
Applied Physics	Physics & Astronomy	74683	277	0,4%
Physical Chemistry	Chemistry	11784	43	0,4%
Aerospace & Aeronautics	Engineering	11841	43	0,4%
Materials	Enabling & Strategic Technologies	71353	256	0,4%
Astronomy & Astrophysics	Physics & Astronomy	21905	69	0,3%
Civil Engineering	Engineering	16967	51	0,3%
Oceanography	Earth & Environmental Sciences	5420	16	0,3%
Geology	Earth & Environmental Sciences	4455	11	0,2%
Paleontology	Earth & Environmental Sciences	8916	20	0,2%
Automobile Design & Engineering	Engineering	391	0	0,0%

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Supplementary Table 2. Number of influential authors and number of them who had at least 1 COVID-19-related publication. The construct is similar to Supplementary Table 1, but is limited to those authors who are the top 2% of their subfield for their career-long work based on a composite citation indicator.

SUBFIELD	FIELD	Number of authors	Authors with COVID-19 paper(s)	%
Emergency & Critical Care Medicine	Clinical Medicine	516	300	58,1%
Allergy	Clinical Medicine	271	136	50,2%
Virology	Biomedical Research	1030	494	48,0%
Respiratory System	Clinical Medicine	939	428	45,6%
Geriatrics	Clinical Medicine	168	76	45,2%
Applied Ethics	Philosophy & Theology	87	39	44,8%
General & Internal Medicine	Clinical Medicine	1853	744	40,2%
Cardiovascular System & Hematology	Clinical Medicine	2729	1062	38,9%
Epidemiology	Public Health & Health Services	160	60	37,5%
Gerontology	Public Health & Health Services	151	54	35,8%
Tropical Medicine	Clinical Medicine	483	170	35,2%
Medical Informatics	Information & Communication Technologies	219	77	35,2%
Surgery	Clinical Medicine	1394	489	35,1%
Otorhinolaryngology	Clinical Medicine	533	184	34,5%
Gastroenterology & Hepatology	Clinical Medicine	1370	466	34,0%
Anesthesiology	Clinical Medicine	608	196	32,2%
Public Health	Public Health & Health Services	870	280	32,2%
General Clinical Medicine	Clinical Medicine	231	74	32,0%
Dermatology & Venereal Diseases	Clinical Medicine	727	224	30,8%
Arthritis & Rheumatology	Clinical Medicine	533	164	30,8%
Sport, Leisure & Tourism	Economics & Business	111	34	30,6%
Psychiatry	Clinical Medicine	1010	305	30,2%
Urology & Nephrology	Clinical Medicine	1137	340	29,9%
Immunology	Clinical Medicine	1959	576	29,4%
Agricultural Economics & Policy	Economics & Business	82	24	29,3%
Clinical Psychology	Psychology & Cognitive Sciences	207	60	29,0%
Pediatrics	Clinical Medicine	852	240	28,2%
Development Studies	Economics & Business	51	14	27,5%
Environmental & Occupational Health	Clinical Medicine	197	54	27,4%

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History of Science, Technology & Medicine	Historical Studies	22	6	27,3%
Health Policy & Services	Public Health & Health Services	292	79	27,1%
Obstetrics & Reproductive Medicine	Clinical Medicine	1137	301	26,5%
Endocrinology & Metabolism	Clinical Medicine	1209	310	25,6%
Nursing	Public Health & Health Services	585	149	25,5%
Microbiology	Biomedical Research	2326	592	25,5%
Industrial Relations	Economics & Business	29	7	24,1%
Complementary & Alternative Medicine	Clinical Medicine	146	34	23,3%
Oncology & Carcinogenesis	Clinical Medicine	4144	947	22,9%
Nuclear Medicine & Medical Imaging	Clinical Medicine	1469	311	21,2%
Substance Abuse	Public Health & Health Services	223	46	20,6%
Legal & Forensic Medicine	Clinical Medicine	158	31	19,6%
General Psychology & Cognitive Sciences	Psychology & Cognitive Sciences	41	8	19,5%
Bioinformatics	Enabling & Strategic Technologies	328	63	19,2%
Social Psychology	Psychology & Cognitive Sciences	278	53	19,1%
Ophthalmology & Optometry	Clinical Medicine	906	166	18,3%
Sport Sciences	Clinical Medicine	402	71	17,7%
Pharmacology & Pharmacy	Clinical Medicine	1564	276	17,6%
Pathology	Clinical Medicine	336	59	17,6%
Rehabilitation	Public Health & Health Services	359	63	17,5%
Neurology & Neurosurgery	Clinical Medicine	4010	686	17,1%
Political Science & Public Administration	Social Sciences	243	41	16,9%
Family Studies	Social Sciences	43	7	16,3%
Anatomy & Morphology	Biomedical Research	81	13	16,0%
Orthopedics	Clinical Medicine	976	154	15,8%
Dentistry	Clinical Medicine	856	135	15,8%
Geography	Social Sciences	214	33	15,4%
Urban & Regional Planning	Built Environment & Design	144	22	15,3%
Nutrition & Dietetics	Biomedical Research	590	90	15,3%
Economics	Economics & Business	515	76	14,8%
Medicinal & Biomolecular Chemistry	Chemistry	1330	196	14,7%
Information Systems	Information & Communication Technologies	272	39	14,3%
Developmental & Child Psychology	Psychology & Cognitive Sciences	267	37	13,9%
Sociology	Social Sciences	103	14	13,6%
Toxicology	Biomedical Research	752	102	13,6%
Econometrics	Economics & Business	15	2	13,3%
Strategic, Defence & Security Studies	Enabling & Strategic Technologies	270	35	13,0%
Criminology	Social Sciences	165	21	12,7%

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Business & Management	Economics & Business	581	72	12,4%
Communication & Media Studies	Communication & Textual Studies	146	18	12,3%
Accounting	Economics & Business	68	8	11,8%
Marketing	Economics & Business	181	21	11,6%
Anthropology	Historical Studies	95	11	11,6%
Statistics & Probability	Mathematics & Statistics	279	32	11,5%
Law	Social Sciences	88	10	11,4%
Social Work	Social Sciences	97	11	11,3%
Psychoanalysis	Psychology & Cognitive Sciences	36	4	11,1%
Developmental Biology	Biomedical Research	1884	205	10,9%
Veterinary Sciences	Agriculture, Fisheries & Forestry	730	79	10,8%
Genetics & Heredity	Biomedical Research	550	59	10,7%
Demography	Social Sciences	39	4	10,3%
Logistics & Transportation	Economics & Business	373	38	10,2%
Biochemistry & Molecular Biology	Biomedical Research	2097	213	10,2%
Fluids & Plasmas	Physics & Astronomy	723	72	10,0%
Environmental Sciences	Earth & Environmental Sciences	1235	122	9,9%
Cultural Studies	Social Sciences	61	6	9,8%
Science Studies	Social Sciences	62	6	9,7%
Human Factors	Psychology & Cognitive Sciences	209	20	9,6%
International Relations	Social Sciences	84	8	9,5%
Distributed Computing	Information & Communication Technologies	160	15	9,4%
Religions & Theology	Philosophy & Theology	78	7	9,0%
Literary Studies	Communication & Textual Studies	90	8	8,9%
Biophysics	Biomedical Research	277	24	8,7%
Meteorology & Atmospheric Sciences	Earth & Environmental Sciences	961	83	8,6%
Information & Library Sciences	Social Sciences	139	12	8,6%
Artificial Intelligence & Image Processing	Information & Communication Technologies	3830	322	8,4%
Applied Mathematics	Mathematics & Statistics	284	23	8,1%
Education	Social Sciences	867	69	8,0%
Evolutionary Biology	Biology	415	32	7,7%
Finance	Economics & Business	132	10	7,6%
Ecology	Biology	864	64	7,4%
Mycology & Parasitology	Biomedical Research	348	25	7,2%
Software Engineering	Information & Communication Technologies	365	26	7,1%
Mathematical Physics	Physics & Astronomy	74	5	6,8%
Experimental Psychology	Psychology & Cognitive Sciences	387	26	6,7%
Biomedical Engineering	Engineering	876	58	6,6%
History	Historical Studies	79	5	6,3%
Operations Research	Engineering	388	24	6,2%
Analytical Chemistry	Chemistry	1565	95	6,1%

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Physiology	Biomedical Research	307	18	5,9%
Philosophy	Philosophy & Theology	90	5	5,6%
Numerical & Computational Mathematics	Mathematics & Statistics	234	13	5,6%
Building & Construction	Built Environment & Design	478	26	5,4%
Biotechnology	Enabling & Strategic Technologies	853	45	5,3%
Classics	Historical Studies	19	1	5,3%
Social Sciences Methods	Social Sciences	39	2	5,1%
Networking & Telecommunications	Information & Communication Technologies	2823	142	5,0%
Nanoscience & Nanotechnology	Enabling & Strategic Technologies	1464	67	4,6%
Economic Theory	Economics & Business	23	1	4,3%
Geological & Geomatics Engineering	Engineering	772	32	4,1%
Languages & Linguistics	Communication & Textual Studies	171	7	4,1%
Computer Hardware & Architecture	Information & Communication Technologies	304	12	3,9%
Industrial Engineering & Automation	Engineering	1577	62	3,9%
History of Social Sciences	Historical Studies	26	1	3,8%
Environmental Engineering	Engineering	744	27	3,6%
Organic Chemistry	Chemistry	1968	69	3,5%
Chemical Physics	Physics & Astronomy	1233	41	3,3%
Agronomy & Agriculture	Agriculture, Fisheries & Forestry	938	31	3,3%
Energy	Enabling & Strategic Technologies	3286	105	3,2%
Food Science	Agriculture, Fisheries & Forestry	846	27	3,2%
Dairy & Animal Science	Agriculture, Fisheries & Forestry	756	23	3,0%
Fisheries	Agriculture, Fisheries & Forestry	440	13	3,0%
Design Practice & Management	Built Environment & Design	138	4	2,9%
Polymers	Chemistry	1375	39	2,8%
Acoustics	Physics & Astronomy	462	13	2,8%
Behavioral Science & Comparative Psychology	Psychology & Cognitive Sciences	155	4	2,6%
Forestry	Agriculture, Fisheries & Forestry	396	10	2,5%
Chemical Engineering	Engineering	993	25	2,5%
Entomology	Biology	403	10	2,5%
Plant Biology & Botany	Biology	1916	45	2,3%
Computation Theory & Mathematics	Information & Communication Technologies	262	6	2,3%
Marine Biology & Hydrobiology	Biology	617	14	2,3%
General Chemistry	Chemistry	707	15	2,1%
Speech-Language Pathology & Audiology	Public Health & Health Services	150	3	2,0%
Microscopy	Biomedical Research	52	1	1,9%
Mechanical Engineering & Transports	Engineering	1591	29	1,8%

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Inorganic & Nuclear Chemistry	Chemistry	971	16	1,6%
General Mathematics	Mathematics & Statistics	800	12	1,5%
General Physics	Physics & Astronomy	1031	15	1,5%
Civil Engineering	Engineering	744	10	1,3%
Astronomy & Astrophysics	Physics & Astronomy	781	10	1,3%
Physical Chemistry	Chemistry	558	7	1,3%
Mining & Metallurgy	Engineering	400	5	1,3%
Electrical & Electronic Engineering	Engineering	1484	18	1,2%
Archaeology	Historical Studies	170	2	1,2%
Applied Physics	Physics & Astronomy	3814	44	1,2%
Nuclear & Particle Physics	Physics & Astronomy	1924	22	1,1%
Optics	Physics & Astronomy	980	11	1,1%
Aerospace & Aeronautics	Engineering	652	7	1,1%
Geochemistry & Geophysics	Earth & Environmental Sciences	1142	9	0,8%
Optoelectronics & Photonics	Enabling & Strategic Technologies	1544	12	0,8%
Materials	Enabling & Strategic Technologies	3059	21	0,7%
Paleontology	Earth & Environmental Sciences	314	2	0,6%
Zoology	Biology	211	1	0,5%
Folklore	Visual & Performing Arts	2	0	0,0%
Horticulture	Agriculture, Fisheries & Forestry	63	0	0,0%
Geology	Earth & Environmental Sciences	183	0	0,0%
Ornithology	Biology	91	0	0,0%
Art Practice, History & Theory	Visual & Performing Arts	8	0	0,0%
Gender Studies	Social Sciences	23	0	0,0%
Automobile Design & Engineering	Engineering	24	0	0,0%
Architecture	Built Environment & Design	14	0	0,0%
Music	Visual & Performing Arts	25	0	0,0%
Oceanography	Earth & Environmental Sciences	215	0	0,0%
Drama & Theater	Visual & Performing Arts	6	0	0,0%

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Supplementary Table 3. Scientists with highest composite citation indicator based on their COVID-19 publications indexed in Scopus as of December 1, 2020 (in order of ranking per the composite indicator).

AUTHOR	INSTITUTION	COUNTRY	MOST COMMON SUBFIELD	SECOND MOST COMMON SUBFIELD
Lu, Hongzhou	Fudan University	chn	Microbiology	Oncology & Carcinogenesis
Henry, Brandon M.	Cincinnati Children's Hospital Medical Center	usa	Anatomy & Morphology	Surgery
Tang, Ning	Tongji Medical College	chn	Cardiovascular System & Hematology	General Clinical Medicine
Thachil, J.	Manchester Royal Infirmary	gbr	Cardiovascular System & Hematology	Immunology
Lippi, Giuseppe	Università degli Studi di Verona	ita	General Clinical Medicine	Cardiovascular System & Hematology
Elfiky, Abdo A.	Cairo University	egy	Virology	Biophysics
Guan, Wei Jie	Guangzhou Medical University	chn	Respiratory System	Oncology & Carcinogenesis
Cao, Bin	China-Japan Friendship Hospital	chn	Microbiology	Respiratory System
Li, Taisheng	Peking Union Medical College Hospital	chn	Virology	Oncology & Carcinogenesis
Chan, Jasper Fuk Woo	The University of Hong Kong, State Key Laboratory of Emerging Infectious Diseases	hkg	Microbiology	Virology
Lipsitch, Marc	Harvard T.H. Chan School of Public Health	usa	Microbiology	Epidemiology
Yancy, Clyde W.	Northwestern University Feinberg School of Medicine	usa	Cardiovascular System & Hematology	General & Internal Medicine
Perlman, Stanley	University of Iowa	usa	Virology	Immunology
Rodriguez-Morales, Alfonso J.	Universidad Tecnológica de Pereira	col	Microbiology	Tropical Medicine
Huang, Chaolin	Jinyintan Hospital	chn	General & Internal Medicine	Immunology
Schwartz, David	Medical College of Georgia	usa	Respiratory System	Immunology
Cook, Tim M.	Royal United Hospitals Bath NHS Foundation Trust	gbr	Anesthesiology	General & Internal Medicine
Rosenbaum, Lisa	Brigham and Women’s Hospital	usa	General & Internal Medicine	Public Health
Heymann, David	London School of Hygiene & Tropical Medicine	gbr	Tropical Medicine	General & Internal Medicine
Recalcati, Sebastiano	Azienda Ospedaliera Ospedale Di Lecco	ita	Dermatology & Venereal Diseases	Immunology
To, Kelvin Kai Wang	The University of Hong Kong, State Key Laboratory of Emerging Infectious Diseases	hkg	Microbiology	Virology
Baig, Abdul Mannan	The Aga Khan University	pak	Neurology & Neurosurgery	Microbiology
D'Antiga, Lorenzo	Papa Giovanni XXIII Hospital	ita	Gastroenterology & Hepatology	Surgery
Kanne, Jeffrey P.	University of Wisconsin School of Medicine and Public Health	usa	Nuclear Medicine & Medical Imaging	Respiratory System
Mehra, Mandeep R.	Brigham and Women's Hospital	usa	Cardiovascular System & Hematology	Surgery
Ivanov, Dmitry	Hochschule für Wirtschaft und Recht Berlin	deu	Operations Research	Industrial Engineering & Automation
Singhal, Tanu	Kokilaben Dhirubhai Ambani Hospital and Medical Research Institute	ind	Pediatrics	Microbiology

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Ludvigsson, J. F.	Karolinska Institutet	swe	Gastroenterology & Hepatology	Pediatrics
Al-Tawfiq, Jaffar A.	Johns Hopkins Aramco Healthcare	sau	Microbiology	Tropical Medicine
Wu, Joseph T.	The University of Hong Kong Li Ka Shing Faculty of Medicine	chn	General & Internal Medicine	Microbiology
Banerjee, Debanjan	National Institute of Mental Health and Neuro Sciences	ind	Psychiatry	Artificial Intelligence & Image Processing
Gautret, Philippe	Aix Marseille Université	fra	Microbiology	Tropical Medicine
Gostin, Lawrence O.	Georgetown Law	usa	Applied Ethics	General & Internal Medicine
Raoult, Didier	Aix Marseille Université	fra	Microbiology	Tropical Medicine
Liang, Wenhua	Guangzhou Medical University	chn	Oncology & Carcinogenesis	Surgery
Cowling, Benjamin J.	The University of Hong Kong Li Ka Shing Faculty of Medicine	hkg	Microbiology	General & Internal Medicine
Wilder-Smith, Annelies	London School of Hygiene & Tropical Medicine	gbr	Tropical Medicine	Microbiology
Rajkumar, Ravi Philip	Jawaharlal Institute of Postgraduate Medical Education and Research	ind	Psychiatry	Pharmacology & Pharmacy
Koh, David	Universiti Brunei Darussalam	brn	Environmental & Occupational Health	General & Internal Medicine
Wang, Chen	Chinese Academy of Medical Sciences & Peking Union Medical College	chn	Respiratory System	General & Internal Medicine
Misra, Anoop	Diabetes Foundation (India), New Delhi	ind	Endocrinology & Metabolism	Nutrition & Dietetics
Krammer, Florian	Icahn School of Medicine at Mount Sinai	usa	Virology	Immunology
Livingston, Edward H.	University of California, Los Angeles	usa	Surgery	Gastroenterology & Hepatology
Zhong, Nanshan	Guangzhou Medical University	chn	Respiratory System	Oncology & Carcinogenesis
Munster, Vincent	NIAID Rocky Mountain Laboratories	usa	Virology	Microbiology
Grasselli, Giacomo	Università degli Studi di Milano	ita	Emergency & Critical Care Medicine	Anesthesiology
Tobias, Aurelio	CSIC - Instituto de Diagnostico Ambiental y Estudios del Agua (IDAEA)	esp	Environmental Sciences	Toxicology
Zhou, Fei	China-Japan Friendship Hospital	chn	Respiratory System	Microbiology
Corman, Victor Max	Charité – Universitätsmedizin Berlin	deu	Microbiology	Virology
Zhou, Peng	Wuhan Institute of Virology Chinese Academy of Sciences	chn	Virology	Immunology
Phan, Tung	University of Pittsburgh Medical Center	usa	Virology	Microbiology
Greenhalgh, Trisha	University of Oxford Medical Sciences Division	gbr	Medical Informatics	Health Policy & Services
Colson, Philippe	Aix Marseille Université	fra	Microbiology	Virology
Hoffmann, Markus	Deutsches Primatenzentrum	deu	Virology	Microbiology
Kalil, Andre C.	University of Nebraska Medical Center	usa	Microbiology	Surgery
Young, Barnaby Edward	Tan Tock Seng Hospital	sgp	Microbiology	General & Internal Medicine
Levi, Marcel	University College London Hospitals NHS Foundation Trust	gbr	Cardiovascular System & Hematology	General & Internal Medicine
Gurwitz, David	Tel Aviv University, Sackler Faculty of Medicine	isr	Pharmacology & Pharmacy	Neurology & Neurosurgery
Pal, Rimesh	Postgraduate Institute of Medical Education & Research, Chandigarh	ind	Endocrinology & Metabolism	General & Internal Medicine
Liu, Yingxia	Second Affiliated Hospital of Southern University of Science and Technology	chn	Virology	Microbiology
Zhu, Na	Chinese Center for Disease Control and Prevention	chn	Virology	General Science & Technology
Kim, Jin Yong	Incheon Medical Center	kor	General & Internal Medicine	Epidemiology

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Xiang, Yu Tao	Universidade de Macau	chn	Psychiatry	Nursing
Lai, Chih Cheng	Veterans General Hospital-Kaohsiung Taiwan	twn	Microbiology	General & Internal Medicine
van Doremalen, Neeltje	NIAID Rocky Mountain Laboratories	usa	Virology	Microbiology
Phelan, Alexandra L.	Georgetown Law	usa	General & Internal Medicine	Applied Ethics
Shi, Yuan	Ministry of Education China	chn	Pediatrics	Neurology & Neurosurgery
Wang, Fu Sheng	General Hospital of People's Liberation Army	chn	Gastroenterology & Hepatology	Immunology
Yuen, K. Y.	The University of Hong Kong Li Ka Shing Faculty of Medicine	hkg	Microbiology	Virology
Lee, Sherman A.	Christopher Newport University	usa	Social Psychology	Clinical Psychology
Zhao, Shi	Chinese University of Hong Kong	hkg	Microbiology	Tropical Medicine
Xiong, Yong	Wuhan University	chn	Microbiology	Virology
Cheng, Vincent Chi Chung	Queen Mary Hospital Hong Kong	hkg	Microbiology	Epidemiology
Plebani, Mario	Azienda Ospedaliera Di Padova	ita	General Clinical Medicine	Gastroenterology & Hepatology
Ioannidis, John P.A.	Stanford University School of Medicine	usa	General & Internal Medicine	Epidemiology
Buonsenso, Danilo	Fondazione Policlinico Universitario Agostino Gemelli IRCCS Università Cattolica del Sacro Cuore	ita	Pediatrics	Nuclear Medicine & Medical Imaging
Lu, Roujian	Chinese Center for Disease Control and Prevention	chn	Virology	Microbiology
Qiao, Jie	Peking University	chn	Obstetrics & Reproductive Medicine	Oncology & Carcinogenesis
Hui, David S.C.	Chinese University of Hong Kong	hkg	Respiratory System	Microbiology
Wang, Wenling	Chinese Center for Disease Control and Prevention	chn	Virology	Microbiology
Du, Ronghui	Wuhan Pulmonary Hospital	chn	Respiratory System	Immunology
Gautam, S.	Karunya Institute of Technology and Sciences	ind	Environmental Sciences	Ecology
Tandon, Rajiv	Western Michigan University Homer Stryker M.D. School of Medicine	usa	Psychiatry	Neurology & Neurosurgery
Bourouiba, L.	Massachusetts Institute of Technology	usa	Fluids & Plasmas	Evolutionary Biology
Singh, Awadhesh Kumar	G.D Hospital & Diabetes Institute	ind	Endocrinology & Metabolism	Pharmacology & Pharmacy
Xu, Zhe	General Hospital of People's Liberation Army	chn	Immunology	Complementary & Alternative Medicine
Lu, Xiaoxia	Tongji Medical College	chn	Pediatrics	Allergy
Kucharski, Adam J.	London School of Hygiene & Tropical Medicine	gbr	Microbiology	Developmental Biology
Mckee, Martin	London School of Hygiene & Tropical Medicine	gbr	Public Health	General & Internal Medicine
Mukhtar, Sonia	University of Management and Technology Lahore	pak	Gender Studies	Sociology
Liu, Lei	Second Affiliated Hospital of Southern University of Science and Technology	chn	Microbiology	Gastroenterology & Hepatology
Graham, Barney S.	National Institute of Allergy and Infectious Diseases (NIAID)	usa	General Science & Technology	Immunology
Lee, Vernon	Ministry of Health, Government of Singapore	sgp	Microbiology	Virology
Coulthard, P.	Barts and The London School of Medicine and Dentistry	gbr	Dentistry	General & Internal Medicine
Atangana, Abdon	University of the Free State	zaf	Applied Mathematics	Mathematical Physics
Wrapp, Daniel	The University of Texas at Austin	usa	General Science & Technology	Virology

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Angus, Derek C.	University of Pittsburgh	usa	Emergency & Critical Care Medicine	Respiratory System
Wang, Dawei	Zhongnan Hospital of Wuhan University	chn	Emergency & Critical Care Medicine	Developmental Biology
Chung, Michael	Icahn School of Medicine at Mount Sinai	usa	Nuclear Medicine & Medical Imaging	Oncology & Carcinogenesis
Huynh, Toan Luu Duc	University of Economics Ho Chi Minh City	vnm	Economics	Finance
Zhang, Chao	General Hospital of People's Liberation Army	chn	Immunology	Microbiology
Greenberg, Neil	King's College London	gbr	Psychiatry	Environmental & Occupational Health
Mehta, Puja	University College London	gbr	Arthritis & Rheumatology	Immunology
Lechien, Jerome R.	Universitat de Barcelona	esp	Otorhinolaryngology	Oncology & Carcinogenesis
Ogen, Yaron	Martin-Universität Halle-Wittenberg	deu	Agronomy & Agriculture	Geological & Geomatics Engineering
Shi, Zheng Li	Wuhan Institute of Virology Chinese Academy of Sciences	chn	Virology	Microbiology
Chen, Nanshan	Wuhan Jinyintan Hospital	chn	General & Internal Medicine	Biomedical Engineering
Cao, Xuetao	Second Military Medical University	chn	Immunology	Oncology & Carcinogenesis
Helms, Julie	Les Hôpitaux Universitaires de Strasbourg	fra	Emergency & Critical Care Medicine	Nuclear Medicine & Medical Imaging
Iacobellis, Gianluca	University of Miami	usa	Endocrinology & Metabolism	Cardiovascular System & Hematology
Shi, Heshui	Tongji Medical College	chn	Nuclear Medicine & Medical Imaging	Oncology & Carcinogenesis
Hopkins, Claire	Guy's and St Thomas' NHS Foundation Trust	gbr	Otorhinolaryngology	General & Internal Medicine
de Wit, E.	NIAID Rocky Mountain Laboratories	usa	Virology	Microbiology
Ho, Cyrus S.H.	National University Hospital, Singapore	sgp	Toxicology	Psychiatry
Vankadari, Naveen	Monash University	aus	Biochemistry & Molecular Biology	Microbiology
Klompas, Michael	Brigham and Women's Hospital	usa	Epidemiology	Microbiology
Hung, Ivan Fan Ngai	The University of Hong Kong Li Ka Shing Faculty of Medicine	chn	Microbiology	Gastroenterology & Hepatology
Drosten, Christian	Charité – Universitätsmedizin Berlin	deu	Microbiology	Virology
Gattinoni, Luciano	Universität Göttingen	deu	Emergency & Critical Care Medicine	Anesthesiology
Sohrabi, C.	Barts and The London School of Medicine and Dentistry	gbr	Surgery	Organic Chemistry
Joob, Beuy	Sanitation 1 Medical Academic Center	tha	Tropical Medicine	Oncology & Carcinogenesis
Yang, Xiaobo	Tongji Medical College	chn	Emergency & Critical Care Medicine	Immunology
Nkengasong, John	Africa Centres for Disease Control and Prevention	eth	Virology	Microbiology
Wang, Yeming	China-Japan Friendship Hospital	chn	Microbiology	General & Internal Medicine
Wiwanitkit, Viroj	Hainan Medical University	chn	Tropical Medicine	General & Internal Medicine
Iwasaki, Akiko	Howard Hughes Medical Institute	usa	Immunology	Developmental Biology
Spinelli, Antonino	Humanitas Research Hospital	ita	Surgery	Gastroenterology & Hepatology
Geldsetzer, Pascal	Stanford University	usa	General & Internal Medicine	Virology
Connors, Jean Marie	Harvard Medical School	usa	Cardiovascular System & Hematology	Immunology
Mizumoto, K.	Georgia State University	usa	Microbiology	Bioinformatics

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Hellewell, Joel	London School of Hygiene & Tropical Medicine	gbr	General & Internal Medicine	Developmental Biology
Guarner, Jeannette	Emory University	usa	Cardiovascular System & Hematology	None
Hsueh, Po Ren	National Taiwan University Hospital	twn	Microbiology	General & Internal Medicine
Vaduganathan, Muthiah	Harvard Medical School	usa	Cardiovascular System & Hematology	General & Internal Medicine
Dhama, Kuldeep	Indian Veterinary Research Institute	ind	Veterinary Sciences	Medicinal & Biomolecular Chemistry
Khan, Suliman	Zhengzhou University	chn	Microbiology	Plant Biology & Botany
Leung, Kathy	The University of Hong Kong Li Ka Shing Faculty of Medicine	hkg	Microbiology	General & Internal Medicine
Wu, Yuntao	George Mason University - Science and Technology Campus	usa	Virology	Biochemistry & Molecular Biology
Kraemer, Moritz U.G.	University of Oxford	gbr	Tropical Medicine	Microbiology
Becker, Richard C.	University of Cincinnati College of Medicine	usa	Cardiovascular System & Hematology	General & Internal Medicine
Zangrillo, Alberto	IRCCS San Raffaele Scientific Institute	ita	Anesthesiology	Emergency & Critical Care Medicine
Khunti, Kamlesh	University of Leicester	gbr	Endocrinology & Metabolism	General & Internal Medicine
Wang, Manli	Wuhan Institute of Virology Chinese Academy of Sciences	chn	Virology	Nanoscience & Nanotechnology
Kruse, Robert L.	BCM Center for Cell and Gene Therapy	usa	Developmental Biology	Virology
Lescure, F. X.	Hôpital Bichat-Claude-Bernard AP-HP	fra	Microbiology	General & Internal Medicine
Stahel, Philip F.	Rocky Vista University	usa	Orthopedics	Neurology & Neurosurgery
Wu, Zunyou	National Center for AIDS/STD Control and Prevention	chn	Public Health	Virology
Jiang, Shibo	Fudan University	chn	Virology	Microbiology
Yao, Hao	Harvard T.H. Chan School of Public Health	usa	Psychiatry	Neurology & Neurosurgery
Leung, Char	Deakin University	aus	Virology	Finance
Zhang, Wei	Wuhan Institute of Virology Chinese Academy of Sciences	chn	Virology	General Science & Technology
Holshue, Michelle	Centers for Disease Control and Prevention	usa	General & Internal Medicine	General Science & Technology
Brufsky, Adam	UPMC Hillman Cancer Center	usa	Oncology & Carcinogenesis	Pathology
Chowell, Gerardo	Georgia State University	usa	Microbiology	Bioinformatics
Chen, Yu	Wuhan University	chn	Virology	Developmental Biology
Gates, Bill	Bill and Melinda Gates Foundation	usa	Business & Management	Networking & Telecommunications
Walls, Alexandra C.	University of Washington, Seattle	usa	Developmental Biology	Biophysics
Chen, Jieliang	Fudan University	chn	Virology	Gastroenterology & Hepatology
Baud, David	Centre Hospitalier Universitaire Vaudois	che	Obstetrics & Reproductive Medicine	Microbiology
Ronco, Claudio	Ospedale San Bortolo	ita	Urology & Nephrology	Cardiovascular System & Hematology
Ceriello, Antonio	IRCCS Multimedica	ita	Endocrinology & Metabolism	Cardiovascular System & Hematology
Bernheim, Adam	Icahn School of Medicine at Mount Sinai	usa	Nuclear Medicine & Medical Imaging	Microbiology
Patel, Zara M.	Stanford University School of Medicine	usa	Otorhinolaryngology	Neurology & Neurosurgery
Benvenuto, Domenico	Università Campus Bio-Medico di Roma	ita	Virology	Microbiology
Bai, Yan	Zhengzhou University	chn	Nuclear Medicine & Medical Imaging	Nanoscience & Nanotechnology

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Alhazzani, Waleed	McMaster University	can	Emergency & Critical Care Medicine	General & Internal Medicine
Lauer, Stephen A.	Johns Hopkins Bloomberg School of Public Health	usa	Statistics & Probability	General & Internal Medicine
Gupta, Ritesh	Fortis CDOC Hospital for Diabetes and Allied Sciences	ind	Endocrinology & Metabolism	General Clinical Medicine
Jernigan, Daniel B.	Centers for Disease Control and Prevention	usa	Microbiology	General & Internal Medicine
Ren, Lili	Institute of Pathogen Biology, Chinese Academy of Medical Sciences & Peking Union Medical College	chn	Microbiology	Virology
Wölfel, Roman	Institut für Mikrobiologie der Bundeswehr	deu	Microbiology	Virology
Tang, Y. W.	Weill Cornell Medicine	usa	Microbiology	Virology
Curigliano, Giuseppe	Università degli Studi di Milano	ita	Oncology & Carcinogenesis	Pharmacology & Pharmacy
Klok, F. A.	Leiden University Medical Center - LUMC	nld	Cardiovascular System & Hematology	Immunology
Jiang, Shibo	Fudan University	chn	Microbiology	Developmental Biology
Asmundson, Gordon J.G.	University of Regina	can	Clinical Psychology	Psychiatry
Conti, P.	University of G. d'Annunzio Chieti and Pescara	ita	Immunology	Biochemistry & Molecular Biology
Zhou, Wenhao	Children’s Hospital of Fudan University	chn	Genetics & Heredity	Pediatrics
Brooks, S. K.	King's College London	gbr	Psychiatry	General & Internal Medicine
Galea, Sandro	Boston University	usa	Public Health	Psychiatry
Fauci, Anthony S.	National Institute of Allergy and Infectious Diseases (NIAID)	usa	Immunology	General & Internal Medicine
Rubin, G. James	King's College London	gbr	Psychiatry	Public Health
Mason, Robert J.	National Jewish Health	usa	Respiratory System	Biochemistry & Molecular Biology
Kim, Hyungjin	Seoul National University College of Medicine	kor	Nuclear Medicine & Medical Imaging	Oncology & Carcinogenesis
Del Rio, Carlos	Emory University School of Medicine	usa	Public Health	Microbiology
Zhang, Jin jin	Zhongnan Hospital of Wuhan University	chn	Allergy	None
Lagunas-Rangel, Francisco Alejandro	Centro de Investigacion y de Estudios Avanzados	mex	Gerontology	Oncology & Carcinogenesis
Bonilla-Aldana, D. Katterine	Universidad Tecnológica de Pereira	col	Microbiology	Tropical Medicine
Leung, Gabriel M.	The University of Hong Kong Li Ka Shing Faculty of Medicine	hkg	Epidemiology	General & Internal Medicine
Cecconi, Maurizio	Humanitas Research Hospital	ita	Emergency & Critical Care Medicine	Anesthesiology
Ling, Yun	Fudan University	chn	Immunology	Microbiology
Paniz-Mondolfi, Alberto E.	Icahn School of Medicine at Mount Sinai	usa	Microbiology	Dermatology & Venereal Diseases
Vaishya, Raju	Indraprastha Apollo Hospitals	ind	Orthopedics	General & Internal Medicine
Xia, Shuai	Fudan University	chn	Virology	Medicinal & Biomolecular Chemistry
Liu, Jia	Wuhan Institute of Virology Chinese Academy of Sciences	chn	Medicinal & Biomolecular Chemistry	Pharmacology & Pharmacy
Chu, Hin	The University of Hong Kong, State Key Laboratory of Emerging Infectious Diseases	chn	Virology	Microbiology
Murthy, Srinivas	The University of British Columbia	can	General & Internal Medicine	Emergency & Critical Care Medicine
Ong, Sean Wei Xiang	Tan Tock Seng Hospital	sgp	Microbiology	Epidemiology
Sanchis-Gomar, Fabian	University of Valencia	esp	Cardiovascular System	General Clinical Medicine

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			& Hematology	
Lake, Mary A.	University of Cambridge	gbr	General Clinical Medicine	General & Internal Medicine
Stebbing, Justin	Charing Cross Hospital	gbr	Oncology & Carcinogenesis	Immunology
Shen, Kun Ling	Beijing Children's Hospital, Capital Medical University	chn	Pediatrics	Microbiology
Shang, Jian	College of Veterinary Medicine	usa	Virology	General Science & Technology
Nishiura, Hiroshi	Graduate School of Medicine	jpn	Microbiology	Bioinformatics
Goodell, John W.	University of Akron	usa	Finance	Business & Management
Casadevall, Arturo	Johns Hopkins Bloomberg School of Public Health	usa	Microbiology	Immunology
Bansal, Manish	Medanta - The Medicity	ind	Cardiovascular System & Hematology	General & Internal Medicine
Li, Hui	China-Japan Friendship Hospital	chn	Microbiology	Respiratory System
Robson, B.	The Dirac Foundation	gbr	Biochemistry & Molecular Biology	Biomedical Engineering
Arabi, Yaseen M.	King Saud bin Abdulaziz University for Health Sciences	sau	Emergency & Critical Care Medicine	General & Internal Medicine
Cai, Hua	David Geffen School of Medicine at UCLA	usa	Cardiovascular System & Hematology	Biochemistry & Molecular Biology
Guo, Li	Institute of Pathogen Biology, Chinese Academy of Medical Sciences & Peking Union Medical College	chn	Virology	Microbiology
Brodin, Petter	Karolinska Institutet	swe	Immunology	Developmental Biology
Verity, Robert	Imperial College London	gbr	Microbiology	General & Internal Medicine
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Ko, Wen Chien	National Cheng Kung University	twn	Microbiology	General & Internal Medicine
Fernandez-Nieto, Diego	Hospital Ramon y Cajal	esp	Dermatology & Venereal Diseases	General & Internal Medicine
McInnes, Iain B.	University of Glasgow	gbr	Arthritis & Rheumatology	Immunology
Wan, Yushun	College of Veterinary Medicine	usa	Virology	Biochemistry & Molecular Biology
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Jin, Runming	Tongji Medical College	chn	Oncology & Carcinogenesis	Pediatrics
Mao, Ling	Tongji Medical College	chn	Neurology & Neurosurgery	Biochemistry & Molecular Biology
Neurath, Markus F.	Friedrich-Alexander-Universität Erlangen-Nürnberg	deu	Gastroenterology & Hepatology	Immunology
Tetro, Jason A.	University of Guelph	can	Epidemiology	Microbiology
Poon, Liona Chiu Yee	Chinese University of Hong Kong	chn	Obstetrics & Reproductive Medicine	Endocrinology & Metabolism
Wang, Fan	Zhongnan Hospital of Wuhan University	chn	Gastroenterology & Hepatology	Oncology & Carcinogenesis
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Martinez, Miguel Angel	Hospital Universitari Germans Trias i Pujol	esp	Virology	Biochemistry & Molecular Biology
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McGonagle, Dennis	University of Leeds, School of Medicine	gbr	Arthritis & Rheumatology	Immunology
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Asadi-Pooya, Ali A.	Shiraz University of Medical Sciences	irn	Neurology & Neurosurgery	General & Internal Medicine
Leung, Gabriel M.	The University of Hong Kong Li Ka Shing Faculty of Medicine	chn	General & Internal Medicine	Immunology
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Wang, Cuiyan	Huaibei Coal Industry Teachers College	chn	Toxicology	Psychiatry
Favalli, Ennio Giulio	ASST Gaetano Pini-CTO	ita	Arthritis & Rheumatology	Immunology
Ye, Guangming	Zhongnan Hospital of Wuhan University	chn	Microbiology	General & Internal Medicine
Cortegiani, Andrea	Università degli Studi di Palermo	ita	Emergency & Critical Care Medicine	Anesthesiology
Chu, Daniel K.W.	The University of Hong Kong Li Ka Shing Faculty of Medicine	hkg	Microbiology	Virology
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Cao, Wei	Peking Union Medical College Hospital	chn	Microbiology	Virology
He, Jianxing	Guangzhou Medical University	chn	Oncology & Carcinogenesis	Respiratory System
Ouslander, Joseph G.	Charles E. Schmidt College of Medicine	usa	Geriatrics	General & Internal Medicine
Sun, Ziyong	Tongji Medical College	chn	Microbiology	Immunology
Shoenfeld, Yehuda	Chaim Sheba Medical Center Israel	isr	Immunology	Arthritis & Rheumatology
Netea, Mihai G.	Radboud University Nijmegen Medical Centre	nld	Immunology	Microbiology
Xiao, Shu Yuan	The University of Chicago Medicine	usa	Pathology	Gastroenterology & Hepatology
Qin, Chuan	Tongji Medical College	chn	Neurology & Neurosurgery	Immunology
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Fan, Bingwen Eugene	Tan Tock Seng Hospital	sgp	Cardiovascular System & Hematology	Physiology
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Rocklöv, Joacim	Umeå Universitet	swe	Tropical Medicine	Toxicology
Liu, Weiyong	Tongji Medical College	chn	Microbiology	Virology
Zhao, Jianping	Tongji Medical College	chn	General & Internal Medicine	Respiratory System
Wu, Fan	Fudan University	chn	General Science & Technology	Virology
Coccia, Mario	Consiglio Nazionale delle Ricerche	ita	Business & Management	Science Studies
Vaninov, Natalie	Icahn School of Medicine at Mount Sinai	usa	Immunology	None
Dong, Ensheng	Johns Hopkins University	usa	Microbiology	None
Tobin, Martin J.	Loyola University of Chicago	usa	Respiratory System	Emergency & Critical Care Medicine
Bontempi, Elza	Università degli Studi di Brescia	ita	Applied Physics	Materials
Han, Huan	Renmin Hospital of Wuhan University	chn	General Clinical Medicine	Microbiology
Chen, Huijun	Zhongnan Hospital of Wuhan University	chn	Oncology & Carcinogenesis	General & Internal Medicine

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Li, Lanjuan	Zhejiang University	chn	Microbiology	Gastroenterology & Hepatology
Rothan, Hussin A.	Georgia State University	usa	Virology	Analytical Chemistry
Richardson, Peter J.	BenevolentAI Limited	gbr	Developmental Biology	None
Hu, Yu	Tongji Medical College	chn	Oncology & Carcinogenesis	Immunology
Lurie, Nicole	Coalition for Epidemic Preparedness Innovations	nor	General & Internal Medicine	Health Policy & Services
Wu, Peng	The University of Hong Kong Li Ka Shing Faculty of Medicine	hkg	Microbiology	General & Internal Medicine
Galanakis, Charis M.	King Saud University	sau	Food Science	Biotechnology

Not listed are 26 authors who are journalists writing news stories or editors writing editorials for very prestigious journals (The Lancet, Mahase E, Day M, Iacobucci G, Kupferschmidt K, Burki T, Horton R, Ledford H, Cohen J (split in two author ID records), Rimmer A, Thornston J, Dyer O, Cyranoski D, Zarocostas J, Kirby T, Tanne J, Wise, J, Callaway E, Godlee F, Abbasi J, Eurosurveillance Editorial Team, Torjesen I, The Lancet Oncology, Stower H, Adam D)