



# Demonstrating the ascendancy of COVID-19 research using acronyms

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## Abstract

“COVID” which stands for corona virus disease, has become the world’s most infamous acronym. Previous analysis of acronyms in health and medical journals found a growing use of acronyms over time in titles and abstracts, with “DNA” as the most common. Here we examine acronyms in the pandemic year of 2020 to show the dramatic rise of COVID-related research. “COVID” was over five times more frequently used than “DNA” in 2020, and in just one year it has become the sixth most popular acronym of all time, surpassing “AIDS”, “PCR” and “MRI”.

**Keywords** COVID · Research · Journals

## Introduction

The current global pandemic has had an enormous impact on the world, reaching every corner of the globe and touching almost every person. Science has been a front-line response to COVID, with tremendous successes in new treatments for sick patients (The RECOVERY Collaborative Group, 2020) and multiple efficacious vaccines developed in record time (Jackson et al. 2020).

There has been a huge growth in published research on COVID, with many scientists switching their research effort to fight the pandemic. In 2020, around 6% of health and medical papers were on COVID-19, with over 100,000 articles published (Else 2020). There was also an increase in non-COVID related research, with a 92% increase in submissions to health and medical journals compared with 2019.

Here we show an alternative measure of the growth in COVID research, by using acronyms.

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**Table 1** The top five acronyms in titles and abstracts in 2019 and 2020

Year	Titles		Abstracts	
	Acronym	Number	Acronym	Number
2019	DNA	10,873	CI	218,981
	HIV	9,485	DNA	85,677
	RNA	8,636	OR	80,855
	CT	4,686	IL	72,468
	MRI	4,619	RNA	60,661
2020	COVID	57,074	CI	265,526
	SARS	11,747	COVID	146,875
	DNA	11,189	OR	96,336
	CoV	10,981	DNA	88,934
	RNA	10,476	IL	78,994

## Methods and materials

We updated our previous observational study of acronyms in papers on the *PubMed* database over the years 1950 to 2019 to include 2020 (Barnett and Doubleday 2020). The data were downloaded from *PubMed* on 16 February 2021.

Our algorithm extracted acronyms, initialisms and abbreviations from the titles and abstracts. We ignored hyphens, so “COVID-19” was recorded as “COVID”.

## Results

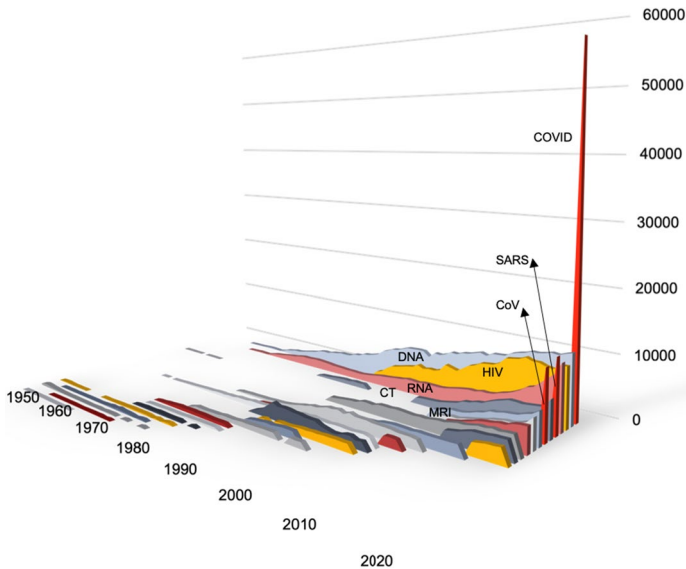
In 2020 “COVID” was the most popular acronym in titles and the second most popular in abstracts only behind “CI” for confidence interval (Table 1). There were over 57,000 titles using “COVID”, which was over 5 times the previous highest annual use of an acronym for “DNA” in 2019.

“SARS” and “CoV” were the second and fourth most popular acronyms in titles in 2020. In 2019 there were only 24 uses of “SARS” in titles, meaning it was outside the 2,000th most popular acronyms in 2019.

“COVID” is the sixth most popular acronym in titles using all the data since 1950, surpassing all the uses of “AIDS”, “PCR” and “MRI” in just one year. The figure shows the sudden ascendancy of “COVID”.

## Discussion

Using acronyms shows that the increase in research on COVID-19 is unprecedented and surpasses all previous shifts in research. There was a large rise in research on HIV and AIDS starting in the late 1980s (Fig 1), but whilst “HIV” was consistently in the top ten acronyms from 1988, it never surpassed “DNA”. “COVID” has eclipsed “HIV” and



**Fig. 1** The most popular scientific acronyms in health and medical journals through time. Using the frequency of selected acronyms in titles from 1950 to 2020. Selected acronyms are those that have been either: (1) a top-10 acronym for 10 years or more or (2) a top-10 acronym that has been mentioned more than 1,000 times in any given year. The most popular acronyms in 2019 and 2020 are individually labelled

even “DNA” in just one year. “COVID” is the world’s most renowned acronym and has dramatically changed health and medical research.

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**Availability of data and material** The analysis code and data to replicate all parts of the analyses and generate the figures and tables are available from GitHub: <https://github.com/agbarnett/acronyms>.

**Code availability** The analysis code and data to replicate all parts of the analyses and generate the figures and tables are available from GitHub: <https://github.com/agbarnett/acronyms>.

**Declarations**

**Conflict of interest** The authors declare that they have no conflict of interest.

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