

# Omicron: Subvariants, Flurona, Deltacron media misinformation and plot twists

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**Keywords:** B.1.1.529 SARS-CoV-2 variant, COVID-19 Virus variants, omicron SARS-CoV-2 variant, SARS-CoV-2 variants



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## Abstract

The worldwide SARS-CoV-2 pandemic has taken the global community through a series of unprecedented events. The frustrating and crippling element in the global COVID saga is that of the catastrophic mutations and or discoveries which set the barely recovering fragile global markets and medical systems alight. One such mutation which ravaged the global recovery and crippled international trade and travel was the Omicron variant. Omicron and its subvariants are rising and becoming the predominant variants globally. The BA.2 subvariant however is seeing an increase in cases due to its enhanced transmissibility and secondary attack rate, it is however not of great concern as no vaccine efficacy discrepancy is evident between the predominant BA.1 variant subtype and that of BA.2. The global community is hypersensitive to COVID-19 and any new findings, it is therefore of the utmost importance that media outlets do not sensationalize and or misconstrue any new information, as such instances can have massive international repercussions. Flurona is not a hybrid virus and is simply a co-infection of the simple seasonal influenza and the Omicron variant, although this co-infection is highly serious, no risk of genetic recombination and hybrid formation is present. Finally, a recombinant variant of the Delta and Omicron variant has been discovered in the UK and is under investigation, initial reports however do not flag the variant as one of concern, more research and data will need to be assessed as for experts to ascertain whether it is a cause for additional health measures or not.

## Introduction

The worldwide SARS-CoV-2 pandemic has taken the global community through a series of unprecedented events. The frustrating and crippling element in the global COVID saga is that of the catastrophic mutations and or discoveries which set the barely recovering fragile global markets and medical systems alight. One such mutation which ravaged the global recovery and crippled international trade and travel was the Omicron variant. Following the discovery of Omicron and assessing the massive impact such a mild variant had, newer and possible more concerning as well as deadly variants may be flagged and discovered in the near future. The discovery of these hybrid mutations and how the international community may respond and circumnavigate such events will determine the course for the following round of immunizations.<sup>1,2</sup>

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## Omicron

Omicron was the novel variant to strike the globe in the latter part of 2021, disrupting global travel and financial markets. This new variant of the SARS-CoV-2 virus was first sequenced and discovered in South Africa, due to the country having some of the world's foremost abilities and capabilities in viral and genome sequencing. The first cases of this new variant were suspected due to a change in the disease's pattern and severity amongst patients, which presented with less severe symptoms than patients whom had contracted the locally predominant Delta variant. This stark difference in presentation aroused the suspicion of physicians whom thus ordered further genomic sequencing of the cases and ultimately discovered the B.1.1.529 variant which was announced by the South African authorities on the 24th of November 2021.<sup>3,4</sup> On 26th of November 2021 the (WHO) World Health Organization subsequently named this new mutant Omicron (B.1.1.529) as a variant of concern due to Omicron having many more mutations than the Delta variant which is still causing thousands of deaths around the globe. This novel variant spread rapidly within South Africa, Hongkong, Israel and Botswana which were among the first countries to record cases of Omicron. A few weeks later towards the latter part of December 2021, the United States of America reported that the Omicron variant was the most commonly newly diagnosed Corona virus infection (73%).<sup>5,6</sup>

## Omicron subvariants

Omicron has mutated into 4 sub lineages namely BA.1, BA.2, BA.3 and B.1.1.529. BA.1 is currently responsible for almost all of the DNA sequenced from infections of the omicron variant submitted to the GISAID database (Global Initiative on Sharing Avian Influenza Data). A current shift in the infections is taking place with BA.2 (stealth omicron) beginning to overtake the Delta and Omicron BA.1 subtype in various countries, thus triggering the concern about a possible new wave. Denmark, India, Philippines and The United Kingdom have flagged their concerns as they report a steep increase in BA.2 cases, with the (SSI) Statens Serum Institute of Denmark declaring that the number of the BA.2 infections have now risen to almost half of the country's reported SARS-CoV-2 cases in the beginning of 2022. The SSI also reported that the BA.2 variant is more transmissible than the BA.1 Omicron variant and could thus explain its rapid rise.<sup>7,8,9</sup>

## Epidemiology of the subvariants

A study conducted in the United Kingdom reported findings in a document published by the United Kingdom Health Security agency, which released technical information with regards to the BA.2 variant of concern (VOC). The analysis concluded that up to the 16th of January 2022 that 3.4% of the cases in the UK were of the BA.2 subtype and 96.1% of the genomic studies were found to be of the BA.1 subtype. The study concluded that the growth rate of BA.2 was increased as when compared to the of BA.1, however did stipulate that further studies will need to take place in order to validate the initial data. The secondary attack rates of BA.2 have also proven to be higher than BA.1 amongst household contacts. The study reported that the initial data did not offer evidence to suspect a difference in vaccine effectiveness against BA.1 or BA.2, however further studies will need to take place due to the lack of an adequate sample size.<sup>10</sup>

## Flurona

The term "Flurona" was coined due to simultaneous co-infections of SARS-CoV-2 and the H3N2 seasonal influenza in patients. The development of such incidences where such a co-infection is present is rare however very concerning. The increase in such Flurona cases is explained by the decreased efficacy of the annual influenza vaccine due to a mismatch caused by mutations in the H3N2 virus. superadded to this, the emergence of the Omicron variant with its increased transmissibility and infectivity has coincided with the "flu-season" and has such created the perfect storm for such concomitant co-infections. The world-wide media coverage of such cases has however both sensationalized and has not always fully and clearly explained such events, thus causing many to believe that a new "super-variant" of a Covid-19 and influenza hybrid to have been discovered. There is no such evidence to suggest that such a hybrid of Covid-19 and influenza can occur even in such co-infected patients.<sup>11,12</sup>

## Deltacron

Deltacron was thought to be a super variant, a hybrid mutation of the Omicron and Delta SARS-CoV-2 variants, however the notion of such a mutation existing was rapidly refuted by international experts. A team of researchers in Cyprus uploaded multiple odd genetic sequences to GISAID which they termed Deltacron. International media outlets however misconstrued the scientists' hypothesis and naming of the sequences thus sensationalizing the event causing a media frenzy and global concern. Leading international experts have stated that the sequences were most likely caused due to contamination. The sequences were subsequently removed from the database. The team of researchers in Cyprus are investigating the views of the international experts and aim to submit their work for peer review.<sup>13</sup>

New evidence has however proven Deltacron to be true, as the first cases of an Omicron and Delta variant (Deltacron) have been reported in the United Kingdom. The UKHSA have currently flagged the "Delta and Omicron recombinant (UK)" under current monitoring and investigation. It is however believed that the variant is of not great concern due to its minute number of cases and that the immunity conferred by vaccination is effective against both of the variants.<sup>14,15</sup>

## Conclusion

Omicron and its subvariants are rising and becoming the predominant variants globally. The BA.2 subvariant however is seeing an increase in cases due to its enhanced transmissibility an secondary attack rate, it is however not of great concern as no vaccine efficacy discrepancy is evident between the predominant BA.1 variant subtype and that of BA.2. The global community is hypersensitive to COVID and any new findings, it is therefore of the utmost importance that media outlets do not sensationalize and or misconstrue any new information, as such instances can have massive international repercussions. Flurona is not a hybrid virus and is simply a co-infection of the simple seasonal influenza and the Omicron variant, although this co-infection is highly serious, no risk of genetic recombination and hybrid formation is present. Finally, a recombinant variant of the Delta and Omicron variant has been discovered in the UK and is under investigation, initial reports however do not flag the variant as one of concern, more research and data will need to be assessed as for experts to ascertain whether it is a cause for additional health measures or not.

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