

Ontology-based representation and comparison of COVID-19 vaccine phase III clinical trials

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Background

- Safe and effective vaccines are essential to ultimately control the COVID-19 pandemic.
- As of Oct. 15, 10 vaccines are in phase III clinical trials, 32 vaccines are in phase I or phase II clinical trials, 156 candidates are in pre-clinical phase. (WHO DRAFT landscape of COVID-19 candidate vaccines)
- Many questions for consumers:
 - Why some vaccine trials are paused?
 - Why some vaccine trials are re-opened?
 - Will I get a COVID 19 vaccine?
 - What if the COVID 19 vaccine is harmful to myself?
 - So many companies are working on vaccines, which one to choose?
 - Are the vaccines tested on black brown yellow people etc.?

COVID 19 Vaccine Information for Consumers

- News are confusing
- Consumers need data or science-based information to make well-informed decision

NEWS · 09 SEPTEMBER 2020

A leading coronavirus vaccine trial is on hold: scientists react

Scientists urge caution in global vaccine race as AstraZeneca reports 'adverse event' in a person who received the Oxford vaccine.

Nicky Phillips, David Cyranoski & Smriti Mallapaty

Johnson & Johnson Temporarily Pauses All Dosing in Our Janssen COVID-19 Vaccine Candidate Clinical Trials

At Johnson & Johnson, there is no greater priority than the safety and well being of the people we serve every day around the world. We are committed to providing transparent updates throughout the clinical development process of our vaccine candidate, in compliance with regulatory standards and our own high ethical and scientific [principles](#).

We have temporarily paused further [Phase 3 ENSEMBLE](#) trial, due to participant's illness is being reviewed by Data Safety Monitoring Board (DSMB) as well as our internal

AstraZeneca
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COVID-19 vaccine AZD1222 clinical trial resumed in Japan, follows restart of trials in the UK, Brazil, South Africa and India

PUBLISHED
2 October 2020

INOVIO Reports FDA Partial Clinical Hold for Planned Phase 2 / 3 Trial of COVID-19 Vaccine Candidate INO-4800

September 28, 2020

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PLYMOUTH MEETING, Pa., Sept. 28, 2020 /PRNewswire/ -- INOVIO (NASDAQ:INO), a biotechnology company focused on bringing to market precisely designed DNA medicines to treat and protect people from infectious diseases and cancer, announced that the U.S. Food and Drug Administration (FDA) has notified the company it has additional questions about the company's planned Phase 2/3 trial of its COVID-19 vaccine candidate INO-4800, including its CELLECTRA® 2000 delivery device to be used in the trial. Until the FDA's questions have been satisfactorily addressed, INOVIO's Investigational New Drug Application (IND) for the Phase 2/3 trial is on partial clinical hold. The company is actively working to address the FDA's questions and plans to respond in October, after which the FDA will have up to 30 days to notify INOVIO of its decision as to whether the trial may proceed.

This partial clinical hold is not due to the occurrence of any adverse events related to INOVIO's ongoing expanded Phase 1 study of INO-4800, the conduct of which may continue and is not impacted by the FDA's notification. In addition, this partial clinical hold does not impact the advancement of INOVIO's other product candidates in development. INOVIO and its partners are continuing to prepare for a planned Phase 2/3 trial of INO-4800, following resolution of the FDA's partial clinical hold and subject to the receipt of external funding to conduct the trial.

Vaccine Ontology (VO), Clinical Trial Ontology (CTO) & VIOLIN

Vaccine Ontology

VO is a biomedical ontology in the domain of vaccine and vaccination.

[OntoBee](#) [AberOWL](#) [OLS](#)

The Vaccine Ontology (VO) is a biomedical ontology in the domain of vaccine and vaccination. VO aims to standardize and integrate vaccines, vaccine components, vaccine mechanisms, vaccine data types, and support computer-assisted reasoning. VO supports basic vaccine research, development, and clinical vaccine usage. VO is being developed as a community-based ontology with support and collaborations from the vaccine and bio-ontology communities.

ID Space [vo](#)
PURL <http://purl.oblibrary.org/obo/vo.owl>
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Homepage <http://www.violinet.org/vaccineontology>
Contact [Yongqun He](#)
Trackers <https://github.com/vaccineontology/VO/issues>
Domain [health](#)

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Products

[vo.owl](#)

CTO: Core Ontology of Clinical Trials

The core Ontology of Clinical Trials (CTO) will serve as a structured resource integrating basic terms and concepts in the context of clinical trials. Thereby covering clinicaltrials.gov. CoreCTO will serve as a basic ontology to generate extended versions for specific applications such as annotation of variables in study documents from clinical trials.

[OntoBee](#) [AberOWL](#) [OLS](#)

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PURL <http://purl.oblibrary.org/obo/cto.owl>
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Homepage <https://github.com/ClinicalTrialOntology/CTO/>
Contact [Dr. Alpha Tom](#)
Trackers [Kodamulli](#)
Domain <https://github.com/ClinicalTrialOntology/CTO/issues>

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Products

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Vaccine Investigation and Online Information Network

Search: for

Welcome to VIOLIN, a web-based vaccine database and analysis system!



VIOLIN integrates vaccine literature data mining, vaccine research data curation and storage, and curated vaccine data analysis for vaccines and vaccine candidates developed against various pathogens of high priority in public health and biological safety. VIOLIN also provide a new program for vaccine target prediction.

Submit your vaccine data without registration and login!

COVID 19 Vaccines in VO

- 22 Vaccines included.
- Vaccines included if listed by clinical trial or peer-reviewed journal for source.
- Almost all vaccines use a variant of S protein or whole virus as an antigen (ZyCoV-D has envelope protein).
- Vaccines for human clinical trial
 - Macaques and mice common research test model

Vaccine Role	Amount
DNA Vaccine	4
Recombinant Vector	5
RNA Vaccine	6
Subunit Vaccine	2
Virus-Like Particle Vaccine	1
Whole Organism Vaccine	4



COVID 19 Clinical Trials (Phase III)

VIOLIN COVID 19 Vaccines



VIOLIN
Vaccine Investigation and Online Information Network

Search: for

COVID-19 Vaccines

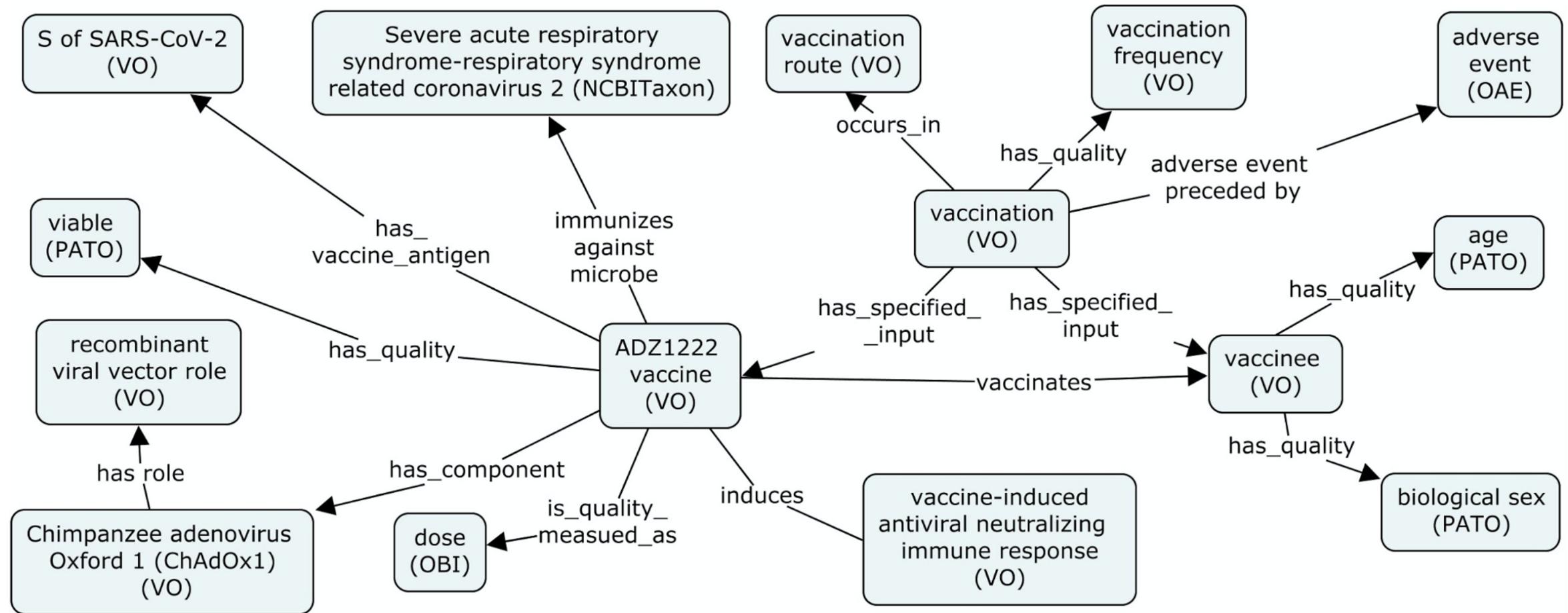
This VIOLIN website is newly generated to update the news and knowledge about COVID-19 vaccines. We are facing the challenges to quickly deliver effective and safe vaccines against COVID-19 pandemic. To help the public and researchers keep updated on the COVID-19 vaccine development, immunization registry, and post-licensure vaccine safety monitoring, we have developed this website.

Note that we target to keep updating this page in a weekly or even daily basis.

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 - 3. [Vaccines in Phase I clinical trial](#)
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 - 3. [Recombinant vector vaccines](#)
 - 4. [RNA vaccines](#)
 - 5. [Subunit vaccines](#)
- III. [Vaccine safety](#)
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 - 2. [Safety issues found in lab animals](#)
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ADZ1222 (ChAdOx1 nCoV19)





Future Directions