Overview of planned and ongoing clinical studies of vaccines for COVID-19

Vaccine, Sponsor	Study identifier/link to website	Location	Study design	Primary outcome	Status of trial	Importance
mRNA vaccine Sponsor: National institute of Allergy and Infectious diseases; Moderna Therapeutics; Lonza	NCT04283461	United States, Washington	Phase 1 open label dose ranging study of the safety and immunogenicity of 2019 nCoV vaccine (mRNA1273) in healthy adults N=105, 3 arm study 25 mcg, 100 mcg, 250 mcg	Relevant safety outcomes; 12 months follow-up	Recruiting Estimated primary completion: September 2021	High
mRNA-1273 Sponsor: ModernaTX, Inc.	NCT04405076 Early news. https://time.com/5835785/moderna-coronavirus-vaccine-phase-2/ https://investors.modernatx.com/news-releases/news-release-details/moderna-receives-fda-fast-track-designation-mrna-vaccine-mrna https://investors.modernatx.com/news-releases/news-release-details/moderna-announces-positive-interim-phase-1-data-its-mrna-vaccine	United states (multiple sites)	Phase 2a, randomized, observer-blind, placebo controlled, dose-confirmation study to assess the safety, reactogenicity, and immunogenicity of 2 dose levels of mRNA-1273 SARS-COV-2 vaccine in adults 18 years of age or older. N=600 randomized to 50 mcg mRNA-1273 or 100 mcg mRNA-1273. Each participant will receive two shots The randomisation is stratified by age. 300 individuals 18-54 years and 300 individuals 55+ years	1. Solicited local and systemic adverse reactions [Time Frame: 7 days post-vacc] 2. Unsolicited adverse events [Time Frame: 28 days post-vacc] 3. Medically-attended adverse events [Time Frame: Month 0 through Month 13] 4. Serious adverse events [Time Frame: Month 0 through Month 13] 5. Change in the measure of clinical safety laboratory values in Cohort 2 from baseline [Time Frame: Through 1 month after last vacc] 6. Number and percentage of participants with abnormalities in blood pressure, temp, HR or respiratory rate [Time Frame: Through 1 year after last vacc] 7. Number and percentage of participants with abnormalities in physical examinations [Time Frame: Through 1 year after last vaccination] 8. Evaluate immunogenicity of mRNA-1273 by titer of SARS-CoV-2-specific binding antibody (bAb) measured by enzyme-linked immunosorbent assay (ELISA) [Time Frame: Through 1 year after the final dose]	Recruiting Estimated Primary Completion Date: March 2021	High

Vaccine, Sponsor	Study identifier/link to website	Location	Study design	Primary outcome	Status of trial	Importance
Recombinant Novel Coronavirus Vaccine (Adenovirus Type 5 Vector) Sponsor: CanSino Biologics Inc.	ChiCTR2000030906 NCT04313127	Hubei, China	A single-center, open and dose-escalation phase I clinical trial for recombinant novel coronavirus (2019-COV) vaccine (adenoviral vector) N=108 Healthy adults treated with 3 different doses	Adverse reactions 7 days post injection	Active, not recruiting Estimated primary completion: Dec 30 2020	High
Ad5-nCoV Insitute of Biotechnology, Academy of Military Medical Sciences, PLA of China CanSino Biologics Inc.	NCT04341389 ChiCTR2000031781	China, Hubei	A Randomized, Double-blind, Placebo-controlled Phase II Clinical Trial to Evaluate the Safety and Immunogenicity of the Recombinant Novel Coronavirus Vaccine (Adenovirus Vector) in Healthy Adults Aged Above 18 Years N=500 healthy individuals randomised to 1×10^11vp of Ad5-nCoV 5×10^10vp of Ad5-nCoV Placebo	Occurrence of adverse reactions [Time Frame: 0-14 days post vaccination] Anti SARS-CoV-2 S antibody response(ELISA) [Time Frame: 28 days post vaccination] Neutralizing antibody response to SARS-CoV-2 [Time Frame: 28 days post vaccination]	Active, not recruiting; Estimated Primary Completion: January 31, 2021	High
Ad5-nCoV Sponsor and collaborators: CanSino Biologics Inc. Institute of Biotechnology, Academy of Military Medical Sciences. PLA of China Canadian Center for Vaccinology	NCT04398147 Early news https://thesamikhsya.com/exclusive/canada-approves-first-clinical-trial-for-potential-covid-19-vaccine	Canada	phase I /II adaptive clinical trial to evaluate the safety, tolerability and the Immunogenicity of Ad5-nCoV in healthy adults from 18 to <55 and 65 to <85 years of age, with the randomized, observer-blind, dose-escalation design. N=96 will be included in the dose-escalating study (phase I) 5E10vp and 10E10vp, Of each of the 2 doses, single dose and 2 doses will be tested. N=600 will be included in the phase 2 trial	Solicited AE in all groups [Time Frame: 0-6 days after each vaccination] Unsolicited AE in all groups [Time Frame: 0-28 days after each vaccination] Serious adverse events (SAE) in all groups [Time Frame: 6 months after the final vaccination]	Not yet recruiting; Estimated Primary Completion: March 2021	High

Vaccine, Sponsor	Study identifier/link to website	Location	Study design	Primary outcome	Status of trial	Importance
BioNTech RNA BNT162a1 BNT162b1 BNT162b2 BNT162c2 Pharmaceuticals GmbH + Pfizer Inc.	EudraCT Number: 2020-001038-36 NCT04380701 U1111-1249-4220 BNT162-01 https://investors.biontech.de/news-releases/news-release-details/biontech-and-pfizer-announce-regulatory-approval-german	Germany	Phase I/II, multi-site, non-randomized, open-label trial investigating the safety and immunogenicity of four prophylactic SARS-CoV-2 RNA vaccines against COVID-2019 using different dosing regimens in healthy adults. N=200 The trial has two parts. Part A: a dose-finding part with four dose cohorts for each vaccine and one pre-defined and one optional dose level for a de-escalation approach. - BNT162a1 (i.m., escalating dose levels) - BNT162b1 (i.m., escalating dose levels) - BNT162b2 (i.m., escalating dose levels) - BNT162c2 (i.m., single dose) Part B: dedicated to recruit expansion cohorts with dose levels which are selected from data generated in Part A.	1. Solicited local reactions at the injection site (pain, tenderness, erythema/redness, induration/swelling) recorded up to 7±1 days after each immunization. 2. Solicited systemic reactions (nausea, vomiting, diarrhea, headache, fatigue, myalgia, arthralgia, chills, loss of appetite, malaise, and fever) recorded up to 7±1 days after each immunization. 3. The proportion of subjects with at least 1 unsolicited treatment emergent adverse event (TEAE): [Time Frame: 21 days following dose administration] 4. The proportion of subjects with at least 1 unsolicited treatment emergent adverse event (TEAE): [Time Frame: 28 days following dose administration]	Ongoing; Estimated Primary Completion Date: August 2020	High
RNA vaccines: BNT162a1 BNT162b1 BNT162b2 BNT162c2 Sponsor: Biontech SE	NCT04368728 Same vaccine as 2020-001038-36	Multicenter, Germany, United States	Phase 1/2, observer-blinded, placebo-controlled, randomized dose-finding trial to Describe the Safety, Tolerability, Immunogenicity, and Potential Efficacy of Covid-19 RNA Vaccine Candidates Against COVID-19 in Healthy Adults N = 7600 healthy adults in age groups: 18-55, 65-85 and 18-85. Randomized to receive single dose of low-, medium- or high-dose or two doses of low-, medium- or high-dose of BNT162a1, BNT162b1, BNT162b2, BNT162c2 or placebo injection (21 arms)	Percentage of participants reporting: - Local reactions - Systemic events - (Serious) Adverse events Percentage of sentinel cohort participants with grading shifts and abnormal hematology and laboratory values	Recruiting Estimated Study Completion Date: January 27, 2023	High

Vaccine, Sponsor	Study identifier/link to website	Location	Study design	Primary outcome	Status of trial	Importance
ChAdOx1 nCoV-19; (COV001) Based on adenovirus vaccine vector with SARS-CoV-2 spike protein. ChAdOx1 nCoV-19 is an adenoviral vector-based vaccine that consists of genetic material from SARS-CoV-2 inserted into a weakened common cold virus. The idea is that after a person has been vaccinated, the spike protein on the surface of the Covid-19 virus is produced, thereby preparing the immune system to attack it. University of Oxford Astra-Zeneca	NCT04324606 http://www.ox.ac.uk/news/2020-03-27-oxford-covid-19-vaccine-programme-opens-clinical-trial-recruitment	UK	A Phase I/II Study Single-blinded, randomised, placebo controlled, multi-centre study N: 510 Healthy volunteers aged 18-55 Number of study participants has been increased to 1112.	Number of virologically confirmed (PCR positive) symptomatic cases of COVID-19 Occurrence of serious adverse events (SAEs) throughout the study duration	Active, not recruiting Estimated primary Completion: May 2021	High
ChAdOx1 nCoV-19	NCT04400838 2020-001228-32 Early news: http://www.ox.ac.uk/news/2020-05-22-oxford-covid-19-vaccine-begin-phase-iiiii-human-trials	UK	Phase II/III study to determine the efficacy, safety and immunogenicity of the ChAdOx1 nCoV-19 in healthy UK volunteers. A randomised, single blinded trial. 10,260 adults and children Phase 2 study: from 5 years of age Phase III study: from 18 years Comparator: Menveo or Nimenrix (meningococcal vaccines)	Assess the efficacy of the candidate ChAdOx1 nCoV-19 against COVID-19 in adults aged 18 years and older. [Time Frame: 6 months]: Number of virologically confirmed (PCR positive) symptomatic cases of COVID-19 Assess the safety of the candidate vaccine ChAdOx1 nCoV-19 in adults and children [Time Frame: 6 months]: Occurrence of serious adverse events (SAEs) throughout the study duration.	Not yet recruiting; Estimated primary completion: August 2021	High

Vaccine, Sponsor	Study identifier/link to website	Location	Study design	Primary outcome	Status of trial	Importance
Inactivated vaccine (Vero cells) Henan Provincial Center for Disease Control and Prevention Funding: Ministry of Science and Technology, China	ChiCTR2000031809	China, He'nan , Jiaozuo	Randomized, double-blind, placebo parallel-controlled phase I/II clinical trial for inactivated Novel Coronavirus Pneumonia vaccine (Vero cells) Healthy volunteers, from 6 years of age Multiple doses	Incidence of adverse reactions/events	From 2020-04-11 To 2021-11-10	High
Inactivated novel coronavirus (2019-CoV) vaccine (Vero cells) Sponsor: Henan Provincial Center for Disease Control and Prevention Funding: Ministry of Science and Technology, China and Sinopharm	ChiCTR2000032459 Same study as ChiCTR2000031809 or update of the study?	China, He'nan, Shangqiu	A phase 1/2 randomized, double-blind, placebo parallel-controlled clinical trial to evaluate the safety and immunogenicity of inactivated novel coronavirus (2019-CoV) vaccine (Vero cells) N = 2128??? Healthy volunteers from 3 years of age Multiple doses	Incidence of adverse reactions/events	From 2020-04-28 To 2021-11-28	High

Vaccine, Sponsor	Study identifier/link to website	Location	Study design	Primary outcome	Status of trial	Importance
Formalin-inactivated and alum-adjuvanted Sinovac Research & Development Co., Ltd	NCT04352608	China, Jiangsu	Randomized, double-blinded, and placebo controlled phase I/II clinical trial of the SARS-CoV-2 inactivated vaccine. Healthy adults aged 18-59 Years. N (estimated) = 744	1.Safety indexes of adverse reactions [Time Frame: up to 28 days after the whole schedule vaccination] 2.Immunogenicity indexes of neutralizing-antibody seroconversion rates for the emergency vaccination schedule (0 and 14) [Time Frame: The 14th day after two doses of vaccination] 3.Immunogenicity indexes of neutralizing-antibody seroconversion rates for the routine vaccination schedule (day 0,28) [Time Frame: The 28th day after two doses of vaccination]	Recruiting; Estimated Primary Completion Date: August 13, 2020	High
Inactivated SARS-CoV-2 vaccine (Vero Cell) Sponsor: Sinovac Research and Development Co., Ltd.	NCT04383574	China, Hebei	Phase 1/2, double-blinded, placebo-controlled, randomized trial on Inactivated Vaccine for Prevention of Covid-19 infection N = 422 (72 in phase 1 and 350 in phase 2), age ≥ 60, healthy, randomized to two doses of low, medium or high dosage or placebo	Safety index-incidence of adverse reactions [Time Frame: Day 0-28 after each dose vaccination]	Not yet recruiting Estimated Primary Completion Date: July 20, 2020	High

Vaccine, Sponsor	Study identifier/link to website	Location	Study design	Primary outcome	Status of trial	Importance
Drug: INO-4800 Device: CELLECTRA® 2000 Sponsor: Inovio Pharmaceuticals	NCT04336410	United States, Missouri and Pennsylvania	Phase 1 Open-label Study to Evaluate the Safety, Tolerability and Immunogenicity of INO-4800 for a Novel Coronavirus (COVID-19) in Healthy Volunteers N=40 Two different doses will be tested	Safety and efficacy Time frame week: 52	Not yet recruiting; Estimated Primary Completion: April 2021	High
bacTRL-Spike Plasmids containing synthetic DNA encoding spike protein from SARS-CoV-2 Sponsor: Symvivo Corporation (A Vancouver-based biotech company) Sponsor: Symvivo Corporation	NCT04334980	Canada, British Columbia Canada, Nova Scotia	A Phase 1, Randomized, Observer-Blind, Placebo-Controlled Trial to Evaluate the Safety, Tolerability and Immunogenicity of the bacTRL-Spike Oral Candidate Vaccine for the Prevention of COVID-19 in Healthy Adults N=84 3 different doses will be tested	Frequency of Adverse Events Each participant will remain in the trial for 12-13 month	Not yet recruiting; Estimated Primary Completion Date: August 31, 2021	High
SARS-CoV-2 Recombinant Spike Protein Nanoparticle Vaccine (SARS-CoV-2 rS) (NVX-CoV2373) Sponsor: Novavax CEPI funding	NCT04368988 https://ir.novavax.com/news-releases/news-release-details/novavax-identifies-coronavirus-vaccine-candidate-accelerates	Australia (multiple sites)	A 2-Part, phase 1/2, randomized, observer-blinded study to evaluate the safety and immunogenicity of a SARS-CoV-2 recombinant spike protein nanoparticle vaccine (SARS-CoV-2 rS) with or without MATRIX-M™ Adjuvant in healthy subjects. N=131 healthy subjects ≥ 18 to 59 age randomized to placebo or SARS-CoV-2 rS - 25 µg without Matrix-M or SARS-CoV-2 rS - 5 µg with 50 µg Matrix-M or SARS-CoV-2 rS - 25 µg with 50 µg Matrix-M or SARS-CoV-2 rS - 25 µg with 50 µg Matrix-M followed by Placebo. In Part 1, at least 1 and up to two SARS-CoV-2 rS constructs will be evaluated in up to 2 cohorts, which may be enrolled in parallel. An interim analysis of Part 1 safety and immunogenicity data will be	1. Subjects with solicited AEs - Phase 1 [Time Frame: 28 2. Safety Laboratory Values (serum chemistry, hematology) - Phase 1 [Time Frame: 28 days] 3. Serum IgG antibody levels specific for the SARS-CoV-2 rS protein antigen(s) - Phase 1 [Time Frame: 35 days]	Recruiting Expected to start mid-May 2020 Estimated Primary Completion Date: December 31, 2020 Sharing of results in July 2020	High

			performed prior to an optional expansion to Part 2.			
SCB-2019 with and without adjuvant (AS03 or CpG 1018 plus Alum adjuvant) Native like Trimeric subunit Spike Protein vaccine Sponsor: Clover Biopharmaceuticals Inc./GSK/Dynavax	NCT04405908	Not stated yet	This is a randomized, double blind, placebo controlled, first-in-human study to assess safety, reactogenicity, and immunogenicity of SCB-2019 at multiple dose levels, administered as 2 injections IM in healthy subjects. Each study vaccine dose level will be evaluated with and without adjuvant. N=150 healthy volunteers stratified by age, randomised to 1 of 3 doses (3, 9 or 30 microgram with or without adjuvant)	Incidence of solicited adverse events (AEs) after vaccination [Time Frame: 7 days after the first or second vaccination.] Incidence of unsolicited AEs after vaccination [Time Frame: Day 1 to Day 50] Immunogenicity(Anti-SCB-2019 Antibody Titers) [Time Frame: Day 1 to Day 184] Geometric mean titer (GMT). Geometric mean ratio (GMR). Seroconversion rate (SCR). Incidence of serious AEs (SAEs) and adverse events of special interest (AESIs) [Time Frame: Day 1 to Day 184]	Not yet recruiting; Estimated primary completion: October 20, 2020	High
LV-SMENP vaccine. Modification of dendritic cells and activate T cells Sponsor: Shenzhen Geno-Immune Medical Institute	NCT04276896	China, Guangdong	Phase 1 and phase 2 Multicenter Trial of Lentiviral Minigene Vaccine (LV-SMENP) of Covid-19 N=100 with confirmed covid-19	Clinical improvement based on the 7-point scale [Time Frame: 28 days after randomization] Lower Murray lung injury score [Time Frame: 7 days after randomization]	Recruiting; Estimated primary completion/estimated primary completion: July 31, 2023/ Dec 31, 2024	High
Covid-19/aAPC vaccine: Pathogen-specific antigen presenting cells (APC). Modify artificial APC (aAPC) and to activate T cells. Sponsor: Shenzhen Geno-Immune Medical Institute	NCT04299724	China, Guangdong	Phase 1, open label single group assignment N=100, Healthy and Covid-19-positive volunteers	Frequency of vaccine events and frequency of serious vaccine events [Time Frame: Measured from Day 0 through Day 28]; Proportion of subjects with positive T cell response [Time Frame: 14 and 28 days after randomization]	Recruiting Estimated primary completion/estimated primary completion: July 31, 2023/ Dec 31, 2024	High
Intranasal vaccine Single dose AdCOVID	Early news: Collaboration between University of Alabama at Birmingham and Altimune Inc. https://www.drugtargetreview.com/news/59182/biotech-and-academia-	USA	Phase I estimated to start Q3 2020	TBD	Not recruiting; Estimated study completion: Unknown	High

	collaborate-on-intranasal-covid-19-vaccine-development/					
Dendritic Cell Vaccine Sponsor: Aivita Biomedical, Inc.	NCT04386252	Not stated	A phase 1/2, randomized, double-blinded trial of a vaccine consisting of autologous dendritic cells loaded with antigens from SARS-CoV-2, with or without GM-CSF, to prevent COVID-19. Different doses N = 160 frontline healthcare providers and first responders.	Confirm safety [Time Frame: 6 months]	Not yet recruiting Estimated Primary Completion Date: October 2020	High
Drug: MicroRNA2911 Sponsor: Nanjing University	ChiCTR2000031432	China, Jiangsu	Phase 1, single center, randomized, open, dose-increasing, double-blind clinical study to evaluate the safety and tolerance of microRNA2911 plasmid in healthy people. N = 15 healthy adults enrolled in 1-5 dose group to receive 3 times of intravenous infusion for 10 minutes of MicroRNA2911 once a day or every other day.	Safety and tolerance	Not yet recruiting From 2020-04-01 To 2020-08-31	Medium
V-SARS Sponsor: Immunitor LLC	NCT04380532	Canada	Phase I/II, single group assignment, open-label trial to evaluate the safety and immunogenicity in healthy individuals administered once-daily pill of therapeutic vaccine made from heat-inactivated plasma from donors with COVID-19. N=20 V-SARS administered po. once-per-day for 15 days	Effect on CBC as per CTCAE v4.0 [Time Frame: 15 Days] Effect on biochemistry parameters as per CTCAE v4.0 [Time Frame: 15 Days]	Recruiting Estimated Primary Completion Date: May 15, 2021	Medium
COVID-19 vaccine British American Tobacco Kentucky BioProcessing (KBP),	Study not FDA approved yet Early news: https://www.bat.com/group/sites/UK__9D9KCY.nsf/vwPagesWebLive/DOBPMBZC		Phase 1 trial		Phase 1 trial not approved yet	
Epitope gene recombinant chimeric DC vaccine;	ChiCTR2000030750	China, Guangdong	Phase 1/2 N=120, 4 arm study	Duration of disease Antipyretic rate Severe rate	Recruiting Estimated study completion: Feb 2021	Low

Sponsor: Shenzhen Third People's Hospital Immunotherapy with recombinant chimeric DC vaccine			Patients with covid-19			

Vaccine, Sponsor	Study identifier/link to website	Location	Study design	Primary outcome	Status of trial	Importance
BCG Vaccine Licensed for tuberculosis	NCT04327206 Early news: The BRACE trial https://www.mcri.edu.au/BRACE https://www.clinicaltrialsarena.com/news/australia-bcg-vaccine-trial-covid-19/	Murdoch Children's Research Institute in Australia	Randomised, multi-center clinical trial to test the use of BCG vaccine against COVID-19 patients Will include 4.170 healthcare workers across AU, incl Melbourne Campus' Royal Children's Hospital	TBD BCG will be assessed for its ability to mitigate the prevalence and severity of COVID-19 symptoms.	Recruiting; Estimated primary completion: October 30, 2020	High
BCG vaccine University Medical Center, Netherlands	EudraCT: 2020-000919-69 NCT04328441 https://www.sciencemag.org/news/2020/03/can-century-old-tb-vaccine-steel-immune-system-against-new-coronavirus	Netherlands	Randomised placebo controlled multi-center clinical trial to test the use of BCG vaccine as protection against COVID-19 Will include 1.000 healthcare workers across 8 Dutch hospitals BCG often cause an injection site reaction which will unblind the person receiving BCG, but the researchers will remain blinded.	Study outcome: "unplanned absenteeism" as it will not be feasible to visit the sick professionals at home during the coronavirus pandemic BCG will be assessed for its ability to mitigate the prevalence and severity of COVID-19 symptoms.	Ongoing; Estimated Primary Completion: October 25, 2020	High
BCG Vaccine VPM1002 Licensed for tuberculosis	Early news: http://www.mpiib-berlin.mpg.de/1990061/news_publication_14610776_transferred https://economictimes.indiatimes.com/industry/healthcare/biotech/pharmaceuticals/serum-institute-to-test-if-tb-vaccine-vpm1002-is-effective-against-covid-19/articleshow/74800246.cms?from=mdr	Germany	Phase III, multi-centre clinical trial to test the use of BCG vaccine as protection against COVID-19 Likely to begin on 2.000 health-care workers in Germany and soon after in India as well.	Study outcome: BCG will be assessed on healthcare workers to see efficacy of the vaccine as a preventive against coronavirus, and on elderly patients to check efficacy in reducing clinical severity	Unknown	High

BCG vaccine BCG vaccine is the Copenhagen (Danish strain) Sponsor: Ain Shams University	NCT04350931	Egypt	Single blind, randomised, placebo controlled trial. N=900 healthcare workers will be randomly assigned to receive intradermal injection of either BCG vaccine or normal saline.	Incidence of confirmed COVID-19 [Time Frame: 9 months] Estimate the incidence of confirmed COVID-19 among the healthcare workers in isolation hospitals Effectiveness of BCG vaccine [Time Frame: 9 months] Evaluate the effectiveness of BCG vaccine in protecting the healthcare workers in isolation hospitals against the risk of COVID-19 infection by detecting any positive cases among vaccinated healthscare workers	Not yet recruiting; Estimated Primary Completion: October 1, 2020	High
BCG Vaccine Sponsor: Andrew Dinardo	NCT04348370	United States: Massachusetts and Texas	Phase 4, randomized, double-blinded N=700 health care workers randomized 1:1 to BCG vaccine or placebo.	Incidence (measured by confirmed positive test) of SARS-CoV2 infection following BCG vaccination compared to placebo [Time Frame: Measured daily for up to 6 months]	Not yet recruiting Estimated Primary Completion Date: May 2021	High
BCG vaccine Sponsor: Universidad de Antioquia	NCT04362124	Columbia (multicenter)	Phase 3, double-blind, randomized, clinical trial to evaluate the BCG vaccination in healthcare workers to reduce the severity of SARS-COV-2 infection. N=1000 covid-19 negative health care workers randomized 1:1 to BCG vaccine or placebo.	Primary outcome [Time Frame: From date of randomization to 360 day of the study]	Not yet recruiting Estimated Primary Completion Date: June 2021	High
BCG vaccine of patients already positive for SARS-CoV-2 (non-specific effects) Sponsor: University of Campinas, Brazil	NCT04369794 (BATTLE)	Brazil	Phase 4, prospective, randomized, double-blind, multicentre study to evaluate to the impact of previous (priming effect, from the titer of anti-BCG interferon-gamma) or current BCG exposure (boost with intradermal vaccine) on 1) clinical evolution of COVID-19; 2) elimination of SARS-CoV-2 at different times and disease phenotypes; and 3) seroconversion rate and titration (anti-SARS-CoV-2 IgA, IgM, and IgG). N=1000 randomized to BCG vaccine or placebo.	1. Clinical evolution of COVID-19 [Time Frame: 45 days of symptoms onset or diagnosis] 2. SARS-CoV-2 elimination [Time Frame: 7 days of symptoms onset or diagnosis] 3. Seroconversion rate and titration [Time Frame: 7 days of symptoms onset or diagnosis	Not yet recruiting Estimated Study Completion Date: May 2022	High

BCG vaccine Sponsor: Bandim Health Project Collaborator: University of Southern Denmark	NCT04373291 2020-001888-90 BCG-DENMARK-COVID	Denmark	Using BCG vaccine to enhance nonspecific protection of health care workers during the COVID-19 pandemic. A randomised controlled multi-center trial. Phase 3, multi-center, randomized, double-blinded placebo-controlled trial using BCG Vaccine to enhance non-specific protection of health care workers during the COVID-19 pandemic. N=1500 hospital personal ≥18 years caring for covid-19 patients randomized 1:1 to BCG vaccine (0,1 mL dose of BCG-Denmark, AJ Vaccines) or placebo (0.1 ml dose sterile 0.9 % NaCl).	Number of days of unplanned absenteeism for any reason [Time Frame: 6 months]	Not yet recruiting Estimated Study Completion Date: January 2021	High
Bacille Calmette-Guérin (BCG) Sponsor: TASK Applied Science	NCT04379336	South Africa	A phase 3, randomized, double-blinded, placebo-controlled study to reduce morbidity and mortality in health care workers exposed to SARS-CoV-2 by enhancing non-specific immune responses through bacillus calmette-guérin vaccination N = 500 healthcare workers	Incidence of HCWs hospitalized due to COVID-19 per arm [Time Frame: 52 weeks]	Recruiting Estimated Primary Completion Date: April 28, 2021	High
BCG vaccinaton Sponsor: Assistance Publique - Hôpitaux de Paris	NCT04384549	France	Phase 3, single-blinded, placebo-controlled, randomized trial on the Efficacy of Vaccination With Bacillus Calmette and Guérin (BCG) in the Prevention of COVID-19 Via the Strengthening of Innate Immunity in Health Care Workers N = 1120 healthcare workers in direct contact with Covid-19 patients	Incidence of documented COVID-19 among health care workers exposed to SARS CoV2 and vaccinated with BCG compared to placebo. [Time Frame: during the study period of 6 months]	Not yet recruiting Estimated Primary Completion Date: February 11, 2021	High
Previous Bacille Calmette-Guérin (BCG) vaccination Sponor: Assiut University	NCT04347876	Egypt	Observational, Case-Control study evaluating whether previous BCG vaccination can alter the outcome of COVID-19 cases. Based on Tuberculin Test. N = 100 COVID-positive patients admitted to hospital and ICU with positive Tuberculin Test compared to	Pneumonia severity index [Time Frame: 2 weeks] Need for ICU admission [Time Frame: 2 weeks]	Recruiting Estimated Study Completion Date: June 30, 2020	Low

			COVID-positive patients with negative Tuberculin Test.			
VPM1002 (a further development of the BCG-vaccine) Sponsor: Vakzine Projekt Management GmbH	NCT04387409 VPM1002-DE-3.06CoV	Germany	Phase 3, double-blind, randomized, placebo-controlled multicentre trial to assess the efficacy and safety of VPM1002 in reducing healthcare professionals' absenteeism in the SARS-CoV-2 pandemic by modulating the immune system. N=1200 health care professionals with high expected exposure to SARSCoV-2 infected patients randomized 1:1 to a single dose (0.1 ml) of either VPM1002 or placebo.	Number of days absent from work due to respiratory disease (with or without documented SARS-CoV-2 infection) [Time Frame: From day 0 to day 240]	Not yet recruiting Estimated Primary Completion Date: June 30, 2021	High

Vaccine, Sponsor	**Study identifier/link to website**	**Location**	**Study design**	**Primary outcome**	**Status of trial**	**Importance**
Drug: Measles-Mumps-Rubella Vaccine Sponsor: Kasr El Aini Hospital	NCT04357028	Egypt	Phase 3, randomized, single-blinded, placebo-controlled clinical trial to determine the benefit of measles vaccine in health care professional. N = 200	COVID-19 disease incidence [Time Frame: Time Frame: Measured over the 6 months following randomization]	Not yet recruiting Estimated Study Completion Date: November 1, 2020	Medium
Inactivated mycobacterium vaccine Sponsor: Guangxi medical university	ChiCTR2000030016 http://www.chictr.org.cn/showproj.aspx?proj=49799	Guangxi Zhuang, China	N=60 with Covid-19 patients randomized to mycobacterium vaccine or saline	viral negative-transforming time;30-day cause-specific mortality;30-day cause-adverse events;30-day all-cause mortality;co-infections;Time from severe and critical patients to clinical improvement;	Recruiting Dec 12, 2022	Medium

Link to WHO's list of vaccines in preclinical and clinical phases, updated June 2, 2020:

https://www.who.int/who-documents-detail/draft-landscape-of-covid-19-candidate-vaccines