

Table 5. NEUROINFLAMMATION AND CYTOKINE-TARGETED INTERVENTIONS : Targeting JAK1/2

| Target | Drug | Main Indications | CT Number , Title, Study Protocol | Neurological Implications |
|----------------------|---|---|--|---|
| <p>JAK1/2</p> | <p>Tofacitinib Anti-Jak1 and -Jak3 Receptor Antibody</p> | <ul style="list-style-type: none"> • Psoriatic arthritis • Rheumatoid arthritis • Ulcerative colitis | <p>NCT04415151 Tofacitinib for Treatment of Moderate COVID-19 (I-TOMIC) Interventional Phase 2</p> | <p>Adoptive transfer of dendritic cells made tolerogenic ex vivo with tofacitinib dampened disease activity in an experimental model of MS (Zhou et al., 2016). Potential risks include occurrence of thromboembolic events and reactivation of latent viral infections (Scott et al., 2018).</p> |
| | | | <p>NCT04469114 Tofacitinib in Hospitalized Patients With COVID-19 Pneumonia Interventional Phase 2</p> | |
| | | | <p>NCT04390061 TOFACitinib Plus Hydroxychloroquine vs Hydroxychloroquine in Patients With COVID-19 Interstitial Pneumonia (TOFACoV-2) Interventional Phase 2</p> | |
| | | | <p>NCT04332042 TOFACitinib in SARS-CoV2 Pneumonia Interventional Phase 2</p> | |

Table 5 Continued (I)

| Target | Drug | Main Indications | CT Number , Title, Study Protocol | Neurological Implications |
|----------------------|---|--|--|---|
| <p>JAK1/2</p> | <p>Baricitinib Anti-Jak1 and -Jak2 Receptor Antibody</p> | <ul style="list-style-type: none"> Rheumatoid arthritis | <p>NCT04340232 Safety and Efficacy of Baricitinib for COVID-19 Interventional Phase 2/3</p> | <p>Reverses HIV-associated neurocognitive disorders in animal models (Gavegnano et al., 2019). May induce thromboembolic events and promote new viral infections or the reactivation of latent infections (Scott et al., 2018).</p> |
| | | | <p>NCT04421027 A Study of Baricitinib (LY3009104) in Participants With COVID-19 Interventional Phase 3</p> | |
| | | | <p>NCT04358614 Baricitinib Therapy in COVID-19 Interventional Phase 2/3</p> | |
| | | | <p>NCT04373044 Baricitinib, Placebo and Antiviral Therapy for the Treatment of Patients With Moderate and Severe COVID-19 Interventional Phase 2</p> | |
| | | | <p>NCT04393051 Baricitinib Compared to Standard Therapy in Patients With COVID-19 Interventional Phase 2</p> | |
| | | | <p>NCT04362943 Clinical-epidemiological Characterization of COVID-19 Disease in Hospitalized Older Adults Observational</p> | |
| | | | <p>NCT04390464 mulTi-Arm Therapeutic Study in Pre-ICu Patients Admitted With Covid-19 - Repurposed Drugs (TACTIC-R) Interventional Phase 4</p> | |
| | | | <p>NCT04401579 Adaptive COVID-19 Treatment Trial 2 (ACTT-2) Interventional Phase 3</p> | |
| | | | <p>NCT04346147 Clinical Trial to Evaluate Efficacy of 3 Types of Treatment in Patients With Pneumonia by COVID-19 Interventional Phase 2</p> | |
| | | | <p>NCT04321993 Treatment of Moderate to Severe Coronavirus Disease (COVID-19) in Hospitalized Patients Interventional Phase 2</p> | |
| | | | <p>NCT04320277 Baricitinib in Symptomatic Patients Infected by COVID-19: an Open-label, Pilot Study Interventional Phase 2/3</p> | |
| | | | <p>NCT04399798 Baricitinib for coRona Virus pnEumonia (COVID-19): a THERapeutic Trial</p> | |

Table 5 Continued (II)

| Target | Drug | Main Indications | CT Number , Title, Study Protocol | Neurological Implications |
|---------------|---|------------------|--|---|
| JAK1/2 | Ruxolitinib Anti-Jak1 and -Jak2 Receptor Antibody | •Myelofibrosis | NCT04348071 Safety and Efficacy of Ruxolitinib for COVID-19 Interventional Phase 2/3 | Ameliorates HIV-encephalitis in mice (Haile et al., 2016) Effective in a single patient with highly active refractory NMO (Hodecker et al., 2017). May induce thromboembolic events and promote new viral infections or the reactivation of latent infections (Scott et al., 2018). Fatal cases of JC polyomavirus encephalopathy and meningitis have been described in patients on chronic therapy with ruxolitinib (Ballesta et al., 2017; Reoma et al., 2019). |
| | | | NCT04414098 Ruxolitinib in the Treatment of Covid-19 Interventional Phase 2 | |
| | | | NCT04355793 Expanded Access Program of Ruxolitinib for the Emergency Treatment of Cytokine Storm From COVID-19 Infection Expanded Access | |
| | | | NCT04377620 Assessment of Efficacy and Safety of Ruxolitinib in Participants With COVID-19-Associated ARDS Who Require Mechanical Ventilation (RUXCOVID-DEVENT) Interventional Phase 3 | |
| | | | NCT04334044 Treatment of SARS Caused by COVID-19 With Ruxolitinib Interventional Phase 1/2 | |
| | | | NCT04331665 Study of the Efficacy and Safety of Ruxolitinib to Treat COVID-19 Pneumonia NA | |
| | | | NCT04337359 Ruxolitinib Managed Access Program (MAP) for Patients Diagnosed With Severe/Very Severe COVID-19 Illness Expanded Access | |
| | | | NCT04361903 Ruxolitinib for the Treatment of Acute Respiratory Distress Syndrome in Patients With COVID-19 Infection (RESPIRE) Observational | |
| | | | NCT04338958 Ruxolitinib in Covid-19 Patients With Defined Hyperinflammation (RuxCoFlam) Interventional Phase 2 | |
| | | | NCT04374149 Therapeutic Plasma Exchange Alone or in Combination With Ruxolitinib in COVID-19 Associated CRS Interventional Phase 2 | |
| | | | NCT04348695 Study of Ruxolitinib Plus Simvastatin in the Prevention and Treatment of Respiratory Failure of COVID-19. (Ruxo-Sim-20) Interventional Phase 2 | |