

# Drug Information Summary for Investigational Therapies for COVID-19

**NOTE:** For a complete list of interactions, please refer to **Lexi-Comp** or the [COVID-19 Liverpool Interaction Checker](#)

Remdesivir			
Contraindications	Drug Interaction	Adverse Effects	Monitoring Parameters
<b>Absolute Contraindications</b> Unknown <b>Warnings</b> Based on clinical trial exclusion criteria, use with caution if evidence of: <ul style="list-style-type: none"> <li>• Multi-organ failure</li> <li>• Vasopressor requirement to maintain BP</li> <li>• ALT levels &gt;5X ULN</li> <li>• Creatinine clearance &lt;30 mL/min</li> <li>• Dialysis or CRRT</li> <li>• Use of other experimental antiviral agents for COVID-19</li> </ul>	<b>No clinical drug-drug interaction studies have been conducted with Remdesivir</b>  Avoid strong inducers of CYP enzymes (e.g. rifampin)	<b>Preclinical studies indicate</b> <ul style="list-style-type: none"> <li>• Transient grade 1 or grade 2 increases in AST and ALT</li> <li>• Acute kidney injury</li> <li>• Hypotension</li> <li>• Cardiac arrest</li> </ul> <b>Serious adverse events from preliminary clinical data</b> <ul style="list-style-type: none"> <li>• Multiple-organ dysfunction syndrome</li> <li>• Septic shock</li> <li>• Hypotension</li> </ul>	Investigational agent with relatively unknown adverse event profile.  <b>Ongoing</b> (During therapy) <ul style="list-style-type: none"> <li>• CBC</li> <li>• Electrolytes</li> <li>• Renal function</li> <li>• LFTs</li> </ul>

# Drug Information Summary for Investigational Therapies for COVID-19

**NOTE:** For a complete list of interactions, please refer to **Lexi-Comp** or the [COVID-19 Liverpool Interaction Checker](#)

Lopinavir/Ritonavir (Kaletra)			
Contraindications	Drug Interactions		Monitoring Parameters
<p><b>Absolute Contraindications</b></p> <ul style="list-style-type: none"> <li>Oral solution contraindicated in pregnancy and hepatic/renal impairment due to risk of excipients (ethanol and propylene glycol) accumulation and toxicity.</li> <li>Known hypersensitivity to any of lopinavir/ritonavir ingredients</li> </ul> <p><b>Warnings</b></p> <ul style="list-style-type: none"> <li>Significant drug interactions (see drug interactions column).</li> <li>Avoid use in solid organ transplant, and patients receiving GVHD treatment or prophylaxis due to significant drug interactions with immunosuppressants.</li> <li><b>Caution in patients with known prolonged QT interval</b></li> </ul>	<p>Lopinavir/Ritonavir is a strong inhibitor and substrate of CYP3A4 and P-glycoprotein, and can result in significant drug interactions. <b>It is strongly encouraged to assess interactions prior to initiation of therapy.</b></p> <p><b>Examples of Common Drug Interactions</b>  <b><i>Avoid Combination (not a comprehensive list)*</i></b></p>		<p><b>Baseline</b></p> <ul style="list-style-type: none"> <li>ECG</li> <li>LFTs</li> <li>Cholesterol and triglycerides</li> </ul> <p><b>Ongoing</b> (weekly if in hospital)</p> <ul style="list-style-type: none"> <li>ECG</li> <li>LFTs</li> <li>Skin rash</li> <li>Blood glucose</li> <li>Additional clinical monitoring of potentially interacting drugs</li> </ul>
	<p>Alfuzosin</p> <p>Amiodarone</p> <p>Aprepitant</p> <p>Budesonide (systemic)</p> <p>Cisapride</p> <p>Clarithromycin</p> <p>Clobetasone</p> <p>Domperidone</p> <p>Dronedarone</p> <p>Eletriptan</p> <p>Eplerenone</p> <p>Ergot derivatives</p> <p>Everolimus</p> <p>Flecainide</p> <p>Fluticasone (nasal)</p> <p>Ivabradine</p> <p>Lovastatin</p> <p>Lurasidone</p>	<p>Methotrimeprazine</p> <p>Metronidazole</p> <p>Midazolam</p> <p>Nimodipine</p> <p>Pimozide</p> <p>Quinidine</p> <p>Quinine</p> <p>Rifampin</p> <p>Rivaroxaban</p> <p>Rupatadine</p> <p>Salmeterol</p> <p>Sildenafil</p> <p>Simvastatin</p> <p>St. John's Wort</p> <p>Tamsulosin</p> <p>Ticagrelor</p> <p>Voriconazole</p>	
		<p><b>Adverse Effects</b></p> <p><b>Common</b></p> <p><i>Gastrointestinal</i></p> <ul style="list-style-type: none"> <li>Diarrhea</li> <li>Nausea/vomiting</li> </ul> <p><b>Severe</b></p> <ul style="list-style-type: none"> <li>Liver dysfunction</li> <li>Pancreatitis</li> <li>Arrhythmias</li> <li>Hypersensitivity</li> <li>Neutropenia and thrombocytopenia</li> </ul>	

# Drug Information Summary for Investigational Therapies for COVID-19

**NOTE:** For a complete list of interactions, please refer to **Lexi-Comp** or the [COVID-19 Liverpool Interaction Checker](#)

Hydroxychloroquine (HCQ)			
Contraindications	Drug Interactions	Adverse Effects	Monitoring Parameters
<b>Absolute Contraindications</b> <ul style="list-style-type: none"> <li>Hypersensitivity to aminoquinoline derivatives</li> <li>Pre-existing retinopathy</li> </ul> <b>Warnings</b> <ul style="list-style-type: none"> <li>Known prolonged QTc interval</li> <li>Known G6PD deficiency</li> </ul>	<b>Pharmacodynamic Considerations</b> <ul style="list-style-type: none"> <li>QTc prolonging agents</li> <li>Antidiabetic agents</li> </ul> <b>Pharmacokinetic Considerations</b> <ul style="list-style-type: none"> <li><b>CYP3A4, 2C8</b> substrate therefore inhibitors may increase HCQ levels</li> <li><b>CYP2D6</b> inhibitor therefore may increase other drug levels</li> </ul> <b>Examples of Common Drug Interactions</b> <p><b>Avoid Combination</b> Mefloquine</p> <p><b>Consider Therapy Modification</b> Dapsone</p> <p><b>Additional Monitoring Required</b> Cyclosporine QTc prolonging agents Digoxin Anti-diabetic agents (e.g. insulin) MAOIs Quinolones (Ciprofloxacin, Levofloxacin, Moxifloxacin) Tamoxifen</p> <p><b>Administration</b> Antacids; separate doses from antacids by ≥4 hours</p>	<b>Common</b> <p><b>Gastrointestinal</b> Abdominal pain, nausea (may take with food to alleviate)</p> <p><b>Ophthalmic</b> Blurring of vision, diminished colour vision (dose dependent)</p> <p><b>CNS</b> Headache, dizziness, nervousness, vivid dreams, insomnia</p> <p><b>Endocrine</b> Hypoglycemia</p> <p><b>Dermatologic</b> Skin rash, pruritus</p> <b>Severe</b> <p><b>CNS</b> Extrapyramidal effects – usually resolve on stopping</p> <p><b>Ophthalmic</b> Retinopathy more common with prolonged use</p> <p><b>Cardiac</b> Cardiotoxicity (including cardiomyopathy, cardiac failure) secondary to dysrhythmias (QTc or QRS prolongation)</p> <p><b>Hematologic</b> Rare reversible agranulocytosis, aplastic anaemia, neutropenia, thrombocytopenia</p>	<b>Baseline</b> <ul style="list-style-type: none"> <li>ECG</li> <li>LFTs</li> <li>Blood Glucose</li> </ul> <b>Ongoing</b> (weekly if in hospital) <ul style="list-style-type: none"> <li>ECG</li> <li>LFTs</li> <li>Blood Glucose (may need to increase monitoring while on HCQ in patients with diabetes)</li> <li>Renal Function</li> </ul>