

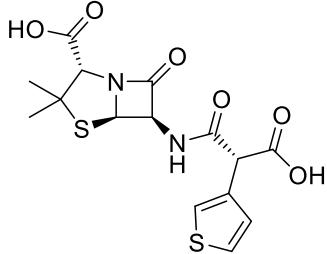
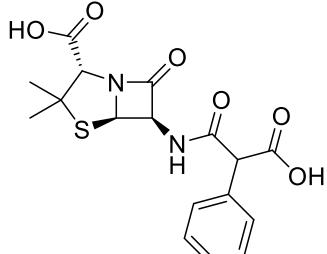
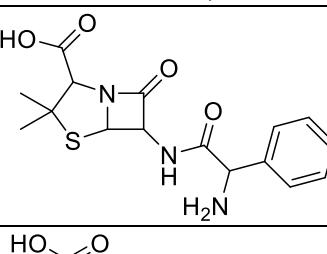
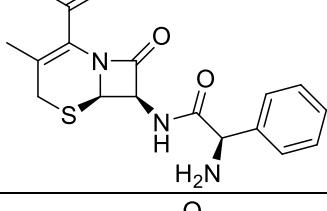
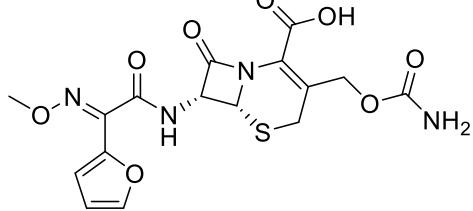
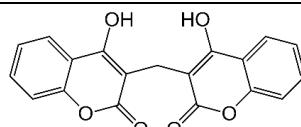
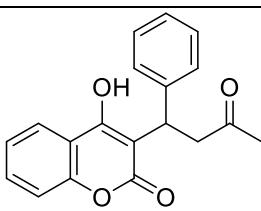
Supplementary Material

Scaffold Hopping of α -Rubromycin Enables Direct Access to the FDA-approved Cromoglicic acid as a SARS-CoV-2 M^{Pro} Inhibitor

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Table S1. Results of ScafA similarity search in the FDA-approved drugs

Compound	Similarity Score	Structure	Class
Cromoglicic acid	0.84		Mast Cell stabilizer*
Nafcillin	0.3		β -Lactam antibiotic**
Amoxicillin	0.15		β -Lactam antibiotic**
Benzylpenicillin	0.11		β -Lactam antibiotic**
Phenoxyethylpenicillin	0.11		β -Lactam antibiotic**

Ticarcillin	0.11		β-Lactam antibiotic**
Carbenicillin	0.11		β-Lactam antibiotic**
Ampicillin	0.11		β-Lactam antibiotic**
Cefalexin	0.11		β-Lactam antibiotic**
Cefuroxime	0.11		β-Lactam antibiotic**
Dicoumarol	0.1		Anticoagulant [#]
Warfarin	0.1		Anticoagulant [#]

Acenocoumarol	0.1	<p>The chemical structure of Acenocoumarol is shown. It features a coumarin core (a benzene ring fused with a five-membered lactone ring). At the 7-position of the coumarin ring, there is a hydroxyl group (-OH) and a nitro group (-NO2). Attached to the 3-position of the coumarin ring is a propionic acid side chain (-CH2CH3COO-).</p>	Anticoagulant [#]
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*This is the most similar hit. In addition, it showed very low toxicity in vitro

** Frequent uncontrolled use of antibiotics can lead to the emergence of bacterial resistance [1].

[#]Anticoagulants are dangerous drugs with low therapeutic window [2].

References

1. Lucien, M. A. B., Canarie, M. F., Kilgore, P. E., Jean-Denis, G., Fénelon, N., Pierre, M., ... & Ramon-Pardo, P. (2021). Antibiotics and antimicrobial resistance in the COVID-19 era: Perspective from resource-limited settings. *International Journal of Infectious Diseases*, 104, 250-254.
2. DUFF, I. F., & SHULL, W. H. (1949). Fatal Hemorrhage in Dicumarol® Poisoning. *Journal of the American Medical Association*, 139(12), 762-766.