



RELAZIONE ILLUSTRATIVA SULL'UTILIZZO DELL'EROGAZIONE LIBERALE

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Nome progetto: Erogazione liberale per le attività di ricerca sul Coronavirus

Codice identificativo Progetto: LIB_VT_COVID_19_SDELBUE

Nell'ultimo anno sono stati conclusi tutti i progetti finanziati dalle erogazioni liberali delle aziende. Di seguito si riportano i risultati ottenuti e non precedentemente relazionati.

RELAZIONE 1) U-EARTH

U-Ox antiSARS-CoV-2 activity

Tables 1-3 summarize the results obtained when SARS-CoV-2 was treated with different concentrations of U-Ox (1:30-1:60-1:120) for 30- 60 or 120 minutes.

Time of U-Ox treatment	Log TCID ₅₀ untreated	Log TCID ₅₀ treated	R ^{&} (Log TCID ₅₀ un- Log TCID ₅₀ tr)	% viral reduction
30 minutes	1.38	0.44	0.94	88.52
60 minutes	1.32	0.35	0.82	89.28
120 minutes	1.17	0.37	0.79	84.15

Table 1: antiSARS-CoV-2 activity of U-Ox used at virus:U-Ox 1:30

Results are expressed as % of replication, compared to the infected untreated cells.

Time of U-Ox treatment	Log TCID ₅₀ untreated	Log TCID ₅₀ treated	R ^{&} (Log TCID ₅₀ un-Log TCID ₅₀ tr)	% viral reduction
30 minutes	1.38	0.40	0.98	89.53
60 minutes	1.32	0.59	0.73	81.38
120 minutes	1.17	0.41	0.76	82.62

Table 2: antiSARS-CoV-2 activity of U-Ox used at virus:U-Ox 1:60

Conclusions

At the used concentrations, for the employed virus-U-Ox incubation times, U-Ox does not exert significant antiSARS-Cov2 activity (< 1log antiviral activity; <90% reduction of the viral

RELAZIONE 2) CORNELLI

Antiviral activity of Eucalyptol against SARS-CoV-2

Eucalyptol was tested against SARS-CoV-2 in the range 0.007 mM - 150 mM

No significant antiviral activity has been observed, using 12 different concentrations.

Antiviral activity of Chitosan and Chitosan in combination with Eucalyptol treatment against SARS-CoV-2



Table 1 summarize the results obtained by qRT-PCR, RNA isolation from the supernatants, 48 hours post infection. Results are the mean of 3 independent experiments and are expressed as % of replication compared to the infected untreated cells.

Table 1: Antiviral activity of Chitosan and Chitosan in combination with Eucalyptol treatment against SARS-CoV-2

[Treatment]	% SARS-CoV-2 replication (range)
Eucalyptol 50 uM	68.99 (62.6-75.39)
Eucalyptol 16.6 uM	94.22 (92.2-96.23)
Chitosan 1 mg/ml	1.92 (3.75-0.82)
Chitosan 0.6 mg/ml	12.74 (1.70-12.74)
Chitosan 0.33 mg/ml	1.54 (0.8-2.28)
Chitosan 0.11 mg/ml	20.8 (19.56-22.04)
Chitosan 0.33 mg/mL+Eucalyp 50 uM	4.52 (5.48-3.56)
Chitosan 0.11 mg/mL+Eucalyp 50 uM	19.12 (16.18-22.06)
Chitosan 0.33 mg/mL+Eucalyp 16.6 uM	2.87 (3.67-2.07)
Chitosan 0.11 mg/mL+Eucalyp 16.6 uM	29.52 (30.78-28.26)
Infected cells not treated	100

Cytotoxicity of Chitosan was comprised between 19.41% and 23.37% for chitosan and 8.2% and 17.4% for Eucalyptol.

CONCLUSIONS

Eucalyptol by itself does not show any antiviral activity, while the use of Chitosan >0.11 mg/ml allow the inhibition of SARS-CoV-2 replication by >80%. The combination of Chitosan at 0.11 mg/ml in combination with Eucalyptol 50uM slightly increased the antiviral ability of Chitosan, used at the same concentration.

RELAZIONE 3) IRIS CERAMICA

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Firma del Responsabile¹

¹ Si consiglia, per maggior visibilità, di utilizzare la firma digitale in formato PADES (con estensione “_signed.pdf”); si fa presente che le firme effettuate direttamente su cellulare o tablet non sono considerate valide.