ASX RELEASE

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Research Agreement with Israeli Ministry of Health

Highlights:

- Testing of eSense's two proprietary blend terpene profiles, TRP-ENV and TRP-COV, was undertaken to determine their anti-viral activity against HCoV-OC43 Corona strain virus ("**virus**") in a range of formulas.
- HCoV-OC43 is a weak strain of human corona virus which represents an accepted surrogate to evaluate activity of substances against SARS-CoV-2 (the virus that causes the disease called COVID-19).[1]
- Results have shown that certain formulas containing eSense's proprietary terpene blends are effective at neutralising HCoV-OC43 viruses showing a significant log reduction in viral copy numbers with a neutralization efficiency at least as good as 70% ethanol.
- Based on the results, eSense-Lab plans to realise the Letter of Intent with SeaLaria, with the intention to commercialise an alcohol-free sanitiser comprising TRP-ENV and SeaLaria's red algae.

Testing:

- Formulas containing TRP-ENV and TRP-COV were tested in comparison to 70% ethanol following incubation with the virus for a period of 1, 3, 10 and 30 minutes.
- One test for each formula was undertaken.
- Results have been obtained for the following formulas:
  - TRP-ENV combined with Wise Wine ethanol
  - TRP-ENV combined with synthetic ethanol
  - TRP-ENV
  - TRP-COV
  - TRP-ENV combined with SeaLaria's red algae

eSense-Lab Ltd (ASX:ESE) (**Company**) provides the following update with regards to the research conducted on its proprietary terpene profiles being undertaken at the Central Virology Lab of the Ministry of Health.

The intention behind this research was to confirm whether the addition of terpenes in sanitisers could mean a reduction of harmful effects on skin, without compromising effectiveness. The commercial goal is to develop a superior organic dominant sanitiser product that provides added protection against bacteria and viruses, while reducing the ethanol content (which is known for its harmful side effects to the skin and its flammability risks).

The Company has tested its proprietary terpene formulas with promising results of terpenes' anti-viral synergistic effects.

[1] COVID-19 Pandemic: Insights into structure, function, and hACE2 receptor recognition by SARS-CoV-2 Anshumali Mittal., et al PLOS PATHOGEN August 21, 2020

Focus has been on testing two terpene profiles, TRP-ENV and TRP-COV, for their anti-viral activity against HCoV-OC43 Corona strain virus in a range of formulas. Results found more effective anti-viral activity in the TRP-ENV profile, than in the TRP-COV profile.

Methodology and Results:

HCoV-OC43 viruses were incubated in the presence of the tested items for a period of 1, 3, 10 and 30 minutes. The incubated viruses were then diluted 1:100 and resuspended in the medium of the targeted cells at a final concentration of 0.001MOI (1 virus for every 1000 cells) for infection. Absorption of HCoV-OC43 to the cells was carried out at 33ºC for 1 hour. HCoV-OC43 was then replaced with fresh medium and the cells were incubated for 6 days at 33ºC to allow the virus to replicate, reproduce, and spread out. After 6 days the supernatant of the cells was collected, extracted for viral genetic material and quantified for viral copy number using Real Time PCR. In parallel, the cells were stained with crystal violate to confirm their viability. Results of one test for each profile are expressed in the table below.

The table below compares the viricidal efficiency of terpene formulas on HCoV-OC43 Corona virus strain over the 1, 3, 10 and 30-minute intervals. According to the World Health Organization (WHO), a **protective** or **high protective** product against viruses requires a **log reduction** in viral copy number equal or greater than 4 (log≥4) or 5 (log ≥5), respectively. The tick represented in this table indicates compounds or combinations that demonstrate an efficient virus neutralization with a log reduction of 4 and above in comparison to control.

PROFILE	1 MIN	3 MINS	10 MINS	30 MINS
Ethanol 70%	✓	✓	✓	✓
TRP-ENV + Red algae Combination 1	✓	✓	✓	✓
TRP-ENV + Red algae Combination 2	✓	✓	✓	✓
TRP-ENV Concentration 1	×	×	×	✓
TRP-ENV Concentration 2	×	×	×	✓
TRP-COV Concentration 1	×	×	×	×
TRP-COV Concentration 2	×	×	×	✓

TRP-ENV + Wise Ethanol 70% Combination	✓	✓	✓	✓
Synthetic Ethanol < 70%	✓	✓	✓	✓
TRP-ENV + Synthetic Ethanol < 70% Combination 1	✓	✓	✓	✓
TRP-ENV + Synthetic Ethanol < 70% Combination 2	✓	✓	✓	✓

Successful results of TRP-ENV combined with SeaLaria's red algae:

The Company is pleased to report that the combination of TRP-ENV in the presence of SeaLaria's red algae provided an immediate neutralisation of HCoV-OC43 virus at all tested times (1, 3, 10 and 30 minutes). Yielding viricidal activity with a neutralization efficiency at least as good as 70% ethanol.

Based on these results, the Company plans to widen its research activity by testing around TRP-ENV activity for bactericidal effect against most common air born bacteria. By doing that, the Company believes that its formula could be extended to full spectrum anti-pathogenic activity (virus and bacteria), which may have the potential to completely replace or at least significantly reduce the necessity for ethanol in hand and surface sterilisation.

Based on these very encouraging results, ESE is now moving towards commercialisation plans and will advise accordingly.

Dr' Eyal Kalo, CTO of eSense said *"We are pleased with the initial results from our testing at the Israeli Ministry of Health. In particular, the combination of our terpenes with SeaLaria's red algae. This product shows a very promising commercialisation opportunity to create a hand and surface sanitiser that provides added protection while reducing ethanol content, making it safer and easier on the human skin."*

This announcement has been approved by the Board of Directors of the Company.

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About eSense-Lab

eSense-Lab Ltd (ASX:ESE) is a life sciences company creating virtual plant-based products for medicinal and recreational consumption. Headquartered in Israel, eSense-Lab combines genetics, mRNA expression, phytochemical characterisation and unique formulations to generate comprehensive models of rare or high value plants. With multi-disciplinary research and development expertise, eSense has game-changing techniques and unique reverse-engineering capabilities, placing it at forefront of the growing international terpene market. eSense has created virtual cannabis, with all the characteristics of the real plant, without the psychoactive and heavily regulated cannabinoid compound, for mass consumer consumption.

To learn more, please visit www.esense-lab.com.