



For Immediate Release

Completion of the First Stage of Joint Research between RCSI Bahrain and BDF of a Food Supplement known in Modulation of Antiviral Effects in COVID-19 Patients

29 March: As part of its continuous research efforts, the Royal College of Surgeons in Ireland - Medical University of Bahrain (RCSI Bahrain) has sponsored "Pilot Study to Evaluate the Safety, Tolerability, and Efficacy of 5-ALA-Phosphate + SFC in Subjects With COVID-19", a study on using the food supplement 5-Aminolevulinic Acid Phosphate (5-ALA-P) plus Sodium Ferrous Citrate (SFC) to test their tolerability, safety and efficacy on COVID-19 patients.

The study was led by RCSI Bahrain's Chair and Professor in the Department of Medicine, Professor John Flood with support from Head of School of Postgraduate Studies and Research, Professor Stephen Atkin, and in collaboration with the Bahrain Defence Force Hospital (BDF), which was the site of the study. Consultant Histopathologist at BDF, Brig. Dr Abdulla Darwish was the principle investigator of the study with Senior Resident Pulmonology and Internal Medicine Specialist at BDF, Dr Abdul Rahmann Hassan Al Madani, and co-investigators, as part of a collaboration with Photonamic and SBI Pharma, subsidiaries of SBI ALApharma, through provisions of research funding and test food supplement. The study was approved by the National Health Regulatory Authority (NHRA) Clinical Research committee.

Chief Executive Officer of Photonamic, Dr Ulrich Kosciessa, explained "5-ALA is a natural product produced by the mitochondria in each living cell; in combination with iron, it is a precursor of Heme which also generates haemoglobin and plays a vital role in upregulating mitochondrial function. 5-ALA-P with iron SFC has been marketed as a food supplement in Japan and various other countries and has been proven to be safe." Many researchers are in the process of testing 5-ALA-P for other indications and applications. Dr Kosciessa added that 5-ALA-P/SFC enhances the induction of hem oxygenase -1 (HO-1), a key enzyme in the heme metabolism and also involved in modulation of antiviral effects for many viruses like influenza, HIV, Zika, Ebola, and Dengue. ⁽¹⁻⁶⁾

In addition, it was recently reported in Japan that 5-ALA-P inhibited infection of SARS-CoV-2, a causative agent of COVID-19, in cell culture, and the antiviral effects could be detected in human and non-human cells without significant cytotoxicity ⁽⁷⁾. 5-ALA-P/SFC was also safely administered to COVID-19 patients and has positively influenced their time to recovery ⁽⁸⁾.

- (1) <https://pubmed.ncbi.nlm.nih.gov/29753693/>
- (2) <https://www.jimmunol.org/content/176/7/4252>
- (3) <https://pubmed.ncbi.nlm.nih.gov/30786886/>
- (4) <https://pubmed.ncbi.nlm.nih.gov/24109237/>
- (5) <https://virology.biomedcentral.com/articles/10.1186/s12985-019-1125-9>
- (6) <https://pubmed.ncbi.nlm.nih.gov/27553177/>
- (7) <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7846235/>
- (8) <https://osf.io/azxsm/>



Major General Professor Shaikh Khalid bin Ali Al Khalifa, Director of the Royal Medical Services and Chair of the Research Committee of the National Taskforce for Combating the Corona Virus (COVID-19) said: “The Kingdom of Bahrain’s leadership faced the challenge of the pandemic in a proactive and assertive manner, which led to success in containing the disease and mitigating its impact. Conducting this joint study with RCSI Bahrain will support the Kingdom’s efforts in finding better methods of treating COVID-19 patients and enhancing their recovery process.”

The initial part of the tests was completed in seven COVID-19 patients and no related adverse effects were reported, showing a good sign of safety and confirming the safety profile from previous use and studies. Based on these results, the NHRA approved the continuation of the study, which will now start enrolling an additional 33 patients with moderate and/or severe symptoms of COVID-19 infection to be treated with 5-ALA-P/SFC, in addition to the current standard of care for these patients to continue studying tolerability, safety and efficacy.

President of RCSI Bahrain, Professor Sameer Otoom said: “RCSI Bahrain has been instrumental in establishing the national research programmes and has played a significant role in promoting and accelerating research in COVID-19 therapy in Bahrain. We have also successfully collaborated with SBI ALApharma and its subsidiaries through research and scientific symposia, in particular with the President of SBI Pharma Bahrain Branch, Dr Riyadh Rehani. These joint projects highlight the significance and the promising outcome of the cooperation between the pharmaceutical industry and research programmes, whereby existing and beneficial medicinal drug treatments can be tested in a controlled environment and upon receiving approval from the relevant authorities, potentially administered to sick individuals to support their recovery.”

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About RCSI Bahrain

RCSI Bahrain is a constituent university of RCSI, which was established in Dublin, Ireland, in 1784. RCSI Bahrain, an independent private university, opened its doors to a cohort of 28 medical students in 2004. It is a not-for-profit health sciences institution focused on education and research to drive positive change in all areas of human health worldwide. Today, the purpose-built campus is home to a student body of more than 1,300 across Schools of Medicine, Nursing and Midwifery and Postgraduate Studies and Research.

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