

R&D activities related to COVID-19

BIOMEDICAL SCIENCES RESEARCH CENTRE (BSRC) "ALEXANDER FLEMING"

With public health as one of its top priorities, BSRC Fleming supports the National Health System and the community by engaging in the following specific research actions against COVID-19:

- Supporting research aimed at understanding viral pathology, by providing experimental animal models that are relevant to SARS-CoV-2 infection, inflammation and the neurotropism of the virus. Specifically, Fleming can provide pre-existing animal models or, based on emerging needs from current clinical studies of the virus, generate novel animal models through its specialized units.
- Providing state-of-the-art services with our proteomics and genomics platforms to researchers in Greek universities and research centers in order to investigate molecular mechanisms involved in viral action and better understand the immune response against the virus.
- Generating genotyping and DNA sequencing data from Greek Covid-19 patients in order to identify genetic susceptibility loci through genome-wide association of genotypes with Covid-19-related phenotypes.
- Providing technical expertise and the necessary bioinformatics tools required to analyze viral genetic material in the Greek population towards identification of potential variants associated with increased transmission or virulence. In addition, the Center can apply combinatorial bioinformatic methods on data from patient sample analyses to discover biological markers of the disease, as well as aid in drug repurposing. BSRC Fleming's researchers are already collaborating with international teams in basic research projects to discover therapeutic targets by modelling and analysing viral – host protein interaction networks. All data from these actions will be freely available to the scientific community in order to accelerate research against COVID-19.
- At the European level, Fleming participates in efforts to tackle the pandemic as coordinator of two National Research Infrastructures, InfrafrontierGR and ELIXIR-GR, and as a core partner of their respective European networks INFRAFRONTIER and ELIXIR, that are already engaged in actions against COVID-19. Additional information is provided at the following links:

<https://www.infrafrontier.eu/knowledgebase/therapeutic-area/covid-19-resources-and-measures>

<https://elixir-europe.org/news/covid-19-support>