

European coordination in the defence against epidemics

Statement by the Lincei Committee on Covid-19

Most European states were caught unprepared to manage the COVID-19 pandemic and each country responded differently, as shown by the various approaches adopted to prevent the spread of the infection, in terms of blocking or reducing internal and international mobility, frequency of testing, tracking those suspected to be infected, etc. In Italy the response was discordant even among the different regions. A pandemic, like a climate event, knows no boundaries, and to prevent its spread or mitigate its impact a common response strategy is needed. This is possible only if the health policies of the various countries are better integrated, strengthening the existing structures or creating new ones.

The European Centre for Disease Prevention and Control (ECDC), located in Stockholm, is responsible for "strengthening Europe's defences against infectious diseases" through the surveillance and monitoring of epidemics and scientific advice. However, being a very small agency (with a staff of about 300 people) it can only serve as an interface between the World Health Organization and national agencies, such as the Istituto Superiore di Sanità (Italy) or the Robert Koch-Institut (Germany), but it is not able to do much more. During this pandemic, EDCD's voice has been very weak. In order to develop common European anti-infective strategies, it will be important to rethink ECDC's mission, entrusting it with operational functions and concrete coordination capabilities. A structure of a predominantly information technology and liaison nature, as seems to be the case at present, even if strengthened, is not prepared to respond adequately to epidemics.

In the past, the European Union has succeeded in creating joint research centres that have demonstrated the potential of European integration in the field of science. One of the most significant successes was the Conseil Européen pour la Recherche Nucleaire (CERN), a research centre in nuclear physics with a large particle accelerator created in the 50s in Geneva. A similar initiative, but on a smaller scale in the biological field, was the creation of the European Molecular Biology Organisation (EMBO) and the European Molecular Biology Laboratory (EMBL) in the 60s and 70s in Heidelberg, from which several outstations arose in Hinxton (EMBL-EBI, European Bioinformatics Institute) and in other locations. Although EMBL has not reached the level of CERN in terms of size or international recognition, it has nevertheless played an important role as a reference point for European research in the field of molecular biology.

The crisis caused by the COVID-19 pandemic should encourage the renewal of initiatives towards European integration in the field of biomedical research. To this end, we propose the creation of a European biomedical research institute, similar to the National Institutes of Health (NIH) in USA, with the study of infectious diseases and immune responses as its core mission, such as the National Institute of Allergy and Infectious Diseases (NIAID) directed by Anthony Fauci. The focus of the research should be the study of viruses and viral diseases, which currently pose the greatest danger to European populations, and of antibiotic-resistant bacteria. The aim of the new institute would not only be to act as a centre for research and scientific advice for European and national agencies, but also function as a place for the training of medical and paramedical staff through workshops, courses, seminars and internships. The institute could also promote research in infectious diseases in European universities and research centres, supported through *ad hoc* funding programmes by the European Commission.

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