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## Fraunhofer initiative **COPERIMOpus** uses Artificial Intelligence to Fight Covid-19

Dear Sir or Madam,

the ongoing Covid-19 pandemic has resulted in dramatic consequences for the global economy, national healthcare systems and affected patients. New approaches for fighting the SARS-COV-2 virus and improving clinical understanding, treatment and outcomes are therefore urgently needed.

Fraunhofer, as Europe's leading applied research organization, is helping lead the way when it comes to combating the pandemic. We have started a dedicated internal program using the wide spectrum of technologies and resources of our 27.000 scientists, to help identify solutions which will address the damaging effects of this pandemic on the health of individual patients (<https://www.fraunhofer.de/en/research/current-research/fraunhofer-vs-corona.html>).

Amongst the initiatives that Fraunhofer has launched recently, the **COPERIMOpus** project will use Artificial Intelligence (AI) to generate personalized risk models for individuals infected by SARS-COV-2. The models will be designed to predict the risk of severe disease development for each patient. However, many COVID-19 data are not quality-assured or curated, with unclear reproducibility and therefore comparability across locations. The diverse sources of data are also not networked with each other. Hence, during our project we will collect, curate and model a broad collection of patient-level data – ranging from clinical studies and clinical routine in hospitals all the way to patient-reported, digital readouts. **COPERIMOpus** will harmonize and integrate these data, extract useful information and finally train and evaluate different AI algorithms.

In order to be maximally effected, the **COPERIMOpus** algorithms will need as inputs, large and representative COVID-19 clinical case data sets. Today, we are asking for your support fighting against COVID-19 by sharing clinical data which can be integrated into enhanced algorithm designs. The mission of Fraunhofer is “non-commercial” and we make our models and our predictions open to the community. So we would like to invite you to join our **COPERIMOpus** network and be part of this initiative to develop and then implement personalized clinical risk models based on a wide range of data sources and technologies, which will enable the joint analysis of medical data and collaborative medical AI systems.

Our co-workers contacting you for your contribution with your data have our full support and will put place the necessary legal measures to protect "your data" in accordance with regulatory requirements.

With kind regards,

A handwritten signature in black ink, appearing to be 'DF', written over a faint, illegible printed name.

Prof. Dr. Dieter Fellner

Prof. Dr. Dr. Gerd Geißlinger