# Does acute and persistent metabolic dysregulation in COVID-19 point to novel biomarkers and future therapeutic strategies?

**Emily M. Hartsell, Mark N. Gillespie and Raymond J. Langley**

Dept of Pharmacology, University of South Alabama College of Medicine, Mobile, AL, USA.

Corresponding author: Raymond J. Langley (rlangley@southalabama.edu)

Shareable abstract (@ERSpublications)
**Metabolomics changes in COVID-19 predict acute patient outcomes and suggest a role for a bioenergetic crisis. Thus, metabolomics changes in COVID-19 may serve as a biomarker and provide insight into pathogenic mechanisms and pharmacologic targets.** https://bit.ly/2XkJeU8

**Cite this article as:** Hartsell EM, Gillespie MN, Langley RJ. Does acute and persistent metabolic dysregulation in COVID-19 point to novel biomarkers and future therapeutic strategies? *Eur Respir J* 2022; 59: 2102417 [DOI: 10.1183/13993003.02417-2021].



Received: 5 Sept 2021
Accepted: 9 Oct 2021

When the coronavirus disease 2019 (COVID-19) pandemic first appeared in December of 2019, the pathophysiological underpinnings of the disease were largely unknown. Scientists, physicians and government institutions from around the globe took an "all-hands on deck" approach with the hope of identifying potential therapies to treat as well as understand the pathophysiology of the disease [1]. Currently, more than 4800 clinical trials listed on clinicaltrials.gov have been performed or proposed around the world, many with subjects from vastly different ethnic and racial backgrounds, as well as different standard-of-care strategies [2]. Despite this effort, apart from monoclonal antibodies, few therapies have emerged as effective treatments of COVID-19; vaccines remain the best approach to control and mitigate the pandemic [3].