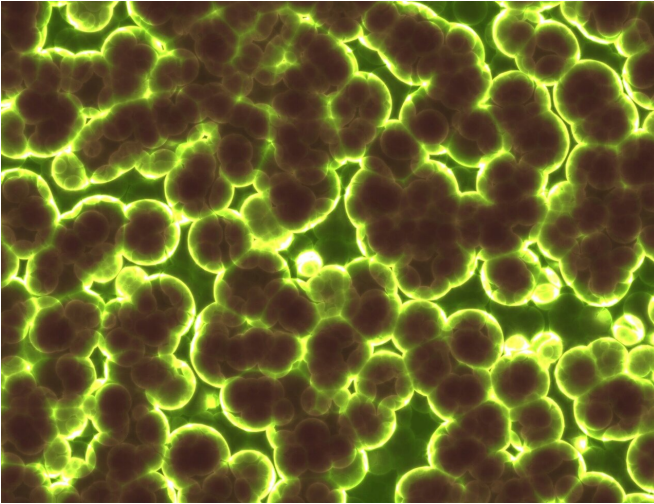


New strategies for identifying health and disease biomarkers developed

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Murdoch University's Australian National Phenome Center (ANPC) working with scientists at Imperial College London have developed a new integrative strategy for identifying biomarkers of health and disease.

These [biological markers](#), or biomarkers, are signals in our bodies that help to diagnose diseases early and effectively assess, target and develop treatments.

"The new approach we've developed to [biomarker](#) discovery is efficient, cost-effective and more comprehensive than any existing techniques," said Professor Jeremy Nicholson, Director of the Australian National Phenome Center.

The approach uses metabolic profiling—the analysis of biological tissue and fluid to uncover the specific interactions of genetic, environmental and lifestyle factors at a [molecular level](#) with advanced statistics to extract important diagnostic information.

"Metabolic profiling of biological samples provides important insights into multiple physiological and pathological processes, but to date has been hindered by a lack of automated and standardized methods for identifying disease biomarkers," said Professor Nicholson.

The study was published in the journal *Nature Protocols* today.

"The paper we've published on our work explains the complex pathways to discover new biomarker molecules for diagnosis of multiple types of diseases. It's an important development and one that we expect will be applied by metabolic scientists around the world. Furthermore, we are currently using these approaches to study one of the greatest global medical challenges—new diagnostic and prognostic markers for COVID-19—and without an integrated measurement and modeling strategy of the type outlined in our paper such a task would be near impossible."

More information: Isabel Garcia-Perez et al. Identifying unknown metabolites using NMR-based metabolic profiling techniques, *Nature Protocols* (2020). [DOI: 10.1038/s41596-020-0343-3](https://doi.org/10.1038/s41596-020-0343-3)

Provided by Murdoch University

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