Mohamed Amer
Research Fellow
Future Biomanufacturing Research Hub: Future BRH
Chemical Biology and Biological Chemistry

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## Overview

Mohamed received his BSc and MSc degrees in Biochemistry from Ain Shams University (Egypt), followed by a PhD in Chemistry from the University of Manchester (UK). He is an accomplished synthetic biologist with extensive transferable skills acquired across both academic and industrial settings. He has a proven track record in developing sustainability strategies for the entire process cycle of microbial cell factory applications in industry. His expertise spans biocatalytic assay development, the construction of novel enzymatic cascade pathways, and genome engineering of various bioproduction platforms, including *E. coli* and other non-model organism chassis.
In addition, Mohamed has substantial experience in fermentation media optimisation, downstream processing (DSP) of diverse bioproducts, and continuous support for pilot- and large-scale production. His contributions have enhanced decision-making processes across bio-based industrial and commercial phases.

## Methodological knowledge

Synthetic Biologist I Industrial Biotechnology I Biomanufacturing I Biocircuits I Metabolic Engineering of Microbial Platforms I Bioprocessing I Fermentation Technology I Bioreactors I DoE I DSP

## Employment

**Research Fellow**
Research Fellow
Chemical Biology and Biological Chemistry
The University of Manchester
1 Jan 2023 → present

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## Research outputs

**The Synthetic Biology of Gaseous Biofuels**
El-Gazar, M. A., 1 Aug 2021, 327 p.

**Engineering nature for gaseous hydrocarbon production**
Amer, M., Toogood, H. & Scrutton, N. S., 13 Nov 2020, In: Microbial Cell Factories. 19, 1, p. 209 209.

**Renewable and Tuneable Bio-LPG Blends Derived from Amino Acids**
Amer, M., Hoeven, R., Kelly, P., Faulkner, M., Smith, M. H., Toogood, H. & Scrutton, N., 14 Jul 2020, In: Biotechnology for Biofuels.

**Low Carbon Strategies for Sustainable Bio-alkane Gas Production and Renewable Energy**
Amer, M., Wojcik, E., Sun, C., Hoeven, R., Hughes, J., Faulkner, M., Yunus, I. S., Tait, S., Johannissen, L., Hardman, S., Heyes, D., Chen, G.-Q., Smith, M. H., Jones, P. R., Toogood, H. & Scrutton, N., 19 May 2020, In: Energy & Environmental Science.

**Distributed Biomanufacturing of Liquefied Petroleum Gas**
Amer, M., 17 May 2019, In: bioRxiv.

**Impacts of Some Environmental Pollutants on Biochemical Functions of Tilapia sp. at Different Hot Spot Areas of Alexandria, Egypt.**
Amer, M., 1 Jan 2016, 247 p.

## UoM administered theses

**The Synthetic Biology of Gaseous Biofuels**
Amer, M. (Author), Scrutton, N. (Supervisor) & Hay, S. (Supervisor), 1 Dec 2020