

GSK Bio-Manufacturing Omics Data Challenge - Request for Proposals

Sponsor

GlaxoSmithKline plc (GSK)

For More Information

Please visit the NineSigma webpage for the [GSK Bio-Manufacturing Omics Data Challenge](#) [1]

Description

GSK has a dataset of metabolomic, proteomic, transcriptomic analyses of fed-batch cultures of *E. coli*, producing two different fusion proteins under multiple bio-reactor conditions. In the spirit of open-source science and our commitment to helping people Do More, Feel Better, and Live Longer, they are making this data set available to external parties for research. A research proposal is the key to unlock access.

Participants are invited to submit proposals for innovative ways to analyze large datasets from fermentation batch experiments. Successful proposals will offer approaches likely to give useful insights from the data set and/or give insights to help solve important problems in bio-manufacturing.

GSK is interested in novel approaches that integrate data across layers to give new insights. This might include, but is not limited to, models that allow:

- Integrated modelling of the cell metabolism based on multiple layers of data (for example, genotype to phenotype)
- Systematic identification of the interaction between variables at the different layers
- Prediction of the phenotype based on the genotype
- Modelling of cell metabolism and protein expression
- Understanding of the links between fermentor conditions, gene and resulting protein expression
- Identification of variables that favour truncation, aggregation, frameshift, etc.
- Increase ability to reduce frameshift, truncation, aggregation
- Use the dataset to validate fermentation models

The following approaches are not of interest:

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- Design of experiments to improve process
- Standard regression and statistical correlation assessment between the given variables
- Reduced process level modelling that for example only leverage the link between glucose substrate feeding and cellular growth

Eligibility

Entries from academic researchers, companies, research institutes, start-ups and individuals are welcome.

Anti-bribery and corruption laws mean that any potential conflict of interest needs to be avoided, as such proposals can not be accepted from:

- Government officials holding a legislative, administrative or judicial position
- Healthcare providers who prescribe or recommend GSK products
- External Experts that have the actual or perceived capacity, to influence or take official decisions affecting GSK business.

Funding Availability

Three (3) proposals will be awarded 7000 Euro each and the winners will present their analysis and discuss its applications in pharmaceutical biomanufacturing with the GSK Vaccines Technical Development and Global Data Analytics departments. In addition, GSK may make funding available for possible joint collaboration projects with the Award winners if the initial analysis shows promising applications for GSK biomanufacturing or research.

Additionally, reasonable proposals from reputable submitters (who are not selected as winners) will also be given access to the data and be allowed to conduct their own independent research on the data.

Special Notes

COVID-19: Please note that research activities carried out in the context of COVID-19 need to adhere to the University of Guelph COVID-19 research principles, policies, guidelines and processes as they may be updated from time to time and communicated on the [Office of Research web-page](#) [2].

Deadlines

If College-level review is required, your College will communicate its earlier internal deadlines.

Type	Date
External Deadline	Thursday, October 14, 2021 - 5:00pm

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How to Apply

Submit a proposal the NineSights online response form for the [GSK Bio-Manufacturing Omics Data Challenge](#) [3].

For Questions, please contact

Contact the Solution Provider Help Desk Email: phd@ninesigma.com [4].

Alert Classifications **Category:**

Funding Opportunities and Sponsor News

Disciplines:

Health and Life Sciences

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Source

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Links

[1] <https://www.ninesigma.com/s/GSKBio-ManufacturingChallenge>

[2] <https://www.uoguelph.ca/research/>

[3] <https://ninesights.ninesigma.com/servlet/hype/IMT?documentTableId=396317831422248703&userAction=Browse&templateName=&documentId=bbb5f9db2fd0eb1a1aced7ded9004bbf>

[4] <mailto:phd@ninesigma.com>