

Sequencing the Food Supply Chain

IBM Research and Mars launch new consortium to drive advances in global food safety



Metagenomics for food safety



With **DNA and RNA sequencing**, we are able to profile communities of microorganisms—the **microbiomes**—in the supply chain anywhere along the **process from farm to table**.

Testing for the unknown



Analyze hundreds of ingredient samples for millions of genes.



Combine with contextual data like weather conditions, shipping methods, and dates to **create a baseline of what safe ingredient microbiomes look like**.



Discover new genes, gene variants, and previously undetected anomalies to **alert when food ingredient safety is at risk** before it gets to a finished product, store shelf, or table.

1 in 6

Americans each year suffer a food borne disease (CDC)

3,000

Annual food borne disease deaths in U.S. (CDC)

2 Million

Annual deaths in emerging areas due to food borne infections

\$80 Billion

Annual cost of losses and illness caused by food borne disease

MARS

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