Communiqués de presse

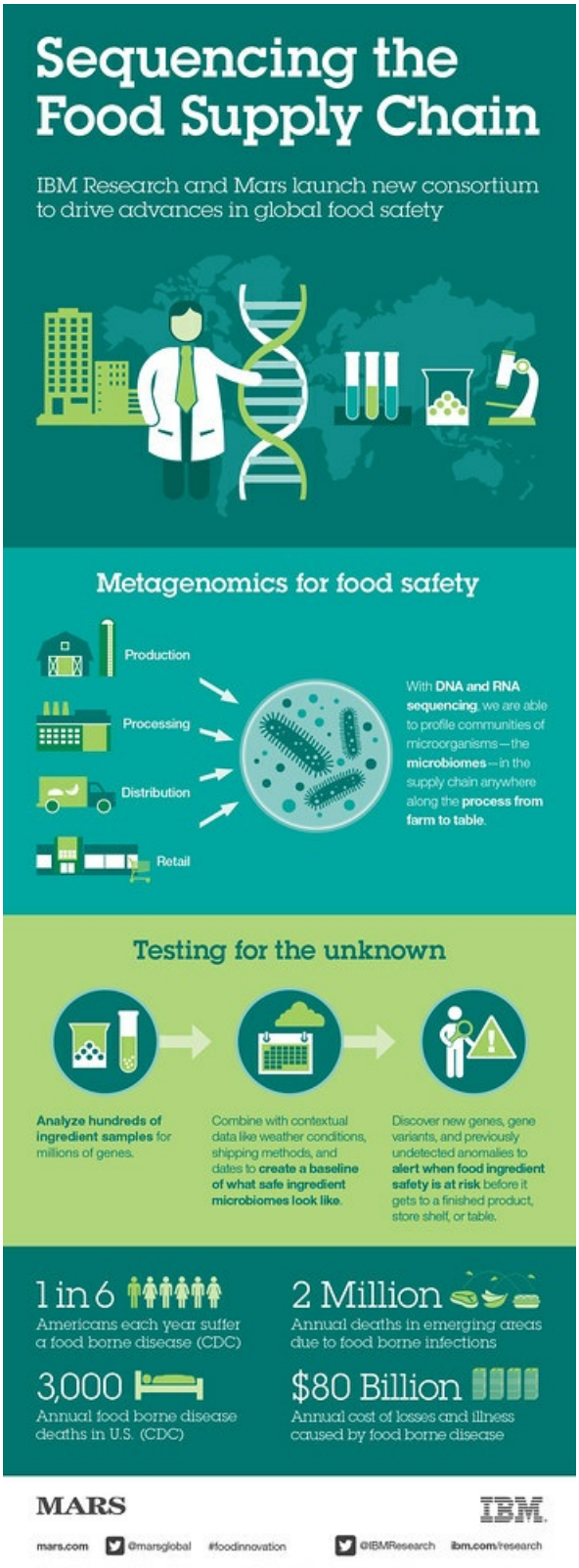
IBM Research et Mars, Incorporated innovent pour faire progresser la sécurité alimentaire mondiale

La plus grande étude métagénomique jamais réalisée permettra, grâce à un nouveau séquençage de la chaîne d'approvisionnement alimentaire, de déterminer ce qui assure la sécurité alimentaire

Paris - 30 janv. 2015: Des scientifiques d'IBM Research et de Mars, Incorporated ont établi aujourd'hui le Consortium pour le Séquençage de la chaîne d'approvisionnement agroalimentaire, une plate-forme collaborative pour la sécurité alimentaire qui, au travers d'avancées en génomique, cherchera à déterminer ce qui rend un aliment sain.

Protéger la chaîne agroalimentaire mondiale est un défi de santé public de taille. Aux Etats-Unis seuls, chaque année une personne sur 6 est atteinte d'une maladie causée par un aliment, ce qui conduit à 128 000 hospitalisations, 3 000 décès et entraîne des coûts médicaux de 9 milliards de dollars.

La chaîne agroalimentaire devenant de plus en plus mondialisée et complexe, des approches innovantes qui tirent parti des données génétiques émergent pour la comprendre dans son ensemble et ainsi améliorer la sécurité alimentaire. Dans ce but, le Consortium conduira la plus grande étude métagénomique jamais menée pour classifier les micro-organismes et comprendre les facteurs qui influencent leur comportement dans un environnement normal et sain. Ce travail pourrait être étendu au contexte plus large de la chaîne agroalimentaire et apporter de nouvelles connaissances sur la manière dont les micro-organismes interagissent dans une usine, et ainsi être mieux contrôlés grâce aux données et à de nouvelles pratiques scientifiques.



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IBM Research and Mars, Incorporated Launch Pioneering Effort to Drive Advances in Global Food Safety

New Sequencing the Food Supply Chain Consortium to undertake largest-ever metagenomics study and unlock food safety insights across the supply chain

San Jose, Calif.,- 29 Jan 2015: Scientists from IBM (NYSE: IBM) Research and Mars, Incorporated today established the Consortium for Sequencing the Food Supply Chain, a collaborative food safety platform that will leverage advances in genomics to further our understanding of what makes food safe a collaborative food safety platform that will leverage advances in genomics to further our understanding of what makes food safe.

Protecting the global food supply is a monumental public health challenge. In the U.S. alone, one in six people are affected by food-borne diseases each year, resulting in 128,000 hospitalizations, 3,000 deaths, and $9 billion in medical costs. Another $75 billion worth of contaminated food is recalled and discarded annually.

As the food supply chain becomes more global and complex, new, innovative approaches that use genetic data to better understand and improve food safety are emerging, holding the promise of unparalleled insight and understanding of the total supply chain. In support of this goal, the consortium will conduct the largest-ever metagenomics study to categorize and understand micro-organisms and the factors that influence their activity in a normal, safe factory environment. This work could be extended into the larger context of the food supply chain -- from farm to fork -- and lead to new insights into how microorganisms interact within a factory ecology and be better controlled by new data and science-driven practices.

As a first step, the consortium's scientists will investigate the genetic fingerprints of living organisms such as bacteria, fungi, or viruses and how they grow in different environments, including countertops, factories, and raw materials. This data will be used to further investigate how bacteria interact, which could result in completely new ways to view supply chain food safety management.

"*The Consortium for Sequencing the Food Supply Chain has the potential to revolutionize food safety, providing a powerful tool to identify and address new threats on an unprecedented scale, enabling critical breakthroughs in global food safety*," said **Dave Crean, Vice President, Corporate Research and Development, Mars, Incorporated**. "*We are excited to be working with IBM Research on this, and look forward to welcoming additional partners in the future to help drive global innovation in genomics, food, and agriculture*."

While many food companies such as Mars already have rigorous processes in place to ensure food safety risks are managed appropriately, this pioneering application of genomics will enable an in-depth understanding and categorization of micro-organisms on a much bigger scale than has previously been possible.

"*Genome sequencing serves as a new kind of microscope – one that uses data to peer deeply into our natural environment to uncover insights that were previously unknowable,*" said **Jeff Welser, Vice President and Lab Director, IBM Research - Almaden**. "*By mining insights from genomic data, we're seeking to understand how to identify, interpret and ultimately create healthy and protective microbial management systems within the food supply chain*."

The consortium's research will initially focus on select raw materials and factory environments but will ultimately extend up and down the entire food supply chain and include applications for farmers.

Understanding soil microorganisms, for example, will be crucial to helping farmers learn how to protect their plants from pathogens while ensuring healthy growth and nutrient uptake.

The first data samples will be gathered at Mars-owned production facilities, while IBM's genomics, healthcare and analytics experts will utilize IBM's Accelerated Discovery THINKLab, a unique collaborative research environment, for the large-scale computational and data requirements of this initiative. Beyond the research, data and findings will be presented in a systematic way to enable affordable and widespread use of these testing techniques.

As the food supply chain becomes more global and complex, better approaches to ensuring safe food are needed, this consortium aims to take food safety to a new level through unparalleled insight and understanding of the total supply chain.

The consortium will be adding additional members from academia, industry and government. For more information about the consortium visit: Sequence the Food Supply Chain or www.ibm.com/wildducks. Follow the conversation on Twitter using the hashtag #foodinnovation.

About IBM Research

Now entering its 70th year, IBM Research continues to define the future of information technology, with more than 3,000 researchers in twelve labs located across 10 countries on six continents. Scientists from IBM Research have produced six Nobel Laureates, 10 U.S. National Medals of Technology; five U.S. National Medals of Science, six Turing Awards, 19 inductees in the National Academy of Sciences and 14 inductees into the U.S. National Inventors Hall of Fame – the most of any company.

About Mars, Incorporated

In 1911, Frank C. Mars made the first Mars candies in his Tacoma, Washington kitchen and established Mars' first roots as a confectionery company. In the 1920s, Forrest E. Mars, Sr. joined his father in business and together they launched the MILKY WAY® bar. In 1932, Forrest, Sr. moved to the United Kingdom with a dream of building a business based on the objective of creating a "mutuality of benefits for all stakeholders" – this objective serves as the foundation of Mars, Incorporated today. Based in McLean, Virginia, Mars has net sales of more than $33 billion, six business segments including Petcare, Chocolate, Wrigley, Food, Drinks, Symbioscience, and more than 75,000 Associates worldwide that are putting its Principles into action to make a difference for people and the planet through its performance.

Mars brands include: Petcare – PEDIGREE®, ROYAL CANIN®, WHISKAS®, BANFIELD® Pet Hospital, CESAR®, SHEBA®, DREAMIES® and NUTRO®; Chocolate – M&M'S®, SNICKERS®, DOVE®, GALAXY®, MARS®, MILKY WAY® and TWIX®; Wrigley – DOUBLEMINT®, EXTRA®, ORBIT® and 5™ chewing gums, SKITTLES® and STARBURST® candies, and ALTOIDS® AND LIFESAVERS® mints. Food – UNCLE BEN'S®, DOLMIO®, EBLY®, MASTERFOODS®, SEEDS OF CHANGE® and ROYCO®; Drinks – ALTERRA COFFEE ROASTERS™, THE BRIGHT TEA COMPANY™, KLIX® and FLAVIA®; Symbioscience – COCOAVIA® and WISDOM PANEL®.

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