2014 FDA Food Safety Challenge
Selection Criteria

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Additional supporting detail
The FDA is most interested in concepts that explore the acceleration or elimination of sample preparation and/or enrichment in the testing process, and/or those that employ novel or revolutionary techniques to achieve pathogen detection. Examples of revolutionary techniques include (but are not limited to) metagenomics (or other next-generation sequencing methods), spectroscopy, application of nanotubes/nanotechnology, quantum detection methods, and electrical detection methods.

Concepts may combine new techniques with existing methodologies (such as PCR), and must describe where time savings are achieved in the testing process as well as expected time from unprepared food sample(s) to verifiable result(s).

Detailed Criteria

- The concept must specifically be able to address the detection of pathogens found in **minimally processed fresh produce**. The ability of the solution to also address testing in other foods and other complex matrices is encouraged.

- Concepts must specifically address improved detection with ***Salmonella*** with identification to the subtype level. The ability of the technique to also address additional pathogens such as Shiga toxin-producing *Escherichia coli* is encouraged.

- Submissions must describe how the technique would increase **speed of pathogen detection** efforts (starting from unprepared food sample, through verification of pathogen) without sacrificing accuracy or comparability to reference methods (described at http://www.fda.gov/Food/FoodScienceResearch/LaboratoryMethods/ucm2006949.htm) and may offer any of the following:
    1. Acceleration or elimination of sample preparation and enrichment

2. The application of novel techniques that reduce time to verifiable result
3. Techniques that enable testing multiple food matrices/types

- Submitted concepts are encouraged to employ **advanced methodologies**, including but not limited to:
  - Metagenomics
  - Spectroscopy
  - Nanotube/nanotechnology research
  - Quantum detection
  - Electrical detection

- Submitted concepts can be targeted to **any point in the food system** (i.e. harvest, packaging, distribution, point of sale, etc.). Concepts should specify which point(s) they are targeting and how the technique would be implemented.

- Though submissions may be theoretical in terms of application to food safety, all entries must be able to demonstrate **a path to practical development of their concept** and **a plan to move to proof of concept (described at http://www.fda.gov/downloads/ScienceResearch/FieldScience/UCM273418.pdf) over the course of the Challenge**.

- Submissions should include any/all available data with reference to use of the concept/technique, including any **initial verification results**, any available **proof of concept**, and any relevant data from the technique's use in adjacent industries.

- Participants must be able to take part in the (virtual) Field Accelerator currently scheduled to start on **15 July 2014 and running until 8 September 2014**.

- At least one member of each team must be available to attend the FDA Boot Camp in **July of 2014** in Washington, DC and the live Demo Day in Washington DC, currently scheduled for **9 September 2014** at their own expense.

- Scientists, academics, entrepreneurs, and innovators from **all disciplines** are encouraged to apply for this Challenge. Individuals as well as teams may enter; **multidisciplinary teams** are especially encouraged to submit.

- Submission proof of concept should be comparable to the validation methods described at http://www.foodsafetychallenge.com/technicalreading.