

**To the attention of *in-vitro*
diagnostics kits manufacturers**

**Strategy and Programs
Department**

**Valorisation, Partnership,
Transfer**

Maisons-Alfort, the 9th October 2018

Subject: Notice of call for expressions of
interest - Salmonella molecular serotyping

File followed by :
CORDEVANT Christophe

Dear Madam and Sir,

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The Food Safety Laboratory of the French National Agency for Food Safety, Environmental and occupational health and safety has undertaken to identify, using a high-throughput qPCR approach, the 28 most frequently isolated Salmonella serotypes worldwide from humans, animals and food sources.

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Salmonella is responsible for approximately 93.8 million cases each year worldwide. In 2015, 94,625 confirmed cases were reported in Europe, including 10,305 in France according to an EFSA report. Foodstuffs involved in the development of salmonellosis are mainly dairy products, eggs and meat products (poultry and pork meat). The economic losses associated with Salmonella are considerable for professionals in the agri-food sector and for the each member state.

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V. Réf. :

REPUBLIQUE FRANÇAISE

The 28 serotypes of *Salmonella enterica* targeted in France represent 95% of strains isolated each year by the National Reference Center - Institut Pasteur (~ 10,000 isolates / year) and more than 80% of strains isolated by the ANSES Salmonella Network (~ 4,000 isolates / year). After exploring data from the scientific literature, we found that no alternative method was sensitive and specific enough to identify major *Salmonella enterica* serotypes. The only commercially available assay to identify them is based on slide agglutination tests using monovalent sera that are difficult to produce, labor intensives and costly.

Using a proprietary bioinformatics approach, we determined 34 pairs of PCR primers to search for the 28 major serotypes and performed more than 60,000 high-throughput qPCR tests to validate the relevance of these primer pairs.



These were also tested *in-silico* on a local basis of 6,267 Salmonella genomes. Finally, the combined *in-silico* and experimental analysis allowed validating, according to the OIE recommendations, different primer pairs of 24 serotypes out of 28 tested, including in particular the regulated serotypes. In addition, the proposed tests have an additional value in that they allow the identification of lineages of certain polyphyletic serotypes.

In order to protect this innovative work carried out at the Food Safety Laboratory in Maisons-Alfort, ANSES wishes to engage in a patent procedure. However, ANSES is not intended to produce or, where appropriate, market the 34 pairs of primers for molecular serotyping Salmonella.

ANSES therefore wishes to ensure the valorisation of these results in partnership with industrial players and to transfer technology by means of a license covering all or part of these 34 pairs of PCR primers.

Also, if you are interested in the development of a diagnostics kit to exploit ANSES research, and if you wish to obtain additional information, I would be grateful if you would let me know and send me your motivated proposals to this project no later than **November 6th, 2018**.

Please send your reply by e-mail to the following address:

Christophe CORDEVANT
Knowledge Transfer Officer
Strategy and Programs Department
E-mail : DSP@anses.fr

If you do not answer after that date, I will consider that you are not interested in this proposal.

Please accept, Madam and Sir, the expression of my best regards.

**The Deputy Director General
Research and Reference**

GILLES SALVAT