

# Case study

## From molecular expertise to routine food pathogen testing

*Interview with M. Louis-Marie Rocque, Technical Manager, ADGENE Laboratory, Thury-Harcourt, France*

### **ADGENE Laboratory**

ADGENE Laboratory was founded in 2001 to provide molecular and genetic testing services to industrial customers. Initially focused on specific tests for food and water safety, ADGENE provided services for GMO, Legionella and meat speciation testing using PCR methods they had developed in house.

In 2015, ADGENE Laboratory merged with the InVivo Group, a leading French agricultural cooperative, and expanded to provide more comprehensive water and food microbiology testing services. A dedicated food pathogen testing laboratory was created, employing 12 microbiologists with expertise in sample preparation primarily using ISO norms and validated alternative cultural methods for food pathogen testing. They provide testing services for the InVivo group members as well as for other manufacturers and food retailers.

### **From traditional food pathogen testing to the use of commercial PCR food testing—the selection of a supplier of choice**

At the end of 2015, as part of their strategic development, ADGENE wanted to add rapid method testing for pathogen detection to address the specific needs of milk powder manufacturers, cereals distributors and animal feed/pet



food manufacturers who all require fast release of food batches. ADGENE also recognized that rapid methods would offer an alternative for current customers. PCR technology was identified as the preferred method because of its robustness, versatility and alignment with ADGENE's core expertise.

In January 2016 M. Rocque began his investigation into commercially available PCR solutions. His requirements included a simple, AFNOR validated PCR method for his pathogen testing laboratory. He also worked closely with his finance department to analyze the cost effectiveness of available solutions.

The Thermo Scientific™ SureTect™ Real-time PCR system was selected because of its ease of use, in particular the simplicity of the lysis DNA preparation step. The fact that all of the reagents (pre-filled lysis and PCR tubes) are in a ready-to-use format, thus simplifying the workflow and minimizing the risk of operator error, was also a decisive factor in selecting the SureTect system.

The solution not only met the operational requirements of the laboratory, but also their financial objectives. Analysis of the initial investment, as well as ongoing reagent and labour costs, confirmed that the profitability goals of the laboratory would be met.



At the beginning of May 2016, the SureTect system was installed at ADGENE Laboratory by the Thermo Fisher Scientific field application specialist who then trained two of the laboratory technicians. Although these technicians are microbiology experts, they have had no previous formal training in molecular methods. Yet they rapidly adapted to the SureTect workflow method.

Says M. Rocque, “Apart from meeting our technical and financial goals, the support provided by Thermo Fisher Scientific was also a deciding factor. Once the Thermo Fisher application specialist had installed the system, he spent time with our technicians, training them how to work with the SureTect workflow. They quickly felt confident using the system and found the operation simple and the software intuitive with easy to interpret results.”

ADGENE Laboratory was accredited by the COFRAC in September 2016 for the use of the SureTect method for pathogen detection and in just a few months the conversion of tests to PCR has been dramatic, with two out of three Salmonella analyses now being carried out using PCR.

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