

## Meet&Match.Dx 2022 Challenge #3

**Title of the challenge:** Point-of-care test for allergy

**Name of the Pharma/Medtech company:** Thermo Fisher Scientific

**Disease area:** Allergy

### Description of the challenge

#### **1. Short introduction about the disease or the problem.**

The prevalence, as well as the awareness, of allergic diseases continues to increase and today at least one in three people suffer from allergy symptoms. The symptoms range from very mild to life threatening and living with allergy affects the daily life of patients and many parents. Allergies occur when your immune system reacts to particular allergens as though they are harmful, even when they aren't. The presence and level of allergen specific IgE antibodies is a measure of sensitization and potential allergies and is used as an aid in allergy diagnostics.

#### **2. Describe the current treatment/solution and its limitations.**

There are a number of well-established *in vitro* lab tests on the market and a blood test measuring IgE specific for certain allergen sources is a powerful tool for clinicians in making correct allergy diagnosis. However, despite the usefulness of *in vitro* tests in making a correct allergy diagnosis, only a fraction of patients suffering from allergy are being tested.

#### **3.1. Describe which kind of solution you are looking for:**

To target the population of non-tested individuals suffering from symptoms, which potentially could be caused by allergy, the aim of this challenge is to focus on reducing the threshold for taking a test by making it:

- **accessible** as a fast, easy to use, test in a near patient setting (point-of-care testing)
- **affordable** to the customer by producing an inexpensive point of care test with reduced complexity of design
- **accurate** provide lab test equivalent results in an easily interpreted format

We are looking for technologies and assay formats, including readers/analyzers, that would enable us to develop a non-expensive, fast (<20 min) point-of-care test able to measure specific IgEs towards 10-20 different allergens in one test run, using only  $\leq 50\mu\text{l}$  whole blood. The test would be used as an aid in allergy diagnosis and would facilitate patients to get tested in e.g. a pharmacy or a doctors' office.