

Success Stories

Mobile Expert & Networking System for Systematic Analysis of Nutritional-based Allergies (MENSSANA)

Faced with a row of brightly-packaged, mouth-watering food do you really know what you will be digesting? Look at the ingredients and you can probably distinguish only a handful. For some people, this can be a matter of life or death. Food allergy is on the rise and, while there are many studies being undertaken to find the reasons, the MENSSANA project is offering an alternative solution.

This ongoing project, started in 2004 under the SECAL programme banner, is headed by Norbert Rösch, who has been developing with his team a technology-based information system (the MENSSANA Electronic Information System for Allergy) designed to interact between the patient and their food consumption, and provide a complete picture of the patient's health for their physician.

The system works in two parts. The patient carries a Personal Allergy Assistant (PAA), which is a mobile pocket computer, equipped with a personalised electronic food diary and a built-in barcode scanner. When the patient consumes something (or wants to find out the ingredients in a food package), he simply scans the package's barcode, the information is immediately processed by the PAA and he is informed whether or not the food is safe to eat (the research team has also created special barcodes for items such as fruit and vegetables). He can also store in the PAA information such as illness, reaction after food consumption and pharmaceuticals. Once or twice a week the patient synchronises his diary remotely with the main database held by his physician and all the new information is updated and automatically catalogued on his health record. His doctor then has a complete record of his patient's health and whether he has reacted to a particular food, and can adapt his medication or treatment accordingly.

This sounds like an ingeniously simple design and it is; although unquestionably complicated in its innovation. For instance it took fifteen months of labour-intensive work to create the computer programme, which would analyse ingredient lists of food products in such a way that derivatives of basic food could be easily identifiable. Creating a PAA®, which would be convenient and simple to use, has also been a challenge and the device has evolved several times to the present system of a Smart phone, which allows the data to be scanned quickly and then synchronised. However the team are currently working on a software package which will eventually allow the patient to use their own mobile phone.



Personal Allergy Assistant

One of the most challenging aspects of the project has been collecting data about food products. Although food producers are required by law to print ingredient lists on the package of food products, they are not obligated to declare ingredient lists to any governmental or private institution for consumer information or protection. This fact led the team to create the WikiFood initiative. Wikifood (www.wikifood.lu) is a database-centred website that holds information on the ingredients of thousands of food products. It can be accessed, and added to, by any member of the public who are interested in knowing what they are consuming. At present there are approximately 13,000 products listed on the site (with more added every day) but the team aim to have at least 30,000 to create a credible information centre and will be working more closely with major food producers in the coming months to achieve this. The Wikifood initiative was launched, with tremendous response, September 2006 at the AEDA-Allergy Congress in Wiesbaden and approximately 120 articles were written about it throughout Europe.

The research team is now ready to undertake a clinical trial and will work with 100 patients and their physicians, in particular Dr Feidert from the Centre Hospitalier, to see how the system functions in day-to-day life, and also whether it makes a significant difference to their health, quality of life and treatment rather than using the traditional method of allergy assessment, e.g. hand-written diaries and more regular doctor's visits. The trial will run for twelve months to take into account seasonal changes and other allergies, such as hay fever.

There has already been a significant amount of public interest in the project from companies such as Cactus, whose support has been invaluable in gathering product information from food producers, and RTL, who has made a short information film about the project. The FNR has strongly supported the project by bringing in experts to give advice and they have been open to the different directions the project has led to. MENSANA has recently received additional funds to continue work on the project and to build up a virtual community for patients, food producers and health professionals.

