PROEUHEALTH – CROWNALIFE

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The unknown within us – ageing affects our gut flora

Ageing does not only affect the way we look from outside; the microbiota living in our gut also changes with age. The intestinal microbiota of infants is quite well identified, but only 8% of the microbes in elderly people can be characterised at the moment.

We all carry inside us millions of mostly beneficial bacteria that help us manage our diet successfully and maintain our health, although we seldom realise it. So far, the composition of our microbiota is still an area that we know rather little about.

An EU-funded project, CROWNALIFE, explores how the gut microbiota changes from adults to elderly. New born babies have a limited number of different types of bacteria living in their bowel. The bifidobacteria often dominating the infant gut are believed to be beneficial for humans. With age this type of bacteria apparently becomes rare and other microbes take over. This may have a role in the development of diseases.

The preliminary findings of CROWNALIFE project suggest that the adults have a large number of different groups of bacteria living in their gut. With ageing the diversity of bacteria is going up, but at the same time there is an increasing number of bacteria that are not accounted for by the existing techniques. With elderly people, only 8 % of the microbes occupying the gut could be recognised when most typical groups of bacteria were analysed. Some of the microbes found belonged to new groups that have not been previously detected from the human gut. By comparison, in infants, 70% of the microbes in the gut can be identified, and the number of species is ten times lower. As variation among individuals is wide, it appears that each of us has a unique gut microbiota.

Within the project CROWNALIFE, the on-going research in Belgium, France, Italy, Germany, United Kingdom and Sweden is trying to find out if there are any geographic differences in the kinds of microbes living in our gastro-intestinal tract. A further objective is to find out whether there is a possibility to influence the composition and functions of microbes with food products tailored for that purpose. The research on the composition of our microbiota opens new doors for understanding how our own microbes can influence our well being. The improved analysing tools enable the mapping of the unknown territory in our bodies. Understanding the changes that occur in this microbiota during ageing will provide us with scientific grounds to define strategies and recommendations to promote and maintain a balanced, beneficial microbiota.

More information on the project can be obtained from the project web page www.crownalife.be or from the coordinator Dr. Joel Dore
UEPSD - INRA - CR Jouy, F-78352 Jouy-en-Josas, Cedex France
tel: +33 1 3465 2709, fax: +33 1 3465 2492, e-mail: dore@jouy.inra.fr

More information on the PROEUHEALTH cluster can be obtained from http://proeuhealth.vtt.fi or by e-mail proeuhealth@vtt.fi