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| <b>Project</b> |  |
| <b>Title</b>   | Risk Factors in Nutrition for the Development of Cancer                            |

The Department of Medical and Surgical Sciences at the University of Bologna, Italy is a research institute and collaborative partner in PATHWAY-27, a pan-European project that set out to clarify the effects of active compounds in food, which are expected to have an impact on the wellbeing.

The research activities in Medical and Surgical Sciences go beyond the tasks of the PATHWAY-27 project, where the effects of bioactives like omega-3 fatty acids, antioxidants and fibres are subject to evaluation and examination. For more information about the current project visit <http://www.pathway27.eu/>

In the frame of a current exchange of the researchers of the PATHWAY-27 consortium Dr. Luigi Ricciardiello, medical doctor at the Department of Medical and Surgical Sciences, reported scientific findings on the cancer risk in different population groups. Three significant impact factors were presented including obesity, nutrients and dietary pattern.

Obesity is a condition defined by a BMI greater than 25 and has a severe influence on health. The development of cancer based on obesity is linked to inflammatory reactions triggered by adipose tissue, which develops during fat storage.

Nutrients like heme-iron in meat, compounds formed during meat cooking and inorganic sulphides as preservatives in food have the potential to increase the risk for Colorectal Cancer (CRC). In contrast the intake of fibres and organic sulphide components (e.g. from garlic or kale) has a preventive effect concerning the development of CRC.

By dietary pattern the “complex integration of foods consumed by a given population” is meant. Various studies have already been dealing with the correlation of eating habits and cancer risk. In conclusion a pesco-vegetarian or “Mediterranean” diet can be considered protective against CRC. Still, primary prevention stays the future goal, since it is difficult due to the complexity of influence factors.

