From Leavened Products to Proteins Through Flours

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"From leavened products to proteins through flours" is the title of a research that I lead in the institute IIS Galileo Galilei in Jesi, Italy. I decided to do this research, to deepen the study on something that we use daily but that we don't know: the flours. I started my research activity by planning an adequate methodology for the extraction and analysis of the protein's molecule structure using IR spectroscopy. At the beginning my goal was to replace the method of analysis of the strength of the flours, currently carried out with the Chopin's Alveograph, with a spectrophotometric analysis. Analyzing the various types of flours, I didn't find sufficiently satisfactory results, to allow me to affirm the presence of this type of correlation. However, it must be said that an interesting correlation has been found between the origin of the grain from which is made up the flour and the proteins that make up the gluten of that flour, so this research could lead to an innovative method for identifying any food scams, determine the specific origin of the flour and it could allow to discover any adulterations of the flour which have not been declared on the label.

Awards Won: