Association of the TP53 R72P polymorphism and colorectal cancer risk: A case-control study with meta-analysis

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Colorectal cancer (CCR) is the third more incident cancer worldwide and the second more frequent in developing countries. In Brazil, mortality due to CCR has markedly increased in the last few decades, being the fifth cause of mortality in both genders. To investigate the implications of the TP53 R72P polymorphism in CCR risk, genotyping was performed by ASO-PCR. Subjects clinical data were collected from the hospital files. A database for meta-analysis was built according to the continents and considering genotype frequencies, sample size from 17 selected relevant studies. Among 80 CCR patients, 52% were male, 34% smokers and 28% alcoholic. Genotype frequencies were 76, 21 and 3% for Arg/Arg, Arg/Pro and Pro/Pro, respectively. Patients mean age was 60 y.o. (25-87 y.o.). Pro/Pro genotype was associated with later CCR development and the Arg/Arg was the most frequent genotype in all the four tumor TNM stages, ranging from 67 to 87%. No association was found between R72P genotypes and CCR risk, age development, five years survival rates or family history of cancer. Patients data were compared with a control group data composed by 85 health subjects. A significant association between the R72P and CCR increased risk in South America was found when a large sample size (4,338 cases and 6,261 controls) was investigated by meta-analysis.

Biography

Flavio Monteiro Ayres has completed his M.Sc. in 2000 from the Federal University of Goiás (Brazil), his Ph.D. in 2005 from Niigata University (Japan) and postdoctoral studies from Universidade Estadual de Campinas (UNICAMP). He is the coordinator of the Laboratory of Genetics Research in the Estadual University of Goiás (UEG). He has published 16 articles, most of them on cancer genetics. F.M. Ayres has been granted with a research fellowship from UEG (Programa de Incentivo à Pesquisa e Produção Científica – PROBIP) and International Travel support from Fundação de Amparo à Pesquisa do Estado de Goiás (FAPEG – CH-01/2015).

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