Pharmacogenomics

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Progress in psychiatric pharmacogenomics and new publication features

The Pharmacogenomics Journal (2003) 3, 249. doi:10.1038/sj.tpj.6500206

In this issue we publish three articles on psychiatric pharmacogenomics, which reflect the growth and progress of this exciting field. The paper by Llerena and colleagues (pages 300–302) shows that CYP2C9*3, a specific cytochrome (CYP) P450 genotype, is more common in Spaniards with the diagnosis of depression than those with schizophrenia or controls. These interesting results indicate that CYP enzymes are not only relevant to the response to antidepressant medication but possibly also to the diagnosis of depression itself. The authors propose that CYP genotype could lead to metabolic alterations that might predispose to depression. Alternatively, a linkage between CYP2C9 and some other gene related to depression cannot be ruled out.

De Luca *et al* show in the article on pages 297–299 that a common polymorphism of the multi drug resistance 1 (MDR1) gene is not associated in a small number of subjects with antidepressant-induced mania, a serious adverse drug reaction (ADR) to antidepressants. The MDR1 gene was shown in a previous article to be associated with hypotension, an ARD to nortryptiline;¹ however the same gene does not appear to be involved in pro-serotonergic induced mania. This may be due to the fact that the MDR1 gene does not appear to be involved in the transport of specific serotonin reuptake inhibitors into the brain.²

Another article in this issue examines the genetics of ADRs. Segman *et al* studied tardive dyskinesia (TD), a long-term adverse effect of dopamine D2 receptor blockers (pages 277–283). They studied genes in the serotonin and dopamine pathways: dopaminergic activity is essential for antipsychotic activity and serotonin receptor antagonism has been proposed as a common mechanism contributing to the low extrapyramidal side effect profile of atypical antipsychotic drugs. No significant associations were found between TD and the following candidate dopamine and serotonin gene polymorphisms: three polymorphisms in the dopamine D2 receptor gene (DRD2), two sites in the 3' region of the dopamine transporter (DAT) gene, two sites in the promoter and coding region of the dopamine D4 (DRD4) receptor gene, as well as polymorphic sites in the serotonin 6 receptor gene, the serotonin transporter gene and the tryptophan hydroxylase gene. This study is limited by the clinical sample size. Nevertheless, it indicates that the loci examined may not be associated with TD. These three articles reflect an ongoing interest in the investigation of pharmacogenomics in psychiatry.

On a different note, we would like to inform our readers of two key new features in our journal. First, we now have AOP – Advance Online Publication. Once articles are in final format, proofed by the authors and otherwise ready to be published they are posted on our website with a DOI (digital object identifier), permitting full citations of articles is their final, definitive version. The DOI is an Internet-based global naming and resolution system that provides for the precise identification, retrieval, and trading of digital items in the form of articles, books, images, bibliographies, supporting data, videos, charts, tables, audio, and other electronic files. Papers appear in PubMed as soon as they are posted on our website, ahead of publication, and can be cited immediately by use of the DOI; e.g. Pharmacogenomics J DOI: 10.1038/sj.tpj.6500192. The DOI can also be used to retrieve articles. That is done simply by adding the prefix http://dx.doi.org/ to the DOI. Thus, a paper with a DOI of 10.1038/sj.tpj.6500192. Further information on the AOP system offered by the Nature Publishing Group can be found at http://npg.nature.com/ by clicking on the tab 'for authors'.

We are also offering our readers the opportunity to use color in the electronic (PDf) version of their articles at no cost. There is still a modest charge for color for the print edition of articles to help defray the high cost of conventional color printing.

We are delighted that in its short life *The Pharmacogenomics Journal* has already become the leading journal in this field. These new features will make publication in our journal even more attractive.

REFERENCES

1 Roberts RL, Joyce PR, Mulder RT, Begg EJ, Kennedy MA Pharmacogenomics / 2002; 2: 191-196.

2 Uhr M, Steckler T, Yassouridis A, Holsboer F Neuropsychopharmacology 2000; 22: 380-387.

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