Reviewer's report

Title: A defined 4q subtelomeric deletion identified in a screen of patients with co-morbid psychiatric illness and mental retardation

Version: 1 Date: 5 May 2004

Reviewer: Sevilla Detera-Wadleigh

Reviewer's report:

General

---------------------------------------------------------------------------------

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

---------------------------------------------------------------------------------

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Pickard and co-workers screened for subtelomeric abnormalities in a panel of patients with learning disability co-existing with psychiatric illness by the use of FISH and MAPH. A deletion of a segment of 4q co-localizing with a region previously highlighted for linkage to bipolar disorder was detected in one patient with schizoaffective disorder.

Hunting for chromosomal abnormalities co-segregating with psychiatric disorders as an alternative to linkage is an attractive strategy that has yielded success in identifying a candidate risk locus for schizophrenia. Unlike in linkage which usually covers a broad region, the chromosomal abnormality facilitates the search for vulnerability variants to a more restricted region. The subtelomeric deletion identified in a patient on 4q could permit a finer localization of the susceptibility gene for bipolar disorder in families that showed linkage to this region.

Minor comments:

• Since MAPH has not yet become a commonly used technique, it will be helpful to the readers if the authors would include a brief description of the method and the probes included in the probe set that was used. Is the subtelomeric portion of all chromosomes represented in this set? How many probes were used for each chromosome? Is the probe set available commercially, and if so, which company carries it?
• The authors should include in the discussion the possibility that the subtelomeric deletion may be causative only of the learning disability and is completely irrelevant to psychiatric illness. Furthermore, the chromosomal abnormality may be unimportant to both traits because of the absence of any supportive family data.

---------------------------------------------------------------------------------

Discretionary Revisions (which the author can choose to ignore)
What next?: Accept after minor essential revisions

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:

None