Reviewer's report

Title: New Jersey Center for Tourette Syndrome Sharing Repository: Methods and Sample Description

Version: 1 Date: 13 August 2008

Reviewer: Andrew Pakstis

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General comments:

The authors of this manuscript provide a good overview of a new resource available to researchers interested in studying the genetics of Gilles de la Tourette Syndrome (GTS). As the title of the manuscript indicates the resource is not so much a database as a repository of clinical/phenotypic data, DNA, and cell lines that have been and are continuing to be collected systematically and are being made available to qualified researchers under the auspices of various sponsoring organizations.

The freely accessible website for the repository does a good job for prospective researchers of providing an overview table of the sample material currently available and the details of the kinds of interview and demographic information collected as well as the types of pedigree structures available (such as singletons, trios, families with multiple affected individuals). As of May 14 of 2008 the repository has information and/or DNA on 183 individuals of whom 59 are affected (48 are independent probands) under one or more of the six diagnostic categories summarized. Presumably the number of participating individuals represented in the repository will continue to grow. The website also provides links to the sponsoring organizations and detailed information concerning the application process and terms of agreement for getting access to the sample material and the information collected. Other parts of the website are still under construction such as descriptions of projects already underway by researchers who have obtained access to the repository.

The manuscript supplies an important description not available on the repository website of how the samples have been collected and details concerning the diagnostic procedures employed in assessing the participants. The paper also provides a useful introduction to the status of research studies on genetic factors underlying Tourette Syndrome by pointing to a reasonable sampling of recent reviews and research reports.

The authors indicate that the goal in establishing the repository is to facilitate access to the clinical and DNA material to the widest possible research community. Establishing a repository such as the one described in this paper is certainly a valuable step in this direction. Anyone who has set out to conduct genetic family studies of important human disorders knows that the tasks of
finding collaborating researchers with the necessary skills and then contacting potential participants and collecting biological samples and interview and other materials is an exceedingly time consuming and expensive task. The existence of a repository for clinical plus DNA material for GTS certainly reduces the various hurdles involved and has the potential for expanding the research effort as intended.

Desirable Major Revisions shown by numbers within square brackets [#] below:

While the samples available in the repository currently are a good starting point for genetic studies, it is very desirable that the number of samples continue to grow. The increasing likelihood of genetic heterogeneity and the role of many loci of relatively small effect in the etiology of GTS may necessitate the collection of much larger sample sizes than have been attained thus far by existing studies in order to achieve the power needed to identify relevant causative factors. [1] It would be useful if the authors could provide a sentence or two about whether the sponsors have a targeted goal for a particular number of affected individuals or types of pedigree structures for the repository and the estimate of the time frame for achieving it. Also, [2] if there are discussions underway with other organizations (such as other regional Tourette syndrome associations) to expand the geographical areas in which participants are being recruited for the repository, then a sentence or two added to the paper would be useful. [3] If there are any firm plans for extension or other new aspects of the repository the authors should provide a short paragraph about them.

Minor essential revisions numbered within braces {#}

for the authors to respond to as they think best:

The manuscript is in general a well written and concise overview of the repository. {1} The fourth sentence under section “4. Availability and requirements” needs recasting to be clearer. Perhaps just adding the words “on the” to make “based qualifications” read as “based on the qualifications” would be one way of clarifying the meaning and flow if that is what the authors intended.

{2} As the repository resources get increasing use in the future, one of the issues that could develop is in regard to the reliability of the diagnostic assessments.

I accept that an experienced clinician made the diagnoses in the repository based on the standard criteria referenced. In the future a followup project that could be sponsored by the supporting organization might be for a panel of diagnosticians to review the available material and assign diagnoses independently. Then these diagnostic results could be made available to subsequent accessors of the repository in a form that would include a reliability score. Some individual participants will be borderline or harder to diagnose for various reasons. It will be useful to future researchers to take this information into account. I would urge the sponsoring organizations to support such a subproject and perhaps encourage researchers
to seek funding for accomplishing it. Only if the authors can relate firm existing plans with respect to reliability of diagnoses, would I ask them to include a short description in the manuscript about such future plans.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests.