**Review**

**Altered functioning of reward circuitry in youth offspring of parents with bipolar disorder**

**Background:** authors investigate the activation and functional connectivity in reward-circuitry during decision-making in BD offspring, offspring with non-BD parents and healthy controls. This study is novel in terms of 1. Comparisons of groups at risk of developing affective disorders 2. Large sample size in each clinical group 3. Use of novel techniques investigating activation and functional connectivity within the reward system. The authors conclude that BD offspring show stronger fronto-striatal connectivity that the other groups and these results remain significant when analyses are adjusted for medication and presence of psychiatric diseases. Thus, neuroimaging measures appear to be potential tools to define neural risk factors for BD The paper is well-written, targets a relevant topic, and deserves to be published in this journal.

A few issues need to be addressed:

1. Could the authors clarify how their reward task activated reward circuits given that the guessing of the number was potentially arbitrary and there were no cues letting the participant know what to expect. Shouldn’t a reward task provide clues so that the participant is challenged by the choice of either refraining from short-term reward to obtain long-term reward? In other words could the authors clarify the decision-making component of this task.
2. Could the authors define which regions are included in the frontal pole?
3. What kind of voxelwise/cluster correction did the authors apply? Bonferroni, Montecarlo?
4. Could authors clarify what they mean by “whenever possible gender, age, IQ and psychopathology were used as covariates…” when were they used?
5. Could the authors comment on how the presence of BD I vs BD II vs BD NOS in parents would affect these results?