

I am glad to hear that his paper has been retracted. I had several concerns with the paper—here is a summary:

Data misrepresentation:

The data reported in Figure 1 of the Li et al (2021) paper appear to be a misrepresentation of an experiment reported in the Olvera-Hernandez-Hernandez et al (2015) paper. In this experiment a claim was made that prenatal feminization of male rats using letrozole dramatically changed adult sexual preference. In fact, this manipulation was not statistically reliable in the original report and only produced a change in preference in a small subset of the original animals (30%). It was not reported how many controls exhibited similar changes in preference. The Li et al. (2021) misrepresents this outcome and shows data from the original paper that appear to be mislabeled and overstate the drug-induced difference in preference. This is an important concern because the Li et al. (2021) paper works from the premise that sexual preference is determined by prenatal hormonal environment. Interestingly, the senior author of the Olvera-Hernandez et al. (2015) paper is also a co-author on the Li et al (2021) paper. I cannot say whether this is fraud or not, it is definitely suspect and should be examined closely.

Overstating relevance of animal models to human gender and sexual orientation:

The paper selectively draws from the literature to argue that “non-heterosexual” orientations and neuropsychiatric disorders have a common cause in perturbed neurodevelopmental processes that are influenced by maternal drug use. These relationships are overstated, and in many cases, based on animal studies which are not sufficiently nuanced to inform human gender and sexual orientation. Moreover, the paper misrepresents previously published data (Figure 1) in a way that raises concerns about the scientific veracity of the claims made in the review. Data from the Olvera-Hernandez et al. (2015) paper appear to have been re-plotted and mislabeled, resulting in an erroneous conclusion about the magnitude of the drug effect on behavior that is central to the author’s premise. There are other examples of factually incorrect statements made in the article. In a review article, authors do have license to cherry pick the literature, but one would hope that the presentation of the science is balanced. Here it is not, and the authors have misrepresented the literature to support their narrative. Indeed they state in the abstract that “Data to support this idea are reviewed.”—this does not suggest a balanced coverage of the topic. This is not appropriate for a review, perhaps an opinion or perspective piece. There are concerns that some of the data reported in the paper (Figure 1) are gross misrepresentations of the published literature (Olvera-Hernandez et al., 2015). Whether this is fraud requires further investigation, but it should definitely be of concern to the editor-in-chief and publisher.

False narrative:

It is a false narrative to believe that homosexual behavior is non-normative and induced by prenatal insults caused by maternal medication or drugs. Homosexual behavior is not a pathology that needs to be fixed. It is part of a normal continuum of animal and human sexual behavior. Although prenatal factors play an important role in developmental processes that influence adult sexual behavior, there is of course a role for environmental influences and learning that influence these processes as well. Arguing that “non-heterosexual” orientations are

not normative and caused by prenatal perturbations in hormones or neural development casts them as pathologies that can be treated. This article implies that members of the LGBTQIA2S+ community are not normal and diminished—it is a very harmful and bigoted perspective. Further, the Li et al. (2021) paper suggests that higher prevalence of neuropsychiatric disorders in individuals with “non-heterosexual” preferences may be the result of maternal factors, including the use of psychotropic medications. They argue that the correlation between “non-heterosexual” orientation and neuropsychiatric disorders may have a common underlying cause stemming from neurodevelopment factors influenced by maternal drug intake. Again, this suggests that sexual orientation is a disorder, occurs along with other psychopathologies, and may be due to maternal drug use. The review fails to strongly consider the possibility that this correlation might arise from social stigmatization of individuals in the LGBTQIA2S+ community, as well as other genetic and environmental factors, that might result in a higher incidence of neuropsychiatric disorders in these individuals.

In terms of the request to retract—I presented some of the concerns I detail above to the editor-in-chief and other than receiving an acknowledgment that the concerns had been received I had not further correspondence with the editors or Elsevier. In fact, your email is the first I have heard that the paper had been retracted.