Comments regarding the University of California press release with regard to lithium and inclusion body myositis

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The University of California posted a press release on 3/18/08 stating that "*A new UC Irvine study finds that lithium chloride, a drug used to treat bipolar disorder, can slow the development of inclusion body myositis*".[1] This press release referred to a study in which mice that had been genetically altered to overproduce beta-amyloid precursor protein and overaccumulate beta-amyloid protein were injected with inflammation-inducing material (lipopolysaccharide). These mice were then treated with lithium and their motor performance measured.[2]

First, no patients with inclusion body myositis were given lithium in this study. The claim that lithium can slow inclusion body myositis development is misleading given that the drug was not given to patients. This statement reflects incorrect thinking in which animal experimentation is *equated* with human disease, rather than viewed only as a *model* for it. The merits and deficiencies of this model are another issue that I will discuss after a future publication has been peer-reviewed and accepted.

Second, this press release further reported that "*mice genetically engineered to have IBM demonstrated markedly better motor function six months after receiving daily doses of lithium chloride, compared with non-treated mice*." In fact, the results reported in the peer-reviewed publication of this study showed no statistically significant difference in motor function in six-month treated mice. Such a statement would never be accepted by scientific peers in a publication, but there are no regulations regarding making such claims in a press release. The investigators of this study should be aware of their own published data and it is their responsibility to ensure that press releases coming out of their own university accurately reflect their scientific results, without exaggeration.

Lastly, even though no patient with inclusion body myositis has ever been reported with the genetic mutations present in these mice, or received injections of inflammation-inducing compounds, nor did the peer-reviewed publication show any statistically significant treatment effect of lithium in these mice, the principal investigator was quoted in the press release stating that "*a clinical trial that tests the effectiveness of lithium chloride on IBM patients should be conducted as soon as possible*". As of 7/14/08, at least one such trial is recruiting subjects.[3]

1. University of California Press Release. http://www.universityofcalifornia.edu/news/article/17499
2. Kitazawa M, Trinh DN, Laferla FM. Inflammation induces tau pathology in inclusion body myositis model via glycogen synthase kinase-3beta. Ann Neurol. 2008
3. IBM-Lithium clinical trial. http://www.phoenixneurology.com/ibm_ct_li.shtml.