

Targeting Talk: *LPS Content*

by Dr. Douglas Lappi

Q: In a recent experiment using a saporin-antibody conjugate injected systemically we saw changes in dendritic cells that could be consistent with an LPS effect. Does ATS test for LPS and has this ever been identified as a problem before?

A: Yes, this can happen, but we here at ATS will swear innocence. One of our collaborators just reported the same thing (the first comment like that in several years), so I'll tell you the story.

Generally our materials have a very low endotoxin content, on the order of less than 1 EU/mg protein. We check this occasionally because most of our customers provide an easy assay. That is, these things are often injected into the brains of rats, and they'll die within a few minutes if there is an LPS (lipopolysaccharide) content such as you described. That would be disastrous for us, so we do pay attention to this issue.

The recent situation was with an immunotoxin that was also injected

systemically, and gave a response similar to what you're stating. The material had been thawed and used in a set of experiments. Then, because of concerns about the effects of freezing and thawing, it was left in the refrigerator for a considerable period of time. It was then used in the experiments that gave the LPS-consistent result. We believe that this material was no longer sterile and that during the time between uses it grew bacteria. We went back and assayed the original material and it gave the usual less than 1 EU/mg value.

The bottom line is that once the sterility is broken, the material is a decent growth medium for bacteria (a protein in PBS). We filter sterilize all of our targeted toxins and package them in a sterile manner, but we do not add preservative. The thinking there is that in sensitive situations, a preservative can cause its own biological response/effect.

This situation causes us to print rather stringent use instructions: aliquot and store frozen at -20°C.

This brilliant artistic expression is a creation by Dr. Roger Guillemin (see brief bio on page 2). The title of this piece is *Hamadryad*.

When asked about the reason for this title, Dr. Guillemin replied, "Hamadryads, as the name implies, were nymphs of the forest, of trees. Thus, the painting should be more green than red. Why that title? I just don't quite remember. Probably some music (Dryades et hamadryades in Chansons de Galathée by Debussy, if I'm not mistaken) or some poetry that came my way at that time."

Whatever the inspiration for the title of this piece, the result is indeed an inspiration in and of itself.

For more examples of Dr. Guillemin's art, visit: holborngallery.com/harwood.html.

