

# **Goldsol's Patent Pending Gold NTA™ Product will Revolutionize Drug Delivery Systems**

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The evidence is clear that colloidal gold has enormous potential for use as a selective carrier in drug delivery systems. To this day the various processes being used for manufacturing Gold nanoparticles is antiquated, and has severe limitations as to product concentration, uniformity and stability.

The current process of creating gold particle delivery systems often results in sub-standard concentration, uniformity and stability. The current process requires the gold nanoparticles to be stabilized by large molecules and then attached to particles (Ex dextran) so they do not conglomerate. Between these long molecules, which are attached to gold particles, there is a need to insert even longer linker molecules (Eg. PEG). Once this is done, an additional step is required to attach the drug to the linker molecules.

All these steps are cumbersome, antiquated and make it very difficult to have a functional concentration and stability. There are serious challenges in getting specific molecules to properly attach to the gold particle and to then to the linker. This means that present companies are required to do an extensive amount of research and development in order to stabilize and optimize their products. Even when this is accomplished, it is found that the resulting product still has too much stabilizer molecule. In addition, the complex now includes four elements (gold, stabilizer, linker and the drug) and is too big for many applications. Essentially, the above processes has made it too cumbersome and impractical for the mass adoption of Gold colloids for use in drug delivery systems.

Our Gold NTA™ product is made by the most cutting edge, patent pending method and delivers already functionalized (the linker is already there), concentrated, stabilized and uniform gold nanoparticles. The result, a ONE STEP method to add the drug for delivery. The complex formed (Gold-NTA and drug) consists of only two elements, is much smaller (by orders of magnitude), it can be carried in smaller cells, and is already prepared to carry specific drugs.

Our Gold NTA™ process now allows Drug Companies to rapidly develop effective gold carried drug products (for any molecule) which can be attach directly to our Gold NTA™. Due to our Gold NTA™ method of manufacturing, drug companies can now add many new gold carried products to their inventory. These new products may be licensed as proprietary and protected for them, and even subject to patentability. Considering the above, we believe that Gold NTA™ will be at the very foundation of a new generation of selective drug delivery systems.