BIOCODE
115 Research Drive
Bethlehem, Pa. 18015
T. 610 861 6965 F. 610 861 6968

Date: October 27, 2003

To: Division of Dockets Management (HFA-305)
Food and Drug Administration
5630 Fishers Lane, rm. 1061
Rockville, MD 20852
Fax: (202) 395-6974

From: James H. Rittenburg, Ph.D.
Vice President Technology and Business Development
Biocode Inc.
115 Research Drive
Bethlehem, PA 18015
Phone: 610-861-6965
Fax: 610 861 6968

RE: Docket No. 2003N-0361
Anti-Counterfeit Drug Initiative

Biocode is a leading supplier of innovative security solutions designed to protect products and their packaging from the threats of counterfeiting, adulteration, and diversion. Biocode's technologies and services are employed by pharmaceutical companies worldwide, as critical components of comprehensive brand protection programs. Biocode's patented, FDA accepted, molecular binding pair technology enables manufacturers to embed proprietary codes into pharmaceutical product packaging as well as onto the dosage form.

Our comments in this letter address the following specific topics of interest listed in Section II the Docket:

II. A. Technology

1. What anti-counterfeit technologies currently are available for use as anticounterfeit measures for pharmaceuticals (e.g., track/trace, authentication)? What are the costs associated with these technologies?

2. What is the current status of, and barriers to, adopting an industry standard for use of anti-counterfeiting technology?

3. What role should FDA play in facilitating the use of anti-counterfeit technologies and in the creation of an industry standard for use of anticounterfeiting measures?

2003N-0361

C 14

Comments relating to discussion point II.A.1

What anti-counterfeit technologies currently are available for use as anticounterfeit measures for pharmaceuticals (e.g., track/trace, authentication)? What are the costs associated with these technologies?

We believe that security should go beyond the packaging because pharmaceutical products do not always stay associated with their packaging. In the US, the dosage form is routinely removed from the original packaging and placed in new packaging by "authorized" re-packagers or by the pharmacist. Taggant technology is available today to provide rapid authentication of the dosage form. This technology is fully developed and is already being used in some tablets and capsules including a tableted, blockbuster product. Biocode's taggant technology has successfully been through the FDA approval process as part of an NDA.

The technology uses trace levels of CDER approved inactive ingredients as proprietary markers. These taggants can be inserted into the dosage form through the film coating, inks, gelatin, or API. Authentication is based on highly sensitive and specific immunoassay technology – similar to technology used for home pregnancy testing. An example of a simple field test kit is shown below:

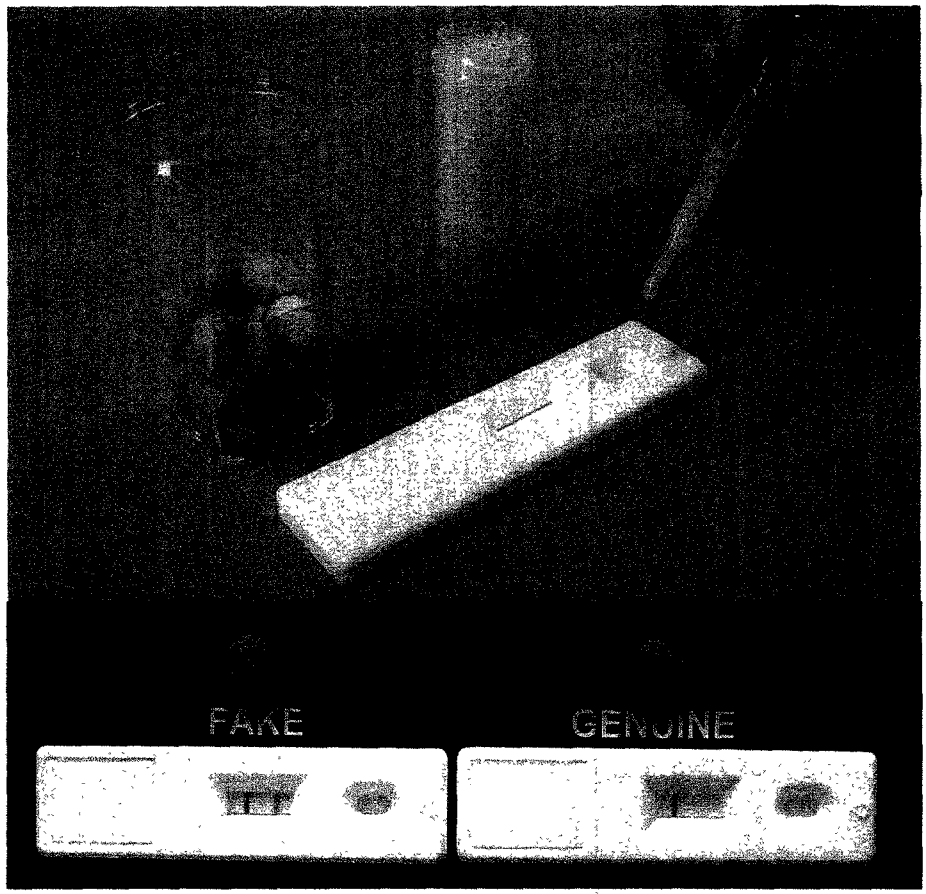

Figure 1. Example of tablet authentication system

To authenticate the dosage form, it is first placed in a vial of buffer and shaken briefly to extract the taggant. Several drops of the extract are then placed into the well of the test device. If the product is authentic, 1 line will appear and if it is fake then 2 lines will appear. The entire test can be completed in several minutes.

Comments relating to discussion point II.A.2
What is the current status of, and barriers to, adopting an industry standard for use of anti-counterfeiting technology?

The regulatory process for including taggants in new products, as part of the NDA, is clear. However, when it comes to the use of taggants in "approved" products that are already being marketed, the SUPAC filing requirements are not clear. We are currently working with pharmaceutical manufacturers who would like to use taggant technology to protect approved products but are held back by the uncertainties of the regulatory process. CDER has been working on new SUPAC guidance for the past two years that would address the use of taggants, however this guidance still has not been published. We believe that by providing new guidance that specifically addresses the filing requirements associated with use of taggants in approved products, the FDA would remove a major barrier that pharmaceutical manufacturers currently face when considering the addition of security features to the dosage form.

Biocode has also been asked repeatedly about the use of taggants in injectable products. We believe that taggants can also be used for authentication of injectables and would provide a rapid and definitive tool in detecting and preventing counterfeits. Current regulations, however, require that all components within an injectable be listed on the product label. This is not the case for oral dosage forms where confidential drug master files can be utilized and proprietary taggants can be incorporated into the dosage form without any requirement for disclosure on the label or in public documents. We request that FDA establish a mechanism whereby confidentiality could be maintained around the use of proprietary taggants within injectable products.

Comments relating to discussion point II.A.3
What role should FDA play in facilitating the use of anti-counterfeit technologies and in the creation of an industry standard for use of anticounterfeiting measures?

We have prepared a decision tree (Figure 2) illustrating the type of SUPAC guidance that we believe would provide industry with a clear understanding of the filing requirements for retrofitting approved products with security taggants. FDA can play a significant role in fostering the adoption of anti-counterfeiting features in pharmaceutical products by simplifying and clarifying the regulatory process that the manufacturer is required to comply with. The current lack of clarity regarding the regulatory filing requirement for the use of anti-counterfeit features leads to delayed and highly conservative decisions by manufacturers considering the use of these features. When it comes to fighting counterfeit pharmaceuticals, we urge the FDA and the manufacturers to establish a cooperative relationship in place of the confrontational type of relationship that is more typical of the drug approval process.

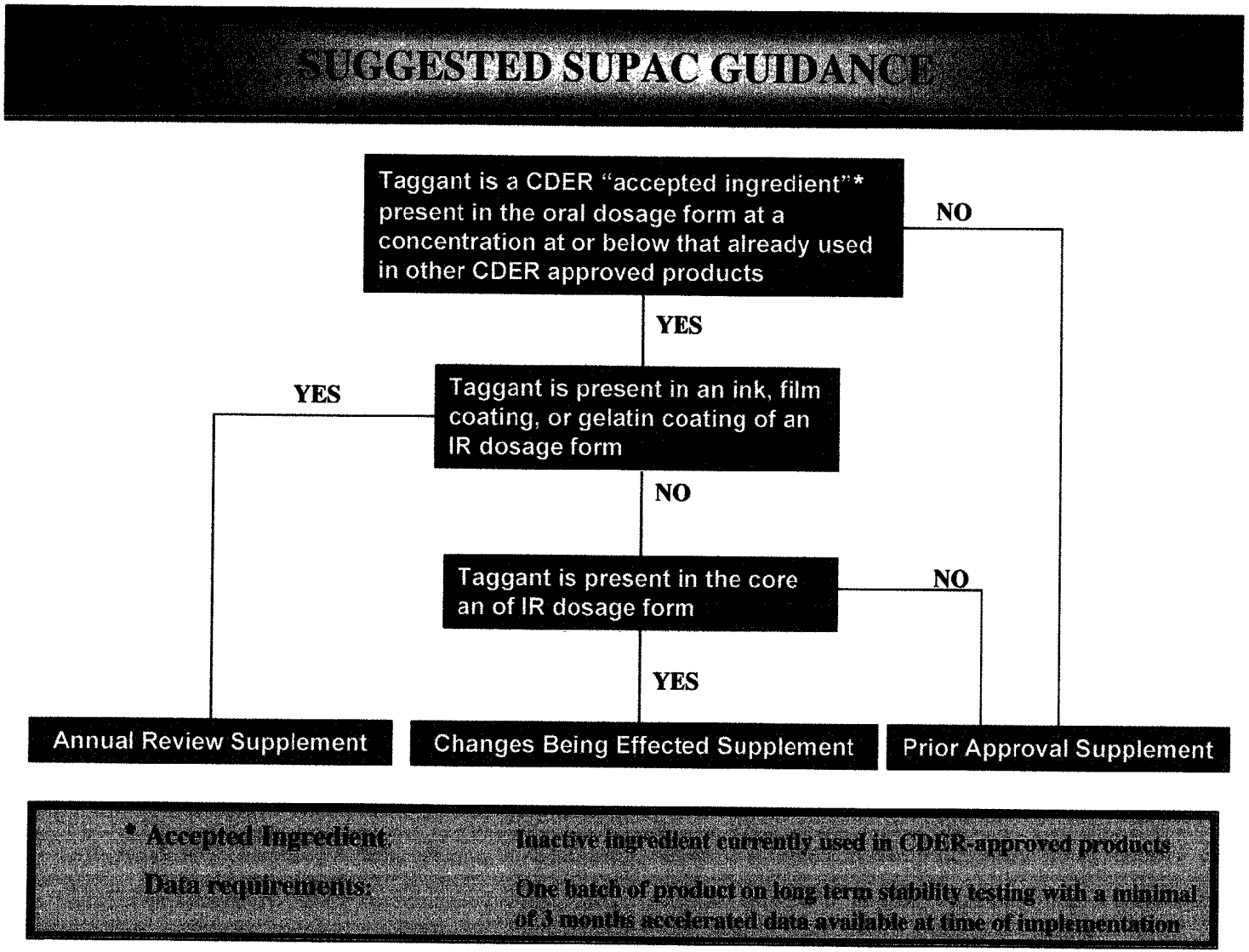

Figure 2. SUPAC Guidance Decision Tree

Biocode appreciates this opportunity to provide our comments to the FDA and we look forward to working together with the Agency and the pharmaceutical manufacturers to minimize the risk posed by counterfeit pharmaceutical products.

Sincerely yours,

James H. Rittenburg, PhD.