DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Food and Drug Administration
Silver Spring, MD 20993

Gary W. Small, M.D.
University of California, Los Angeles (UCLA)
Semel Institute for Neuroscience & Human Behavior
760 Westwood Plaza, Suite #38-251
Los Angeles, CA 90095

RE: (b) (4)
[F-18] FDDNP
MA #1

Dear Dr. Small:

The Office of Prescription Drug Promotion (OPDP) of the U.S. Food and Drug Administration (FDA) has reviewed the website entitled "Taumark Better Brain Diagnostics" (website) for the investigational new drug [F-18] FDDNP (FDDNP) found at http://taumark.com/.[1,2] You are receiving this letter as the authorized representative of UCLA, the sponsor of FDDNP, and a partner in Taumark, LLC (Taumark), a West Virginia limited liability company.[3] The website suggests in a promotional context that FDDNP, an investigational new drug, is safe and effective for the purpose for which it is being investigated or otherwise promotes the drug. As a result, FDDNP is misbranded under section 502(f)(1) of the Federal Food, Drug, and Cosmetic Act (FD&C Act) and in violation of section 301(k) of the FD&C Act.

Background

FDDNP is an investigational new drug for which there is no marketing authorization in the United States. (b) (4)

Promotion of an Investigational New Drug

Under section 502(f)(1) of the FD&C Act, a drug shall be deemed to be misbranded unless its labeling bears adequate directions for use. Adequate directions for use means directions

[1] Last accessed January 23, 2014.
[2] According to www.whois.net, the website's registrant organization is "tau mark."
[3] Taumark, LLC was originally incorporated as CTEM LLC in West Virginia on March 27, 2013. Its corporate documents reflect that effective June 30, 2014, its name was changed to Taumark, LLC. Information accessed on July 14, 2014, from West Virginia Secretary of State--Online Data Services at: http://apps.sos.wv.gov/business/corporations/organization.aspx?org=318185.

(b) (4)

under which the layman can use a drug safely and for the purposes for which it is intended. 21 CFR 201.5. Your website describes FDDNP for use in brain PET scans to diagnose traumatic brain injuries, Alzheimer's disease, and other neurological conditions. These uses are ones for which a prescription would be needed because they require the supervision of a physician and adequate directions for lay use cannot be written. Although 21 CFR 201.115(b) provides an exemption from the adequate directions for use requirement if a new drug "complies with section 505(i) . . . and regulations thereunder," your investigational drug fails to do so.[5] Among the requirements for that investigational exemption, 21 CFR 312.7 provides that "A sponsor or investigator, or any person acting on behalf of a sponsor or investigator, shall not represent in a promotional context that an investigational new drug is safe or effective for the purposes for which it is under investigation or otherwise promote the drug. This provision is not intended to restrict the full exchange of scientific information concerning the drug, including dissemination of scientific findings in scientific or lay media. Rather, its intent is to restrict promotional claims of safety or effectiveness of the drug for a use for which it is under investigation and to preclude commercialization of the drug before it is approved for commercial distribution."

The website contains claims and presentations that promote FDDNP as safe or effective for the purpose for which it is being investigated or otherwise promote the drug, including the following:

- TauMark for Prevention and Intervention

  After concussions and traumatic brain injury, abnormal tau protein deposits accumulate in the brain regions that control memory, thinking, and mood. An FDDNP brain PET scan (licensed exclusively to TauMark) is the only available non-invasive method to measure the distribution and level of brain tau (your **"T-Number"**). The goal is to help doctors detect problems early and monitor treatments. (Home page; "Why TauMark" Tab) (emphasis in original)

- An Easy and Safe Method

  The FDDNP compound (licensed to Taumark) contains a small amount of a rapidly disappearing radiation tag. For the PET scan, about a tablespoon of FDDNP preparation is injected into the patient's arm vein, allowing the chemical marker to reach the brain. The PET scan measures brain radioactivity accumulation for about 45 minutes, thus pinpointing areas where any tau protein deposits are present. (Home page; "How It Works" Tab)

- Image of football players, accompanied by the claim "Protecting Our Athletes who want to know about the consequences of concussive brain injuries." ("Home" page)

  Image of a soldier, accompanied by the claim "Supporting Our Soldiers concerned about long-term effects of head injury." ("Home" page)

[5] 21 CFR 201.100 offers another exemption from the requirement for adequate directions for use for prescription drugs provided certain requirements are met; however, FDDNP does not fall within that exemption because it is an investigational new drug for which there is no marketing authorization in the United States.

Image of an elderly couple accompanied by the claim "Helping Our Seniors who worry about age-related memory slips." ("Home" page)

- Get Started, Get Safe (Home page; “How to Get Started” Tab)

- TauMark Scan:

  Many hundreds of scans performed over the last 15 years have demonstrated the high safety profile of TauMark Scans with no reported adverse effects. (“Services” page)

- Despite the devastating consequences of traumatic brain injury and the large number of athletes, military personnel and other head trauma victims at risk, until now, no method has been developed for early detection or tracking of the brain pathology associated with these injuries. However, recent research in former NFL players showed that the FDDNP PET scan (now exclusively licensed to TauMark) demonstrates that a pattern of tau deposition expected from numerous brain autopsy studies of chronic traumatic encephalopathy (CTE), a degenerative condition associated with memory loss, dementia, depression, personality changes, and abnormal movements. ("Research" page)

- In addition to studying traumatic brain injury and the effects of concussions, scientists from around the world have used the FDDNP PET scan to demonstrate its usefulness in improving brain diagnostics in multiple neurological conditions, including neurodegenerative tauopathies, Alzheimer’s disease, depression, Down syndrome, and more: For the first time, FDDNP PET scans were used to demonstrate the presence of tau aggregates—similar to those found in CTE—in neurodegenerative tauopathies. (“Research” page)

- The FDDNP PET scan (licensed to TauMark) is the only currently available method to measure brain tau proteins in living people. Autopsies of CTE victims show an overwhelming presence of tau proteins in specific brain regions, which differ from the tau accumulation patterns observed in other diseases like Alzheimer’s. The amyloid PET scans do not measure tau at all. (“FAQs” page)

The above claims and presentations make numerous conclusory statements about the safety and effectiveness of FDDNP, such as suggesting that it has a “high safety profile” with “no reported adverse effects,” and that it’s the "only available non-invasive method to measure the distribution and level of brain tau…" to improve brain diagnostics in various neurological conditions that control memory, thinking, and mood. Thus, these claims and presentations suggest in a promotional context that FDDNP, an investigational new drug, is safe or effective for such uses, when FDA has not approved FDDNP for any use.

Conclusion and Requested Action

For the reasons discussed above, FDDNP is misbranded under section 502(f)(1) of the FD&C Act and in violation of section 301(k) of the FD&C Act. The claims and presentations in the website are concerning from a public health perspective because they make representations in a promotional context regarding the safety and efficacy of an investigational new drug that has not been approved by the FDA.

OPDP requests that UCLA immediately cease violating the FD&C Act, as discussed above. Please submit a written response to this letter on or before March 6, 2015, stating whether you intend to comply with this request and explaining your plan for discontinuing use of such materials.

Please direct your response to the undersigned at the **Food and Drug Administration, Center for Drug Evaluation and Research, Office of Prescription Drug Promotion, 5901-B Ammendale Road, Beltsville, Maryland 20705-1266** or by facsimile at (301) 847-8444. To ensure timely delivery of your submissions, please use the full address above and include a prominent directional notation (e.g., a sticker) to indicate that the submission is intended for OPDP. Please refer to the MA # 1 in addition to the (b) (4) in all future correspondence relating to this particular matter. All correspondence should include a subject line that clearly identifies the submission as a Response to Untitled Letter. OPDP reminds you that only written communications are considered official.

The violations discussed in this letter do not necessarily constitute an exhaustive list. It is your responsibility to ensure that your materials for FDDNP comply with each applicable requirement of the FD&C Act and FDA implementing regulations.

Sincerely,

{See appended electronic signature page}

Zarna Patel, PharmD
Regulatory Review Officer
Office of Prescription Drug Promotion

{See appended electronic signature page}

Amy Toscano, PharmD, RAC, CPA
Team Leader
Office of Prescription Drug Promotion

This is a representation of an electronic record that was signed electronically and this page is the manifestation of the electronic signature.

/s/

ZARNA PATEL
02/20/2015

AMY TOSCANO
02/20/2015