Exhibit 2

Advisory Committees: Critical to the FDA's Product Review Process

The Food and Drug Administration regulates more than 150,000 marketed drugs and medical devices. At any time, nearly 3,000 investigational new drugs are being developed. More dietary supplements than ever before are on the market, and Americans today have a much broader range of food choices. Then there are the scores of blood products and veterinary medicines for which the FDA is responsible.

Access to this growing range of products offers opportunities for advancing public health and improving people's lives. But it also creates new vulnerabilities and greater potential risks for people who use the products. To keep up with the challenges that the FDA's full-time experts face when reviewing innovative and rapidly evolving technologies, the agency hires "special government employees" whose opinions complement its goals to provide safe and effective products.

These outside advisers make up the FDA's technical and scientific advisory committees. The primary role of an advisory committee is to provide independent advice that will contribute to the quality of the agency's regulatory decision-making and lend credibility to the product review process. In this way, the FDA can make sound decisions about new medical products and other public health issues. And although advisory committees have a prominent role in the product approval stage, they are sometimes included earlier in the product development cycle and are asked to consider issues relating to products already on the market.

Committees typically are asked to comment on whether adequate data support approval, clearance, or licensing of a medical product for marketing. Advisory committees also may recommend that the FDA request additional studies or suggest changes to a product's labeling. Their recommendations are just that--advice--and do not bind the agency to any decision. While committee discussions and final votes are very important to the FDA, the final regulatory decision rests with the agency.

Advisory committee meetings often receive considerable media attention, and the agency welcomes such scrutiny because it helps provide public assurance of a responsible process.

Committee Members and Participants

Rapidly expanding technology in food and drugs in the 1960s led to a growing opinion among scientists and other public health experts that the FDA could perform its mission of consumer protection more effectively by using public advisory committees. With the passage of the Federal Advisory Committee Act in 1972, Congress prescribed the formal use of advisory committees throughout the federal government.

Membership in advisory committees must be "fairly balanced"--that is, as open and inclusive as possible--according to the law. Committee membership is expected to include ethnic, gender, and geographic diversity, as well as people with recognized expertise and judgment in a specific field, such as clinicians and researchers. Most members of the FDA's drug advisory committees, for example, are physician-scientists whose specialties or research involves the kinds of products being reviewed. Other members might include statisticians, epidemiologists, nutritionists, and toxicologists--experts in preclinical (animal) studies. The FDA also insists on getting industry and public perspectives, and nearly all committees include industry and consumer representation.

"Placing people on committees that have different perspectives and expertise gives balance to the discussions and final recommendations," says Linda Ann Sherman, M.D., M.P.A., former director of the FDA's Advisory Committee Oversight and Management Staff. "The agency aims for a lively discussion."

Industry representatives address global concerns for industry. They do not represent their employers; rather, they bring to the table their opinion of an issue, such as whether or not an additional preclinical study is necessary for a new class of drugs. The industry representative may express the opinion that the cost of such a study would be prohibitive and not give enough additional information to be cost-effective and could potentially delay the marketing of a product.

Consumers are represented on committees by technically qualified professionals who have specific links with consumer advocacy groups. In addition, some committees have patient representatives. These individuals present "real world" concerns of the patient who is to be the potential recipient of the new medical product.

For example, scientists and the FDA might be considering a pill form of a drug that's already approved as an injection, but there may be problems with a person's ability to absorb the drug in pill form. The patient representative's role might be to point out that the committee should weigh the seriousness of the absorption problem against the value of patients taking the drug more consistently when it's offered in a more convenient dosage form. In any case, patient representatives, who can be voting or non-voting members, offer their experiences in an effort to

provide a realistic look at a new product. It's important for patient representatives to have a general knowledge of the disease and the ability to comprehend the scientific data that are presented.

Most committee members vote at the end of each meeting on questions that are posed to them, while some do not vote. The main impact a member provides, however, is his or her contribution to the discussion, and not the final vote.

Notices requesting nominations to advisory committees are published in the *Federal Register* (https://www.federalregister.gov/agencies/food-and-drug-administration). Typically, potential members are referred by professional, scientific, and medical societies; academic institutions; government agencies; consumer and patient groups; and former and current advisory committee members. Self-nominations also are encouraged.

Committees are required to dedicate a minimum of 60 minutes of each meeting to "open public comment." The public is invited to appear before the committee. Interested people may present information, orally or in writing, relevant to the meeting topic. Those who want to speak are encouraged to register.

Most meetings are supplemented by temporary voting members, or consultants, who are the world's experts on the topic being discussed. These consultants are also special government employees, but are present only for the specific meeting.

Committee Meetings

Committees, which range in size from 10 to 15 members (and may be supplemented by additional FDA consultants), typically meet twice a year in the Washington, D.C., area. Meetings generally last two days. Members stay at a designated hotel at government expense. Travel expenses, including local transportation, and meal expenses are reimbursed at government rates, and a modest fee is provided for each day of service. An FDA official serves as the administrative executive secretary of each committee. Before an advisory committee meets, members will have already received and reviewed specific questions from the FDA, along with other materials, such as summaries of information on the safety and effectiveness of a new product. Prior to every meeting, each member is evaluated for any potential conflicts of interest. For example, a member may not participate in a meeting if he or she holds a financial interest in the product under consideration, since the action taken could potentially provide the member with a personal financial gain or loss.

So, how does the agency determine which products will undergo advisory committee review in the first place?

"Surprisingly," Sherman says, "many products do not make it to advisory committees." Those that do usually represent new technology or some element of controversy.

For example, a meeting to discuss the latest data regarding silicone breast implant safety highlighted the mixed opinions about the risks and benefits of the implants. "The meeting provided a valuable forum for discussing the issue from many diverse perspectives and for raising important additional questions," Linda Kahan, deputy director of the FDA's Center for Devices and Radiological Health, said. "That is the point of the FDA's advisory committee process," she says, "to air issues that are controversial, complex, and do not have simple answers."

The decision to involve an advisory committee is usually at the discretion of the division director in one of the FDA's five product centers.

Sherman says no count can be given to the number of products approved as a result of advisory committee recommendations. "Much of the advice accepted is not whether or not a product should be approved, but about some unique aspect of safety, effectiveness, or clinical development of that product."

In addition to serving as an important mechanism for outside input for the FDA, advisory committees are a vital public resource for information about new medical products. These meetings often represent the FDA's first public discussion of a new medical product and can be an invaluable source of information for patients, health care providers, and others who are interested in the product. Transcripts of FDA advisory committee discussions are posted here (/advisory-committees).

Each FDA committee must be renewed by the agency every two years, or its charter automatically expires. Renewals must be approved by the FDA commissioner or a designated appointing official. An assessment to renew is made based on the activity of the committee and the agency's continuing need for expertise in a particular scientific specialty.

"The FDA values the service its advisory committee members provide and the process itself," adds Sherman. "The system allows for full participation of all of FDA's stakeholders to assist in the agency's regulatory decisions."