Food and Drug Administration
Center for Biologics Evaluation and Research

SUMMARY MINUTES
164th VACCINES AND RELATED BIOLOGICAL PRODUCTS ADVISORY COMMITTEE

February 26, 2021

Committee Members
Hana El Sahly, M.D., Chair +
Archana Chatterjee, M.D., Ph.D.
CAPT. Amanda Cohn, M.D.
Hayley Gans, M.D.
Holly Janes, Ph.D. +
Michael Kurilla, M.D., Ph.D.
Myron Levine, M.D., D.T.P.H., F.A.A.P. +
H. Cody Meissner, M.D.
Paul Offit, M.D.
Steven Pergam, M.D., M.P.H.
Andrea Shane, M.D., M.P.H., M.Sc. +
Paul Spearman, M.D. +
Geeta K. Swamy, M.D. +

Industry Representatives
Paula Annunziato, M.D.
Gregg Sylvester, M.D., M.P.H. <+

Consumer Representative
Jay Portnoy, M.D. * (Acting)

Designated Federal Officer's (DFO)
Prabhakara Atreya, Ph.D.
Kathleen Hayes, M.P.H.

Committee Management Specialist(s)
Monique Hill, M.H.A.

* Consumer Representative
+ Not in attendance
< Alternate Industry representative

Temporary Voting Members
Arnold Monto, M.D. (Acting Chair)
A. Oveta Fuller, Ph.D.
David Kim, M.D., M.A.
Eric Rubin, M.D., Ph.D.
James Hildreth, Sr., Ph.D., M.D.
Jeannette Lee, Ph.D.
Mark Sawyer, M.D., F.A.A.P.
Melinda Wharton, M.D., M.P.H.
Ofer Levy, M.D., Ph.D.
Pamela McInnes, D.D.S., M.Sc.
Patrick Moore, M.D., M.P.H.
Stanley Perlman, M.D., Ph.D.
Wayne Marasco, M.D., Ph.D.

Speakers and Guest Speakers
Adam MacNeil, Ph.D., M.P.H. - CDC
Gregory A. Poland, M.D., F.R.C.P. - Sponsor
Hanneke Schuitemaker, Ph.D. - Sponsor
Johan Van Hoof, M.D. - Sponsor
Macaya Douoguih, M.D., M.P.H. - Sponsor
Maria Allende, M.D. - FDA
Tom Shimabukuro, M.D., M.P.H., M.B.A - CDC
Rachel Zang, M.D.-FDA
Steve Anderson, Ph.D., M.P.P. - FDA
Yosefa Hefter, M.D. - FDA

FDA Participants
Doran Fink, M.D.
Marion Gruber, M.D.
Philip Krause, M.D.
Peter W. Marks, M.D., Ph.D.
Celia M. Witten, Ph.D., M.D.
CDR. Valerie Marshall, M.P.H., P.M.P.
Jerry Weir, Ph.D.

These summary minutes for the February 26, 2021 Meeting of the Vaccines and Related Biological Products Advisory Committee were approved on _3/18/2021__.

I certify that I participated in the February 26, 2021Meeting of the Vaccines and Related Biological Products Advisory Committee and that these minutes accurately reflect what transpired.

_____/s/_____ _____/s/_____
Prabhakara Atreya, Ph.D. Arnold Monto, M.D.
Designated Federal Officer Acting Chair

On February 26, 2021 at 9:00 a.m. Eastern Standard Time (EST), the 164th Meeting of the Vaccines and Related Biological Products Advisory Committee (VRBPAC) met in open session to discuss EUA of the Janssen Biotech Inc. COVID-19 Vaccine for active immunization to prevent COVID-19 caused by SARS-CoV-2 in individuals 18 years and older.

Dr. Arnold Monto, the Acting Chair, called the meeting to order. The DFO made administrative remarks, conducted roll call and invited the committee members to introduce themselves, and read the Conflict of Interest (COI) statement into the public record. It was stated that one conflict of interest waiver was issued to a consultant and a temporary voting member for Dr. James Hildreth under 18 U.S. Code 208 in connection with the meeting and the waiver was posted on the FDA website for public disclosure.

Dr. Maria Allende of FDA provided an introductory presentation titled “Emergency Use Authorization; Overview and Considerations for COVID-19 Vaccines.” This was followed by a presentation by Dr. Adam MacNeil with the Centers for Disease Control and Prevention (CDC) titled “Epidemiology of SARS-COV-2 Variants.” Dr. Tom Shimabukuro also with the CDC and Dr. Steven Anderson with the FDA then gave a joint presentation “COVID-19 Vaccine Safety Update.” Following their safety presentation, the Committee was released for a 10-minute break. After the break, the Sponsor speakers, including Dr. Johan Van Hoof, Dr. Hanneke Schuitemaker, Dr. Macaya Douoguih and Dr. Gregory Poland with Janssen presented ‘Sponsor Presentation: Emergency Use Authorization Application for Ad26.COV2.S’.

After the Sponsors presentations concluded and a supplemental 30-minute Q&A session was held, the Committee was released to a 30-minute lunch break. Once the Committee returned from lunch, a 60-minute Open Public Hearing (OPH) session was held in which 17 public pre-registered speakers made presentations and oral comments. The names of OPH speakers and their oral remarks may be obtained from the transcript posted on the website. Following the OPH session, the Committee heard from Dr. Rachel Zhang and Dr. Yosefa Hefter with FDA who presented “FDA Review of Efficacy and Safety of the Janssen COVID-19 Vaccine Emergency Use Authorization Request.” After their presentation, the Committee was released for a 10-minute break. Following the break, the Committee proceeded with the discussion and voting portion of the meeting.

The VRBPAC was asked to vote on the following question:
Based on the totality of scientific evidence available, do the benefits of the Janssen COVID-19 vaccine outweigh its risks for use in individuals 18 years of age and older

In reference to the voting question, and prior to casting their votes committee members discussed how data from the currently ongoing phase 3 clinical trial evaluating a two dose schedule will impact the use of the product when authorized under the EUA as a single dose; in particular, if a two dose regimen demonstrates improved efficacy and immunogenicity. It was thought that health policy makers including ACIP would have to address this issue. From a regulatory perspective, if a two dose schedule were shown to be more effective, the EUA could be amended to authorize a two dose schedule and/or these data could be considered under biologics license application. Some committee members expressed concerns about the case definition used by Janssen, in particular the category of "moderate to severe" disease. It was noted that this definition is not consistent with FDA's case definitions. FDA clarified that Janssen's definition does include all severe COVID-19 disease. Because very few cases of "mild" disease were observed in the trial, operationally this definition of "moderate to severe" disease may have captured cases that would have been considered mild under other definitional frameworks. However, use of this more restrictive description of the vaccine's efficacy was considered to be reasonable. Other members asked about the efficacy of the vaccine in subjects SARS-CoV-2 positive at baseline. Janssen clarified that this will be further evaluated as cases in individuals seropositive at baseline were too infrequent to allow a robust analysis at this time. Additional work will also be performed to more precisely define rates of asymptomatic infections in vaccinated subjects. The ability to accurately estimate efficacy against asymptomatic infection will in part depend on whether nucleocapsid serology will allow a distinction between the SARS-CoV-2 virus and other coronaviruses.

Some committee members raised concerns about emerging variants and the data FDA would require to support an authorization of a modified COVID-19 vaccine to protect against variants of concern. FDA referred to its recently amendment guidance document on emergency use authorization of vaccines to prevent COVID-19 stating that immunogenicity bridging studies could be used where the original vaccine was demonstrated to be effective in clinical trials. The importance of assessing neutralizing ability of sera derived from subjects vaccinated with the current vaccine construct against emerging SARS-CoV-2 variants of concern was highlighted. Janssen discussed preliminary data showing a drop in neutralizing ability in studies using the B.1.1.7 variant but that the drop in neutralizing activity decreases when sera are evaluated at increasing time interval following vaccination. FDA asked the committee members to discuss the observed vaccine efficacy estimates in subjects over 60 years of age with comorbidities. Committee members pointed out that wide confidence intervals around the point estimate of efficacy are expected as number of COVID -19 cases are small and in addition, these results are likely attributable to shorter follow-up times due to staged subject recruitment with older subjects with comorbidities entering the study later.

The tightening of confidence intervals (and increases in point estimates for efficacy in this group) in analyses that included more participants (e.g., cases after 14 days or among those whose PCR results have not yet been confirmed) were discussed. In addition, there was no evidence for decreasing efficacy as age increased and overall efficacy among participants with

comorbidities was similar to that in those without comorbidities. Additional data to further refine these efficacy estimates will be collected. Other committee members suggested, if additional data indicated this were necessary and the two-dose study indicated this would be effective, that older subjects with comorbidities could be offered a second dose of the vaccine. Overall, committee members did not express concern about vaccine efficacy among older adults with or without comorbidities. Committee members asked when studies in pediatric populations would begin and opined that it is important to ensure their adequate geographic representation. FDA clarified that discussions regarding studies in pediatric populations including how to demonstrate efficacy and safety are currently ongoing.

Following this discussion, the VRBPAC was asked to vote on whether, based on the totality of scientific evidence available, the benefits of the Janssen COVID-19 Vaccine outweigh its risks for use in individuals 18 years of age and older.

The results of the vote were as follows: Yes = 21, No = 0, Abstain = 0.

Thus, the committee voted in favor of a determination that based on the totality of scientific evidence available, the benefits of the Janssen COVID-19 Vaccine outweigh its risks for use in individuals 18 years of age and older.

Following the vote, the meeting was then adjourned on February 26, 2021 at 5:30 PM EST.

Additional information and details may be obtained from the transcript and the recording of the webcast of the meeting that may be viewed at: https://youtu.be/Qd7mlCD-rEA