

**FOOD AND DRUG ADMINISTRATION (FDA)**  
**Center for Biologics Evaluation and Research (CBER)**  
**Cellular, Tissue, and Gene Therapies Advisory Committee (CTGTAC)**  
**June 9, 2022**  
**DRAFT AGENDA**

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**TOPIC SUMMARY**

**June 9, 2022: Topic I:**

*The committee will meet in open session to discuss the biologics license application (BLA) BLA 125755 from bluebird bio, Inc. for elivaldogene autotemcel [autologous CD34+ stem cells genetically modified with a lentiviral vector to contain an adenosine triphosphate binding cassette, sub-family D, member 1(ABCD1) gene which encodes a functional adrenoleukodystrophy protein (ALDP)]. The applicant has requested an indication for the treatment of patients less than 18 years of age with early cerebral adrenoleukodystrophy (CALD) who do not have an available and willing HLA-matched sibling hematopoietic stem cell (HSC) donor*

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**DAY 1: JUNE 9**

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| EDT<br>10:00 a.m. | Opening Remarks: Call to Order and Welcome   | <b>Lisa Butterfield, Ph.D.</b> (5 min)<br>Chairperson<br>Vice-President, PICI Research Center<br>University of California, San Francisco |
| 10:05 a.m.        | Administrative Remarks, Roll Call, Introduction of Committee, Conflict of Interest Statement | <b>Christina Vert, M.S.</b> (15 min)<br>Designated Federal Officer, CTGTAC<br>DSAC, CBER, FDA  |
| 10:20 a.m.        | FDA Opening Remarks  | <b>Wilson W. Bryan, M.D.</b> (5 min)<br>Director<br>Office of Tissues and Advanced Therapies (OTAT), CBER                                |

**Session 1: Early CALD Efficacy and Safety**

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|------------|--------------------------------|--|
| 10:25 a.m. | <b>Applicant Presentations</b> | <b>bluebird bio, Inc.</b> (50 min)   |
|            | Introduction                   | <b>Anne-Virginie Eggimann, M.Sc.</b><br>Chief Regulatory Officer, bluebird bio, Inc.   |
|            | Cerebral Adrenoleukodystrophy  | <b>Florian Eichler, MD</b><br>Director, Leukodystrophy Service, Massachusetts General Hospital, Associate Professor of Neurology, Harvard Medical School |
|            | Efficacy                       | <b>Jakob Sieker, MD</b><br>Senior Medical Director, Clinical Research and Development, bluebird bio, Inc.  |

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|  | Safety and Benefit/Risk   | <b>Laura Demopoulos, MD</b><br>Vice President, Pharmacovigilance, bluebird bio, Inc.   |
|  | Clinical Perspective:<br>The Role of eli-cel  | <b>Christine Duncan, MD</b><br>Sr. Physician, Dana-Farber/Boston Children’s Hospital<br>Cancer and Blood Disorders Center<br>Medical Director of Clinical Research & Development, Gene<br>Therapy, Boston Children’s Hospital<br>Associate Professor of Pediatrics, Harvard Medical School |
| 11:15 a.m.   | <b>FDA Presentation</b><br>Elivaldogene Autotemcel<br>(Eli-cel): BLA 125755 Clinical<br>Considerations for Efficacy and<br>Specific Safety in Early<br>Cerebral<br>Adrenoleukodystrophy | <b>Shelby Elenburg, M.D. and Leah Crisafi, M.D., FASA,<br/>CDR, USPHS (50 min)</b><br>OTAT Clinical Reviewers<br>Division of Clinical Evaluation and<br>Pharmacology/Toxicology (DCEPT)<br>OTAT, CBER  |
| 12:05 p.m.   | Clarifying Questions to<br>Presenters   | (30 min)   |
| 12:35 p.m.   | <b>LUNCH BREAK</b>  | (25 min)   |
| 1:00 p.m.  | <b>OPEN PUBLIC HEARING</b>  | (60 min)   |
| <b>Session 2: Safety, including vector integration</b> |   |  |
| 2:00 p.m.  | <b>Invited Speaker Presentation</b><br>Lentiviral Vectors and<br>Integration  | <b>Stephen Hughes, Ph.D. (25 min)</b><br>National Cancer Institute,<br>National Institutes of Health   |
| 2:25 p.m.  | <b>Applicant Presentation</b><br><br>Introduction   | <b>bluebird bio, Inc. (30 min)</b><br><br><b>Anne-Virginie Eggimann, M.Sc.</b><br>Chief Regulatory Officer, bluebird bio, Inc.   |
|  | Lentiviral Vector Safety<br>(relevant to both eli-cel and<br>beti-cel)  | <b>Melissa Bonner, PhD</b><br>Senior Vice President, Head of Research, bluebird bio, Inc.  |
| 2:55 p.m.  | <b>BREAK</b>  | (10 min)   |

