Adaptive Biotechnologies and Collaborators to Highlight Clinical Relevance of Measuring Residual Disease in Blood Cancers at ASH 2017

December 8, 2017

New Data Continue to Demonstrate the Importance of the clonoSEQ® Assay in Detecting MRD, an Important Endpoint in Multiple Myeloma and Other Blood Cancers

Seattle, WA – December 8, 2017 – Adaptive Biotechnologies, the leader in using next-generation sequencing (NGS) to detect minimal/measurable residual disease (MRD) in blood cancers, and its collaborators will present 22 studies, including a late-breaker presentation, at the 59th Annual Meeting of the American Society of Hematology (ASH) in Atlanta, December 9-12. Data presented at ASH will demonstrate how Adaptive's clonoSEQ® Assay to measure MRD, the cancerous cells remaining in the body after treatment, can inform clinical care in patients with B and T cell lymphoid malignancies. Additionally, at ASH, Adaptive and its collaborators will present data from studies utilizing the company's research-based immunosequencing platform, immunoSEQ®, to identify potential biomarkers of response to therapy.

"MRD is increasingly viewed as a critical endpoint in lymphoid cancers used to assess a patient's response to cancer treatment and evaluate disease burden over time. At Adaptive, we are excited to see the growing use of this endpoint to support clinical trials and patient management," said Charles Sang, Senior Vice President of Diagnostics. "We leveraged our foundational immunosequencing platform to develop the clonoSEQ Assay which provides a highly sensitive and standardized determination of residual disease in patients with lymphoid malignancies."

clonoSEQ, the first clinical application of Adaptive's pioneering immunosequencing platform, is helping to set a new standard for assessment of minimal residual disease in the clinic. It will be featured in a late breaker presentation, 5 orals and 7 posters. Data will be presented across a range of cancers – 9 multiple myeloma, 1 peripheral T-cell lymphoma, 1 mantle cell lymphoma, 1 chronic lymphocytic leukemia, 1 follicular lymphoma. Abstracts of importance include:

- LBA-4 Phase 3 Randomized Study of Daratumumab Plus Bortezomib, Melphalan, and Prednisone (D-VMP) Versus Bortezomib, Melphalan, and Prednisone (VMP) in Newly Diagnosed Multiple Myeloma (NDMM) Patients (Pts) Ineligible for Transplant (ALCYONE) (LBA-4)
- Minimal Residual Disease in Multiple Myeloma: Final Analysis of the IFM2009 Trial (Abstract #435)
- Daratumumab, Lenalidomide, and Dexamethasone (DRd) Versus Lenalidomide and Dexamethasone (Rd) in Relapsed or Refractory Multiple Myeloma (RRMM): Updated Efficacy and Safety Analysis of Pollux (Abstract #739)

Below is a full list of clonoSEQ and immunoSEQ related abstracts that will be presented at ASH this year.

CLONOSEQ ORAL ABSTRACT AND POSTER PRESENTATION HIGHLIGHTS:

Saturday, December 9, 2017

Oral Presentation, Abstract #154 Initial Treatment with Lenalidomide Plus Rituximab for Mantle Cell Lymphoma: 5-Year Follow-up and Correlative Analysis from a Multi-Center Phase II Study

Presenter: Jia Ruan, MD, PhD, Weill Cornell Medicine and New York Presbyterian Hospital, New York, NY

Time: 12:45 – 1:00 PM

Location: Bldg A, Lvl 4, A411-A412 (Georgia World Congress Center)

Poster Presentation, Abstract #1824 Daratumumab in Combination with Pomalidomide and Dexamethasone for RRMM Patients with ≥2 Prior Lines of Therapy: Updated Analysis of MMY1001

Presenter: Thierry Facon, Department of Haematology, Lille University Hospital, Lille, France

Time: 5:30 – 7:30 PM

Location: Bldg A, Lvl 1, Hall A2 (Georgia World Congress Center)

Poster Presentation, Abstract #1852 Daratumumab, Bortezomib, and Dexamethasone Versus Bortezomib and Dexamethasone for Relapsed/Refractory Multiple Myeloma (RRMM) Patients: An Update of Overall Survival in Castor

Presenter: Suzanne Lentzsch, Columbia University Medical Center, New York, NY

Time: 5:30 – 7:30 PM

Location: Bldg A, Lvl 1, Hall A2 (Georgia World Congress Center)

Poster Presentation, Abstract #1883 Daratumumab, Lenalidomide, and Dexamethasone Versus Lenalidomide and Dexamethasone in RRMM Based on Prior Treatment History, Renal Function, and Cytogenetic Risk: Subgroup Analyses of Pollux

Presenter: Philippe Moreau, Hematology, University Hospital Hôtel-Dieu, Nantes, France

Time: 5:30 – 7:30 PM

Location: Bldg A, Lvl 1, Hall A2 (Georgia World Congress Center)

Sunday, December 10, 2017

Oral Presentation, Abstract #435 Minimal Residual Disease in Multiple Myeloma: Final Analysis of the IFM2009 Trial

Presenter: Hervé Avet-Loiseau, MD, PhD, UC-Oncopole, Unite de Genomique du Myelome, Toulouse, France

Time: 12:30 – 12:45 PM

Location: Bldg C, Lvl 1, Hall C4 (Georgia World Congress Center)

Oral Presentation, Abstract #496 A Multicenter, Phase II Study of Ibrutinib Plus FCR As Frontline Therapy for Younger CLL Patients

Presenter: Matthew S. Davids, MD, Department of Medical Oncology, Dana-Farber Cancer Institute, Boston, MA

Time: 5:15 – 5:30 PM

Location: Bldg B, Lvl 5, Murphy BR 3-4 (Georgia World Congress Center)

Poster Presentation, Abstract #2728 Next-Generation Sequencing Based Monitoring of Circulating-Tumor DNA in Untreated Peripheral T-Cell Lymphoma

Presenter: Christopher Melani, MD, Lymphoid Malignancies Branch, Center for Cancer Research, National Cancer Institute, National Institutes of Health, Baltimore, MD

Time: 6:00 – 8:00 PM

Location: Bldg A, Lvl 1, Hall A2 (Georgia World Congress Center)

Poster Presentation, Abstract #3145 Daratumumab, Bortezomib, and Dexamethasone Versus Bortezomib and Dexamethasone in RRMM: Updated Efficacy and Safety Analysis of Castor

Presenter: Andrew Spencer, MD, Malignant Haematology and Stem Cell Transplantation Service, Alfred Health-Monash University, Melbourne, Australia

Time: 6:00 – 8:00 PM

Location: Bldg A, Lvl 1, Hall A2 (Georgia World Congress Center)

Monday, December 11, 2017

Oral Presentation, Abstract #739 Daratumumab, Lenalidomide, and Dexamethasone (DRd) Versus Lenalidomide and Dexamethasone (Rd) in Relapsed or Refractory Multiple Myeloma (RRMM): Updated Efficacy and Safety Analysis of Pollux

Presenter: Meletios A. Dimopoulos, National and Kapodistrian University of Athens, Athens, Greece

Time: 2:45 – 3:00 PM

Location: Bldg C, Lvl 1, Hall C1 (Georgia World Congress Center)

Poster Presentation, Abstract #4533 High Rate of Sustained Minimal Residual Disease Negativity Predicts Prolonged Survival for the Overall Patient Population in the Phase 2 KRd Plus Autologous Stem Cell Transplantation MMRC Trial

Presenter: Andrzej J. Jakubowiak, MD, University of Chicago Medical Center, Chicago, IL

Time: 6:00 – 8:00 PM

Location: Bldg A, Lvl 1, Hall A2 (Georgia World Congress Center)

Poster Presentation, Abstract #4685 Measurable Residual Disease (MRD) Testing in Multiple Myeloma Using an Improved Testing Technology: Population Impact

Presenter: Marita Zimmermann, PhD, MPH, Veritech Corporation, Seattle, WA

Time: 6:00 – 8:00 PM

Location: Bldg A, Lvl 1, Hall A2 (Georgia World Congress Center)

Tuesday, December 12, 2017

Late Breaker Presentation: LBA-4 Phase 3 Randomized Study of Daratumumab Plus Bortezomib, Melphalan, and Prednisone (D-VMP) Versus Bortezomib, Melphalan, and Prednisone (VMP) in Newly Diagnosed Multiple Myeloma (NDMM) Patients (Pts) Ineligible for Transplant (ALCYONE)

Presenter: Maria-Victoria Mateos, University Hospital of Salamanca/IBSAL, Salamanca, Spain

Time: 7:30 AM-9:00 AM

Location: Bldg C, Lvl 1, Hall C2-C3 (Georgia World Congress Center)

IMMUNOSEQ ABSTRACT AND POSTER PRESENTATION HIGHLIGHTS:

Saturday, December 9, 2017

Poster Presentation, Abstract #1898 Quantifying the Size and Diversity of the Human Alloresponse Via High-Throughput T Cell Receptor Sequencing

Presenter: Susan DeWolf, MD, Columbia Center for Translational Immunology (CCTI), Columbia University Medical Center, New York, NY

Time: 5:30 – 7:30 PM

Location: Bldg A, Lvl 1, Hall A2 (Georgia World Congress Center)

Poster Presentation, Abstract #2069 Novel Human Anti-HLA-Bw4 and B61 Monoclonal Antibodies Kill Malignant B Cells Via CDC/ADCC While Sparing Normal Peripheral Blood Cells

Presenter: Hiroyuki Takamatsu, MD, PhD, Department of Hematology, Kanazawa University, Kanazawa, Japan

Time: 5:30 – 7:30 PM

Location: Bldg A, Lvl 1, Hall A2 (Georgia World Congress Center)

Sunday, December 10, 2017

Poster Presentation, Abstract #2454 Surveillance of the Immune Repertoire of Aplastic Anemia Patients Using Deep Sequencing

Presenter: Cassandra Hirsch, BS, Department of Translational Hematology and Oncology, Taussig Cancer Institute, Cleveland Clinic, Cleveland, OH

Time: 6:00 – 8:00 PM

Location: Bldg A, Lvl 1, Hall A2 (Georgia World Congress Center)

Poster Presentation, Abstract #2734 Longitudinal Analyses of the Genomic, Transcriptomic, and T-Cell Repertoire in Diffuse Large B-Cell Lymphoma Demonstrates Changes in Signaling and Immune Recognition at Relapse

Presenter: Shamzah Araf, MRCP, MBBS, Centre for Haemato-Oncology, Barts Cancer Institute, Queen Mary University of London, London, United Kingdom

Time: 6:00 – 8:00 PM

Location: Bldg A, Lvl 1, Hall A2 (Georgia World Congress Center)

Poster Presentation, Abstract #2771 Intratumoral G100 Induces Systemic Immunity and Abscopal Tumor Regression in Patients with Follicular Lymphoma: Results of a Phase 1/ 2 Study Examining G100 Alone and in Combination with Pembrolizumab

Presenter: Christopher Flowers, MD, MS, Winship Cancer Institute Bone Marrow & Stem Cell Transplantation, Atlanta, GA

Time: 6:00 – 8:00 PM

Location: Bldg A, Lvl 1, Hall A2 (Georgia World Congress Center)

Monday, December 11, 2017

Oral Presentation, Abstract #649 Results from a Phase 1/2 Study of Brentuximab Vedotin in Combination with Nivolumab in Patients with Relapsed or Refractory Hodgkin Lymphoma

Presenter: Alex F. Herrera, MD, City of Hope, Duarte, CA

Time: 10:30 – 10:45 AM

Location: Bldg A, Lvl 4, Marcus Aud. (Georgia World Congress Center)

Oral Presentation, Abstract #728 The Tumor Microenvironment Is Independently Prognostic of Conventional and Clinicogenetic Risk Models in Follicular Lymphoma

Presenter: Joshua W.D. Tobin, University of Queensland, Australia

Time: 3:00 – 3:15 PM

Location: Bldg C, Lvl1, C101 Auditorium (Georgia World Congress Center)

Oral Presentation, Abstract #825 The T-Cell Receptor Repertoire Predicts Interim-PET in Patients with DLBCL Treated with R-CHOP: An Observational Study from a Prospective Clinical Trial

Presenter: Mohamed Shanavas, MD, University of Queensland Diamantina Institute, Brisbane, Australia

Time: 5:00 PM

Location: Bldg C, Lvl 3, Georgia BR 1-3 (Georgia World Congress Center)

Poster Presentation, Abstract # 4506 Day 90 Post-Allogeneic Hematopoietic Cell Transplantation T Cell Receptor Diversity Level Correlates with Risk of Relapse in Patients with Multiple Myeloma

Presenter: Robert Korngold, PhD, John Theurer Cancer Center, Hackensack Univ. Med. Ctr. Jurist Research Bldg., Hackensack, NJ

Time: 6:00 – 8:00 PM

Location: Bldg A, Lvl 1, Hall A2 (Georgia World Congress Center)

About Minimal/Measurable Residual Disease

Minimal/measurable residual disease (MRD) in hematologic malignancies refers to cancer cells that remain in the body of a person with cancer after treatment. In the case of clonoSEQ this includes ALL and MM. These cells can be present at levels undetectable by traditional morphologic, microscopic examination of blood, bone marrow or a lymph node biopsy. Sensitive molecular technologies, such as next-generation sequencing utilized by the Adaptive Biotechnologies clonoSEQ Assay, may be employed to facilitate the reliable detection of MRD at levels below the limits of traditional assessment.

About the clonoSEQ® Assay

The Adaptive Biotechnologies clonoSEQ Assay enables physicians to utilize a molecular, next-generation sequencing-based minimal/measurable residual disease (MRD) detection method. The clonoSEQ Assay detects and quantifies DNA sequences found in malignant cells which can be tracked throughout treatment. This robust assay provides consistent, accurate measurement of disease burden which potentially allows physicians to visualize response to treatment over time. The clonoSEQ assay is not approved or cleared by the FDA and is currently available in a CLIA-certified laboratory. clonoSEQ test results should only be used taking into account all available clinical information and should not be used as the sole determinant of patient care and management.

About the immunoSEQ Platform

Adaptive's immunoSEQ Platform helps researchers make discoveries in areas such as oncology, autoimmune disorders, infectious diseases and basic immunology. The immunoSEQ Assays can identify millions of T- and B-cell receptors from a single sample in exquisite detail. Offered as a Service or Kit, immunoSEQ Assays provide quantitative, reproducible sequencing results along with access to powerful, easy-to-use analysis tools. The immunoSEQ Assays are for research use only and are not for use in diagnostic procedures.

About Adaptive Biotechnologies®

Adaptive Biotechnologies is a pioneer and leader in combining high-throughput sequencing and expert bioinformatics to profile T-cell and B-cell receptors. Adaptive is bringing the accuracy and sensitivity of its immunosequencing platform into laboratories around the world to drive groundbreaking research in cancer and other immune-mediated diseases. Adaptive's mission is to translate immunosequencing discoveries into clinical diagnostics and therapeutics to improve patient care. For more information, please visit adaptivebiotech.com.

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