IDEAYA Biosciences Announces Synthetic Lethality Research Highlights and Target Milestones for 2020

Chief Executive Officer Yujiro Hata will present key research highlights on Synthetic Lethality today, January 15, 2020, at 5:00 pm PT (8:00 pm ET) at the 38th Annual J.P. Morgan Healthcare Conference in San Francisco

SOUTH SAN FRANCISCO, Calif., Jan. 15, 2020 /PRNewswire/ -- IDEAYA Biosciences, Inc. (NASDAQ:IDYA), an oncology-focused precision medicine company committed to the discovery and development of targeted therapeutics to treat cancer, announced key research highlights from its synthetic lethality pipeline. IDEAYA's research in synthetic lethality comprises multiple preclinical programs against novel targets with genetically defined biomarkers, including:

- Methionine adenosyltransferase 2a (MAT2A) inhibitors for solid tumors with methylthioadenosine phosphorylase (MTAP) deletions
- DNA polymerase theta (Polq) inhibitors for solid tumors with homologous recombination deficiency (HRD), such as BRCA mutations
- Werner helicase (WRN) inhibitors for tumors with high microsatellite instability (MSI-High)
- Poly (ADP-ribose) glycohydrolase (PARG), in tumors with Replication Stress
- Novel undisclosed synthetic lethality targets undergoing validation

Dr. William Sellers, M.D., a member of IDEAYA's Scientific Advisory Board and a Core Institute Member of the Broad Institute of MIT and Harvard, noted that "Synthetic lethality is an important area of cancer biology that has the opportunity to deliver the next generation of targeted therapies for patients. The industry advancement in molecular biology research tools, including CRISPR, has enabled our ability to interrogate key biological questions to validate novel targets. MAT2A and Werner Helicase represent two of the most exciting synthetic lethality targets to emerge since PARP inhibitors."

"We are excited about the progress across our synthetic lethality pipeline targeting patient populations such as MTAP-deletion, HRD, and MSI-High. We have advanced multiple potential first-in-class programs to *in vivo* testing, and have also validated the synthetic lethal biology for novel undisclosed targets," said Dr. Michael Dillon, Ph.D., Senior Vice President, Chief Scientific Officer and Head of Research at IDEAYA Biosciences.

Key research highlights and target milestones for IDEAYA's pipeline in synthetic lethality include:

- MAT2A (MTAP)
    - Monotherapy activity with robust tumor growth inhibition and pharmacodynamic (PD) modulation in multiple endogenous MTAP-/- *in vivo* models
    - Monotherapy activity and tumor regression in HCT116 MTAP-/- xenograft model
    - Differentiated safety profile, with no evidence of liver injury or increased bilirubin in preclinical studies across multiple compounds in lead series
    - Targeting IND for MAT2A inhibitor in H2 2020
- Polq ATPase (HRD)
    - Monotherapy activity in vivo in DLD1 BRCA2-/- xenograft model
    - Enhanced tumor growth inhibition in combination with olaparib, a PARP inhibitor, in DLD1 BRCA2-/- xenograft model
    - Targeting Development Candidate Nomination for Polq inhibitor in 2020
- WRN Helicase (MSI-High)

    - Cellular dose-dependent pharmacodynamic (PD) modulation
    - Selective cellular viability effects in multiple MSI-High cell lines, with lack of activity in MSS cell lines, evidencing pharmacological phenocopying of genetic knockdown effects

- PARG (Replication Stress)

    - Monoterapy in vivo efficacy studies ongoing in multiple genetic settings

- Synthetic Lethality Ongoing Research

    - Target validation research ongoing for next generation programs in synthetic lethality
    - Collaborations focused on synthetic lethality ongoing with leading academic institutions

"We are making progress in our efforts to discover pharmacologically active, small molecule inhibitors for multiple novel synthetic lethality targets," said Yujiro S. Hata, Chief Executive Officer and President at IDEAYA Biosciences. "We believe synthetic lethality represents an important class of precision medicine targets, that enables the targeted treatment of select patient populations. We look forward to advancing our first synthetic lethality program to IND and extending our leadership in the field."

About IDEAYA Biosciences

IDEAYA is an oncology-focused precision medicine company committed to the discovery and development of targeted therapeutics for patient populations selected using molecular diagnostics. IDEAYA's approach integrates capabilities in identifying and validating translational biomarkers with small molecule drug discovery to select patient populations most likely to benefit from the targeted therapies IDEAYA is developing. IDEAYA is applying these capabilities across multiple classes of precision medicine, including direct targeting of oncogenic pathways and synthetic lethality – which represents an emerging class of precision medicine targets.

Forward-Looking Statements

This press release contains forward-looking statements, including, but not limited to, statements related to (i) the potential of synthetic lethality to be the next generation of targeted therapies, (ii) the potential of preclinical programs to become clinical research programs, including the programs' timing ahead of other companies, (iii) the timing of filing an IND for a MAT2A inhibitor, and (iv) the timing of nominating a development candidate for a Polq inhibitor. Such forward-looking statements involve substantial risks and uncertainties that could cause IDEAYA's preclinical and clinical development programs, future results, performance or achievements to differ significantly from those expressed or implied by the forward-looking statements. Such risks and uncertainties include, among others, the uncertainties inherent in the drug development process, including IDEAYA's programs' early stage of development, the process of designing and conducting preclinical and clinical trials, the regulatory approval processes, the timing of regulatory filings, the challenges associated with manufacturing drug products, IDEAYA's ability to successfully establish, protect and defend its intellectual property and other matters that could affect the sufficiency of existing cash to fund operations. IDEAYA undertakes no obligation to update or revise any forward-looking statements. For a further description of the risks and uncertainties that could cause actual results to differ from those expressed in these forward-looking statements, as well as risks relating to the business of IDEAYA in general, see IDEAYA's recent Quarterly Report on Form 10-Q filed on November 13, 2019 and any current and periodic reports filed with the U.S. Securities and Exchange Commission.

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For further information: Investor and Media Contact, IDEAYA Biosciences, Inc., Paul Stone, Chief Financial Officer, pstone@ideayabio.com

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