**ARCA biopharma Announces Promotion of Chief Medical Officer and Vice President, Regulatory Affairs & Quality**

*Westminster, CO, October 5, 2020* – ARCA biopharma, Inc. (Nasdaq: ABIO), a biopharmaceutical company applying a precision medicine approach to developing genetically targeted therapies for cardiovascular diseases, today announced the promotion of Debra Marshall, MD, FACC to Chief Medical Officer, and Sharon Perry, RAC, to Vice President, Regulatory Affairs and Quality.

Dr. Marshall joined ARCA in 2016 as Senior Vice President, Medical Affairs. She has spent more than 20 years dedicated to cardiovascular drug development. Prior to joining ARCA, she served as an Executive Medical Director in the Cardiovascular Therapeutic Area at Amgen, Senior Medical Director in Cardio-Metabolism at Genentech, Global Senior Medical Director for the CV/Acute Care team at Lilly and Associate Medical Director for CV Medical Affairs at Novartis Pharmaceutical Corporation. Dr. Marshall has been involved development and approval of medicines for Heart Failure, Hypertension, Acute Coronary Syndromes and Dyslipidemias. Dr. Marshall holds a B.S. in Chemistry and an M.D. from the University of California, Los Angeles. She completed an internship in Internal Medicine at the University of Pennsylvania, Philadelphia and a Cardiology fellowship at the Oregon Health Sciences University in Portland, Oregon. Dr. Marshall has been an NIH and AHA grant recipient and has authored numerous scientific and clinical publications. She earned board certifications in Internal Medicine, Cardiovascular Diseases, Interventional Cardiology and Nuclear Cardiology.

Ms. Perry joined ARCA in 2008 as Senior Manager, Quality. She has more than 30 years of pharmaceutical industry experience as a Regulatory and Quality professional. Prior to joining ARCA, she was Quality Assurance Manager at Colorado Histoprep, Quality Assurance Specialist at Gilead Sciences, Chemist at Paragon Analytics, Manager of Quality for PR Pharmaceuticals and Quality Assurance Coordinator at Pfizer. Ms. Perry's expertise includes Quality Department and Quality Management Systems development and implementation, global Good Clinical, Laboratory and Manufacturing Practices (GXP), FDA pre-approval and Good Manufacturing Practices (GMP)/Good Clinical Practice (GCP) inspections, New Drug Applications (NDA), Investigational New Drug (IND) applications and Clinical Trial Applications, and Fast Track Designation and Orphan Drug Designation applications.

**About ARCA biopharma**

ARCA biopharma is dedicated to developing genetically targeted therapies for cardiovascular diseases through a precision medicine approach to drug development. ARCA is developing AB201 as a potential treatment for diseases caused by RNA viruses, initially focusing on COVID-19. ARCA is also developing Gencaro™ (bucindolol hydrochloride), an investigational, pharmacologically unique beta-blocker and mild vasodilator, as a potential treatment for atrial fibrillation in heart failure patients. ARCA has identified common genetic variations that it

believes predict individual patient response to Gencaro, giving it the potential to be the first genetically targeted atrial fibrillation (AF) prevention treatment. The U.S. FDA has granted the Gencaro development program Fast Track designation and a Special Protocol Assessment (SPA) agreement. For more information, please visit www.arcabio.com or follow the Company on LinkedIn.

**Safe Harbor Statement**

*This press release contains "forward-looking statements" for purposes of the safe harbor provided by the Private Securities Litigation Reform Act of 1995. These statements include, but are not limited to, statements regarding potential future development plans for AB201 and Gencaro, the expected features and characteristics of AB201 and Gencaro, including the potential for genetic variations to predict individual patient response to Gencaro, Gencaro's potential to treat atrial fibrillation, AB201's potential to treat COVID-19 or any other RNA virus associated disease, future treatment options for patients with COVID-19, and the potential for Gencaro to be the first genetically targeted AF prevention treatment. Such statements are based on management's current expectations and involve risks and uncertainties. Actual results and performance could differ materially from those projected in the forward-looking statements as a result of many factors, including, without limitation, the risks and uncertainties associated with: ARCA's financial resources and whether they will be sufficient to meet its business objectives and operational requirements; ARCA may not be able to raise sufficient capital on acceptable terms, or at all, to continue development of AB201 or Gencaro or to otherwise continue operations in the future; results of earlier clinical trials may not be confirmed in future trials; the protection and market exclusivity provided by ARCA's intellectual property; risks related to the drug discovery and the regulatory approval process; and, the impact of competitive products and technological changes. These and other factors are identified and described in more detail in ARCA's filings with the Securities and Exchange Commission, including without limitation ARCA's annual report on Form 10-K for the year ended December 31, 2019, and subsequent filings. ARCA disclaims any intent or obligation to update these forward-looking statements.*

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