

FOR IMMEDIATE RELEASE

Protea Announces Research Agreement with Mass General Hospital

Developing molecular tests to help guide tumor immunotherapy

Morgantown WV USA, 8:00AM ET, August 8 2017 – [Protea Biosciences Group, Inc.](#) (OTCQB: PRGB) (“Protea”) announced today that it had entered into a Collaboration Research Agreement with the Vaccine and Immunotherapy Center (VIC), Division of the Massachusetts General Hospital (MGH) and Harvard Medical School. The goal is to co-develop a new diagnostic methodology that will provide cancer cell molecular profiles, including the distribution of drugs within cancer cells and molecular response indicators, to improve patient treatment and outcomes.

“This is a very exciting opportunity for our scientists at VIC to gain access to an advanced molecular imaging technology and collaborate with Protea’s scientists to bring that technology to clinical relevance for our patients”, stated Mark Poznansky, M.D., Ph.D., Director of the MGH Vaccine and Immunotherapy Center and the Principal Investigator for the joint research program.

“We are delighted to be undertaking the development of this groundbreaking diagnostic technology with the VIC Team”, commented Steve Turner, Protea Chairman & CEO. He added, “Our collective goal is to improve the molecular information rapidly available to patients and their physicians from tumor samples, which can be used as the basis for decisions regarding both the initiation and modification of specific immunotherapies for their treatment”.

Immunotherapy is a type of cancer treatment that boosts the body's natural defenses to fight the cancer. It uses substances made by the body or in a laboratory to improve or restore the function of the body’s natural immune system. Immunotherapies can alter the immune environment of the tumor, leading to better therapeutic outcome. The total Immunotherapy market is estimated to be worth approximately \$14 billion by 2019, rising to \$34 billion by 2024, as the treatment of cancer patients undergoes drastic changes over the next decade,

Immunotherapies are increasingly being integrated into treatments for solid tumors - drugs that have great promise for some patients but are expensive and come with some significant adverse events. However currently, standard clinical measurements only provide serum levels of drug and provide little or no information on changes within the tumor. Patients currently undergo costly therapy with significant potential side effects but without a robust means to evaluate the impact of the therapy in the tumor microenvironment. For new immunotherapies to have maximum impact in a cost-effective way, it will be essential to generate more molecular information from tumor samples that can support medical decision



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making at the start of, and throughout the process of, treatment of the cancer. Developing the technology to provide this molecular information is the goal of this joint research collaboration.

About Protea Biosciences Group, Inc.: Protea Biosciences Group, Inc. (OTCQB:PRGB) is a molecular information company providing innovative bioanalytical solutions to the pharmaceutical and life science industries. The Company has developed next gen technology that enables the rapid and direct identification, mapping and display of the molecules present in all living cells and tissue samples. Protea applies its technology to the development of new molecular tests for the differential diagnosis of cancer, and the comprehensive molecular profiling of human disease.

"Molecular information" refers to the generation and bioinformatic processing of very large data sets, obtained by applying the Company's technology to identify and characterize the proteins, metabolites, lipids and other biologically-active molecules which are the byproducts of all living cells and life forms. The company provides proprietary molecular information services to its clients in the pharmaceutical and life science industries.

Forward-Looking Statements; *This press release may contain statements relating to future results or events, which are forward-looking statements. Words such as "expects", "intends", "plans", "may", "could", "should", "anticipates", "likely", "believes" and words of similar import may identify forward-looking statements. These statements are not historical facts, but instead represent only the Company's belief regarding future events, many of which, by their nature, are inherently uncertain and outside of the Company's control. It is possible that the Company's actual results and financial condition may differ, possibly materially, from the anticipated results and financial condition indicated in these forward-looking statements. Further, information concerning the Company and its business, including factors that potentially could materially affect the Company's business and financial and other results, are contained in the Company's filings with the Securities and Exchange Commission, available at www.sec.gov. All forward-looking statements included in this press release are made only as of the date of this press release, and we do not undertake any obligation to publicly update or correct any forward-looking statements to reflect events or circumstances that subsequently occur or of which we hereafter become aware.*

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