

**COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENT
BETWEEN
NANOLOGIX INC
AND THE
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

This Cooperative Research and Development Agreement ("CRADA" or "Agreement") is entered into by and NanoLogix, Inc. a State of Delaware Corporation which has its principal place of business at 843 North Main Street, Hubbard, Ohio 44425, ("the Cooperator"), and the National Exposure Research Laboratory (NERL) Microbiological and Chemical Exposure Assessment Research Division (MCEARD) ("the Laboratory"), of the U.S. Environmental Protection Agency ("EPA") under the authority of Title 15, United States Code ' ' 3710a-3710d, commonly known as the Federal Technology Transfer Act of 1986.

WITNESSETH:

A. WHEREAS, the Congress, in enacting the Federal Technology Transfer Act of 1986 (the "FTTA"), has found that Federal laboratories' developments should be made accessible to private industry, state and local governments, and has declared that one of the purposes of such Act is to improve the economic, environmental and social well being of the United States by stimulating the utilization of Federally-funded technology developments by such parties;

B. WHEREAS, the FTTA provides each Federal agency with the authority to permit the Directors of Government-operated laboratories to enter into cooperative research and development agreements with Federal or non-Federal entities, including private firms and organizations for the purpose of providing to, or obtaining from, collaborating parties, personnel, services, property, facilities, equipment, intellectual property or other resources toward the conduct of specified research and development efforts, which may include the disposition of patent or other intellectual property rights in the inventions resulting from such collaboration;

C. WHEREAS, the Laboratory has performed and has sponsored substantial research and development with respect to rapid and sensitive detection of bacterial pathogens in drinking and source water by concentration of the pathogens on magnetic particles coated by specific antibodies;

D. WHEREAS, the Laboratory possesses certain advanced scientific skills, facilities for work with microorganisms, special equipment and opportunities for research on real drinking water distribution systems, and information regarding survival of bacterial pathogens in finished and source waters;

E. WHEREAS, the Cooperator possesses certain devices and methods developed by the Cooperator, particularly the technology of BioNanoPore™ membranes and

BioNanoChannel™ plates for the purpose of rapid detection and identification by immunological and/or microcolonies growth methods, either with or without use of rapid PCR;

F. WHEREAS, the Laboratory and the Cooperator are interested in developing methods and devices for rapid detection and identification of bacterial pathogens in drinking and source water;

G. WHEREAS, the Cooperator desires to provide resources for the Laboratory's development and/or evaluation of the technology;

H. WHEREAS, the Laboratory and the Company are interested in the further development of the technology and its utilization by private and public entities; and

I. WHEREAS, the Laboratory views its collaboration with the Cooperator to develop/evaluate the technology to be in the furtherance of the public interest.

NOW, THEREFORE, the parties hereto agree as follows:

Article 1. Definitions

As used in this CRADA, the following terms shall have the following meanings and such meanings should be equally applicable to both the singular and plural forms of the terms defined:

1.1 "CRADA" or "Agreement" means this Cooperative Research and Development Agreement entered into by the Laboratory pursuant to 15 U.S.C. ' 3710a.

1.2 "Computer Software" means computer software, computer programs, computer data bases, and documentation thereof developed, in whole or in part, under this Agreement.

1.3 "Government" means the Government of the United States of America.

1.4 "Invention" means any invention or discovery which is or may be patentable or otherwise protectable under the intellectual property laws of this or any foreign country.

1.5 "Made" in relation to any Invention means the conception or first actual reduction to practice of such Invention.

1.6 "Proprietary Information" means information which embodies trade secrets developed at private expense, or which is confidential scientific, business or financial information, provided that such information:

- (a) Is not generally known or available from other sources without obligation concerning its confidentiality;
- (b) Has not been made available by the owners to others without obligation concerning its confidentiality; and

(c) Is not already available to the Government without obligation concerning its confidentiality.

1.7 "Subject Data" means all recorded information first produced in the performance of this Agreement. This term includes Computer Software.

1.8 "Subject Invention" means any Invention conceived or first actually reduced to practice in the performance of work under this Agreement.

1.9 "Technology" means applications and improvements for the goals of current Agreement generally based on BioNanoPore™ and BioNanoChannel™ technologies developed in the Company.

1.10 "Works" means any Computer Software or subject matter that is copyrightable.