

**TECHNOLOGY/BUSINESS OPPORTUNITY**  
**METHOD for EARLY DETECTION of CONTAGIOUS DISEASES**

**Opportunity:**

Lawrence Livermore National Laboratory (LLNL), operated by the Lawrence Livermore National Security (LLNS), LLC under contract no. DE-AC52-07NA27344 (Contract 44) with the U.S. Department of Energy (DOE), is offering the opportunity to secure a license to exercise patent rights for commercializing its method for early detection of contagious diseases technology.

**Background**

Contagious diseases, caused by bacteria or viruses, have been known to kill hundreds of thousands of individuals in the United States in past epidemics and currently account for nearly 12,000 deaths per week. While vaccines are a significant preventative method for diseases ranging in severity from that of influenza to the plague, not everyone receives them and not always all those who do can boast full immunity. Additionally, new disease or strains, natural or man-made, may arise suddenly and without warning. In these cases, an ideal method for mitigating the impact of the disease on a population is to identify and treat or isolate affected individuals prior to developing symptoms. This prompts the need for an adequate system for time-of-contact care and pre-contact disease prevention.

**Description**

LLNL scientists have developed a technology which fulfills this need. The LLNL technology itself is comprised of two elements which are to be embedded in a user's personal electronic device (e.g. cell phone, tablet device, pager, etc.). The first is a proximity monitor which transmits location and temporal data such as the distance between the user and a contagious individual and the duration of proximity. The second is a personal exposure notification which comes after the user has been positively diagnosed with a contagious disease by a healthcare provider. Information of their contagiousness is downloaded to a server and the user's device would then transmit exposure warnings to other individuals who have encountered the user and are deemed by the proximity monitor to be at high risk for contracting the disease. Two other factors are critical for the success of this LLNL technology: the accurate disease screening of afflicted individuals by healthcare providers and the early medical response taken by the individuals who have been notified by their device as being potentially afflicted by another individual.

**Advantages**

- Early warning system which could mitigate disease spread significantly
- Non-invasive technology is conveniently stored within current personal electronic devices
- Encourages users warned by their device to be proactive about their health

**Potential Applications**

- Early mitigation of mild to high severity diseases and epidemics
- Mitigation of the spread of chronically contagious diseases in addition to short-term epidemics

**Development status**

LLNL holds a US patent [7,993,266](#) “Early detection of contagious diseases” for this technology (LLNL internal case # IL-10967).

Please visit the IPO website at <https://ipo.llnl.gov/resources> for more information on working with LLNL and the industrial partnering and technology transfer process.

Note: **THIS IS NOT A PROCUREMENT**. Companies interested in commercializing LLNL's method for early detection of contagious diseases should provide a written statement of interest, which includes the following:

1. Company Name and address.
2. The name, address, and telephone number of a point of contact.
3. A description of corporate expertise and facilities relevant to commercializing this technology.

Written responses should be directed to:

Lawrence Livermore National Laboratory

Innovation and Partnerships Office

P.O. Box 808, L-795

Livermore, CA 94551-0808

Attention: FBO 432-19

Please provide your written statement within thirty (30) days from the date this announcement is published to ensure consideration of your interest in commercializing LLNL's method for early detection of contagious diseases technology.