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Oct. 15, 2010

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## **Advanced MicroLabs Wins Small Business Innovative Research Phase II funding for Online Ion Analysis Hardware Development**

**FORT COLLINS** – The National Institutes of Health (NIH) Superfund Research Program awarded \$845,000 to Advanced MicroLabs, LLC to further develop its Online Ion Analysis Hardware. The primary application for which the award was made is the measurement of perchlorate in drinking water with secondary applications anticipated in other industries like power generation.

Advanced MicroLabs uses a microchip Capillary Electrophoresis with patent pending electrochemical detection technology, which originated at Colorado State University coupled with a patent pending sample delivery technology for real-time, online analysis. “Our sensitivity typically matches, if not out performs, Ion Chromatography, and our technique is much faster, easier, and less expensive” says Dr. Charles S. Henry, CEO of Advanced MicroLabs. “Plus, we can separate and detect almost any ion in water, allowing us to address many new online measurement needs. With the chemistry for perchlorate analysis now well developed, our next set of evaluations is for ways to improve the water re-use and overall economics in power generating plants.”

Perchlorate is a small inorganic ion that impairs thyroid function when consumed with fetuses and children being most at risk. Its appearance in ground water sources is primarily a result of improper storage of rocket fuels and explosives. Many remediation efforts are underway throughout the U.S. to restore ground water for use as drinking water, since its treatment cost is much lower than alternatives like desalination. However, these efforts lack of suitable means of monitoring perchlorate in real time, resulting in deploying over-engineered solutions to safe guard against plant failure. An online sensor would make these efforts safer and more cost-effective. Jess Brown, Ph.D., P.E., a process design engineer with Carollo Engineers, comments: “No other analytical technologies exist that meet our on-site perchlorate monitoring

needs, and therefore we are quite enthusiastic about the prospects of the Advanced MicroLabs device.”

“This award is the cornerstone of our commercial thrust, providing product development resources and validating our scientific and commercial strategies,” continues Dr. Henry, CEO. The Small Business Innovative Research (SBIR) Phase II award will allow Advanced MicroLabs to develop prototype commercial units. Detection limits below 1 part per billion (ppb) have already been demonstrated in Perchlorate. “Other Advanced MicroLab studies have demonstrated measurement sensitivity and repeatability of interest to the power plant industry for ions like Sodium, Calcium, Chloride, Sulphates, and many more” said Uwe Michalak an advocate of improved power plant water usage and now Director of Business Development at Advanced MicroLabs.

Advanced MicroLabs will be attending the International Water Conference, San Antonio, Texas, October 24 to 28, 2010.

About Advanced MicroLabs. Founded in 2003, the company develops instrumentation and application specific detection chemistries using microchip Capillary Electrophoresis with a patent pending electrochemical detection technology originated at Colorado State University. Since its founding the Company has received scientific research and development awards of nearly \$3M to further this promising technology and has filed for additional patents. Headquartered in Fort Collins, Colorado, Advanced MicroLabs is in the final stages of launching its first commercial product. . For more information, please visit [www.advancedmicrolabs.com](http://www.advancedmicrolabs.com).