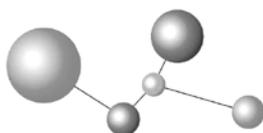


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Participation Opportunities

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Discovering Cures Iowa

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Iowa Bio, Partnership for Better Health and Discovering Cures Iowa are excited to extend an open invitation to this educational meeting regarding biotech and patient advocacy issues relative to the state of Iowa. It will be a chance for attending members to engage in dialogue and understand how these issues affect their industry and research.

“Discovering Cures” Continued on Page 2

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Agenda

- **8:30-9:00** Registration and Breakfast
- **9:00-10:00** Introductions and a Discussion Panel, Followed by a Q&A Session

Moderator **Christopher G. Atchison**, Associate Dean for Public Health Practice and Co-Chair of Partnership for Better Health

Panelists **Fritz Bittenbender**, Vice President, Alliance Development & State Government Affairs, BIO
Dr. Larry Severidt, Director, Medical Education & Broadlawns Medical Center, Family Medicine Residency Program
Megan Dapp, Program Coordinator, Discovering Cures

Location

[Renaissance Des Moines Savery Hotel](#)

401 Locust Street
Des Moines, IA 50309

*Public parking is available in the Fourth & Grand Parking Garage, located on Grand Avenue.

If you are interested in attending this **FREE** event, please submit your registration at www.iowabio.org/cures. If you have any questions, please contact us at info@iowabio.org or 515.327.9156

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Network Forming to Promote and Expand Clinical Research in Iowa

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Last September, the Iowa Biotech Association partnered with Innovate Iowa to release a report detailing more than 1,100 clinical trials that have taken place in Iowa since 1999. Clinical trials are responsible for 45 to 75 percent of the \$1.2 billion average cost of developing one new cutting-edge biotechnology medicine.

In addition to contributing to local economies where trials are conducted, patients often benefit from excellent 1-on-1, access to medications that would otherwise be unavailable, and the opportunity to help future generations.

Given the positive media coverage surrounding the release of that report and the need to further educate the public about the opportunities that clinical trials present, a new network is being formed. **If you are involved in clinical research in Iowa and see value in collaborating with others to help raise the profile of clinical research** please contact Heidi Frederickson at hfrederickson@pubaffairsco.com or 612-219-2837.

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New Member Spotlight

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Bayer HealthCare Pharmaceuticals



Bayer HealthCare Pharmaceuticals Inc. is the U.S.-based pharmaceuticals business of Bayer HealthCare LLC, a subsidiary of Bayer AG. Bayer HealthCare is one of the world's leading, innovative companies in the healthcare and medical products industry, and combines the activities of the Animal Health, Consumer Care, Medical Care, and Pharmaceuticals divisions. As a specialty pharmaceutical company, Bayer HealthCare provides products for General Medicine, Hematology, Neurology, Oncology and Women's Healthcare. The company's aim is to discover and manufacture products that will improve human health worldwide by diagnosing, preventing and treating diseases.

For more information, please contact Craig Mischo at craig.mischo@bayer.com or (651) 714-0316.

###

Mencine Pharmaceutical, Inc.



Mencine Pharmaceuticals, Inc. is a vaccine platform company founded in 2010 to develop Immunoplex™, with broad applicability in both infectious diseases and oncology immunotherapy. The 2012 flu vaccine was only 56 percent effective in adults and children and only 9 percent effective in people over 65, and significant unmet need exists across numerous human and veterinarian vaccine indications. Immunoplex™ infectious disease vaccines are delivered needle-free at mucosal surfaces without adjuvants, and elicit a more robust immune response via the body's natural immune defenses. Immunoplex™ vaccines are protein subunit-based, and therefore avoid the manufacturing and distribution hurdles associated with infectious agent-based vaccines. Proof-of-concept has been achieved in several murine models, including HepB, influenza, and a breast cancer immunotherapy model. Mencine's business strategy is to function as a discovery engine and out-license by field and territory for human and veterinary use.

Immunoplex™ Technology: Immunoplex™ is a transformative advance over traditional immune complex vaccines in that it utilizes a universal antibody in all vaccines for both infectious diseases and oncology personalized medicine indications. The crux of the invention involves a proprietary peptide tag that is covalently attached to the antigen or tumor cell, and an antibody that binds the tag to form an "Immunoplex". The tag-antibody complex delivers the antigen cargo to key immune players such as dendritic cells and macrophages. Thus the immune system is efficiently alerted, utilizing far less antigen than traditional vaccines and without harmful adjuvants. Importantly, the tag and the antibody components function in a universal fashion for all vaccines, affording development time and resource savings.

"Mencine Spotlight" Continued on Page 4

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Market Opportunity: The global infectious diseases vaccine market is \$27B with annual growth at 10% through 2015. Multiple factors drive growth including globalization, increased awareness of the benefits of prevention, and new technologies affording improvements in production and dosage routes. Novel vaccines with blockbuster potential such as Prevnar 13® (Wyeth/Pfizer's pneumococcal vaccine) and Gardasil® (Merck's HPV vaccine), help fuel growth in the industry.

In 2009, U.S. sales of targeted anticancer therapies surpassed \$10B. Vaccine oncology research is vibrant and promising with many programs advancing through human clinical trials. The idea recently became commercially validated by the first ever approval of the prostate cancer vaccine Provenge®, in 2010.

Memcine Pharmaceuticals accomplishments include:

- Nearly \$1M received in non-dilutive funding since 2010, including a recent award of \$150,000 from the Iowa Demonstration Fund and \$30K in state grant funding
- Named "2012 Startup of the Year"
- POC achieved in murine models for influenza, HepB, and breast cancer
- R&D lab and office space at BioVentures Center in Coralville, Iowa
- Antibody partnership negotiated
- Corporate legal, finance, and regulatory consultants engaged

Memcine is actively managing patent applications on Immunoplex™ in collaboration with the University of Iowa Research Foundation.

For more information regarding Memcine Pharmaceuticals, Inc. and Immunoplex™ technology, please contact Kathleen Holt, PhD, CEO and Director at kate@memcine.com or 319-333-8562.

###

Advanced Analytical Technologies, Inc.



Overview

Headquartered in Ames, IA since its founding in 1998, Advanced Analytical Technologies, Inc. ("AATI") develops, manufactures and markets high-throughput, fully-automated nucleic acid and genetic analysis systems. AATI's products are designed to improve processes and accelerate research within the pharmaceutical, life science, agricultural, clinical, biofuels and research markets. Combined with our satellite sales and service office in Heidelberg, Germany, AATI has approximately 50 employees and 25 product distributors worldwide.

The Company's product portfolio includes instruments for the analysis of DNA, RNA, pharmaceutical compounds, biomolecules, and proteins using capillary electrophoresis with fluorescence detection or UV absorbance. The Company's latest product, the Fragment Analyzer™, is a best-in-class, multi-channel, automated fluorescence-based capillary electrophoresis ("CE") detection system for the simultaneous analysis of the quantity and quality of PCR fragments, genomic DNA ("gDNA"), Next Generation Sequencing ("NGS") fragments, RNA and DNA Mutation detection.

Market and Customers

AATI's flagship product, the Fragment Analyzer™ was launched in January 2012 and through its first 15 months has placed over 200 units worldwide, serving one of the largest and fastest growing biological markets in the world: DNA sequencing. DNA sequencing, or the determination of the exact order of DNA base pairs in a particular genome, has been practiced since the

"Advanced Analytical Spotlight" Continued on Page 5

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1970s. The first human genome was sequenced as part of the Human Genome Project, taking 13 years (1990 – 2003) and costing nearly \$3 billion. Since 2003, sequencing technology has been introduced that can sequence a genome in a much more cost and time-efficient manner. Key advancements, namely exponential increases in computing power, have led to the creation of next-generation sequencers that have significantly reduced the cost and time needed to sequence a genome. These advancements have had a profound impact on the utilization of sequencing technologies in government, hospitals, academic research, agricultural and life sciences markets.

With the removal of key barriers and massive increases in sequencing capacity, bottlenecks have developed at both the front-end and back-end of the sequencing process. On the front-end, laboratories must complete a labor-intensive process known as library preparation, which involves the size determination and quantification of un-sheared genomic DNA and downstream fragmented DNA. The Fragment Analyzer™, has several advantages over existing systems, such as the elimination of several manual steps, increased resolution, ability to analyze larger fragments, and the ability to perform both quantity and quality analyses simultaneously.

Current customers of the Fragment Analyzer™, include blue chip users spanning multiple industry segments. A sampling of existing customers include: Stanford University, Harvard University, Brown University, MIT, Tufts University, Dartmouth College, Weill Cornell Medical College, UC Davis, Dana-Farber Cancer Institute, Max Plank Institute, Boston's Children Hospital, John Hopkins, Mayo Clinic, St. Jude's Children's Hospital, EMBL, Sanger Institute, RIKEN Institute, New York Genome Center, BC Genome Sciences, Scripps Research Institute, Myriad Genetics, Ambry Genetics, Ontario Cancer Research Institute, Amyris, Arcadia Biosciences, Gevo, Complete Genomics, Pacific Biosciences, Life Technologies, Monsanto, Pioneer/DuPont, Syngenta, Dow Agri, Bayer Crop Sciences and Novartis.

Products

AATI markets and manufactures three instruments along with a full line of consumable products for each instrument. AATI's key products are:

Fragment Analyzer™: Multi-channel CE fluorescence detection system for analysis DNA and RNA. A full line of reagent kits are available for analysis of PCR fragments, genomic DNA ("gDNA"), Next Generation Sequencing ("NGS") fragments, RNA and DNA Mutation detection.

pKa PRO™: Multi-channel parallel UV detection CE system for rapid measurement of acid dissociation constants (pKa values) of water soluble and insoluble drug compounds.

Oligo PRO™: Multi-channel parallel UV detection CE system for size-based purity analysis of single stranded DNA and RNA oligonucleotides, and double stranded RNA interference ("RNAi") products.



Contact Information

Advanced Analytical Technologies, Inc.
2711 South Loop Drive, Suite 4150
Ames, IA 50010
Phone: 515-296-6600
www.aati-us.com
Brian J. Thompson, CFO

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Upcoming Events

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Per reader feedback, we have updated this section to only include 1) events around the Midwest and 2) events IBA is hosting and/or attending. A full listing of industry events can be viewed on our online [Events Calendar](#).

[Discovering Cures Discussion Panel](#)

June 7, 2013 / Des Moines, IA

Iowa Bio, Partnership for Better Health and Discovering Cures Iowa are excited to extend an open invitation to this educational meeting regarding biotech and patient advocacy issues relative to the state of Iowa. It will be a chance for attending members to engage in dialogue and understand how these issues affect their industry and research. Please visit www.iowabio.org/cures for more information and registration details.

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[2013 BIO World Congress](#)

June 16-19, 2013 / Montréal, Canada

The BIO World Congress on Industrial Biotechnology is the world's largest industrial biotechnology event for business leaders, investors and policy makers in biofuels, biobased products, and renewable chemicals. Entering its tenth year, BIO World Congress offers unique networking opportunities, an overview of the latest technological developments and real world scenarios for bringing technological solutions to market. The event features discussions of high profile topics related to sustainability, new sources of fuel, climate change, financing, and policy.

Money Saving Opportunity! – Export Trade Assistance Program (ETAP) funds are a great way to receive financial assistance to attend this event. The application date has been extended to **September 30, 2013**. [By clicking here](#), you will find information on how to apply, as well as on other financial assistance opportunities such as the Domestic Trade Assistance Program and State Export Trade Assistance program.

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[5th Annual Animal Health Investment Forum](#)

August 27, 2013 / Kansas City, MO

The KC Animal Health Investment Forum provides a unique opportunity for venture capital funds, investment firms and animal health companies to hear from emerging companies with the newest technology. The event offers one of the only opportunities in the world for early stage companies in the animal health sector to present their vision and business plan to potential investors.

Companies presenting at the Forum have raised nearly \$85 million. Several have also received licensing agreements or distribution contracts.

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[2013 Iowa Cancer Summit](#)

October 10-11, 2013 / Des Moines, IA

On October 10th & 11th, the Iowa Cancer Consortium (ICC) will host the 2013 Iowa Cancer Summit in Des Moines, Iowa. This year's event will bring Iowans together to focus on the four sections of the Iowa Cancer Plan: prevention, early detection, treatment, and quality of life. The Summit is a great opportunity for attendees to learn how the ICC and their partners are taking action to reduce the burden of cancer in Iowa, and how the Iowa Cancer Plan can guide cancer control practices in Iowa. Physicians, nurses, social workers, community health educators, cancer survivors, caregivers, health advocates and elected officials are all encouraged to attend.

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[Drug Development Boot Camp 2013](#)

November 20-21, 2013 / Boston, MA

\$50 Discount Available for Iowa Bio Members - The Drug Development Boot Camp is a unique, intensive, integrated drug development training which immerses the participants in drug development using a unique approach pioneered by Dr. Lorna Speid. A world quality expert Faculty that have worked together to develop the Boot Camp materials will teach the Boot Camp. Not only will you have fun at the Boot Camp, but you will be totally immersed in the principles of drug development for two days, allowing you to take your drug development skills to another level.

For VCs and Incubators in Iowa

The attrition rate for drug discovery and development is very high. Training in drug development helps to assure success and good use of the resources that are invested in the Iowa region. For this reason, those working in drug discovery and drug development should be encouraged to access hands-on training. If you are a VC firm or an incubator with portfolio firms that you would like to take the intensive training in drug development that is available on the Drug Development Boot Camp, please contact Dr. Lorna Speid at lspeid@sndtm.com or (858) 793-1295. If we can secure ten registrations from any VC firm or incubator, then one registration will be given gratis. This is offered as a benefit of the VC firm and incubator being a member of Iowa Bio. If ten registrations cannot be achieved, the normal Iowa BIO discount will be applied. Importantly, we will be bringing this needed training to Iowa to make an impact on our potential for success.

IBA Members: To receive either of the offered discounts above and attend this event, please email Lorna Speid at lspeid@sndtm.com and copy melissa@iowabio.org.

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Breaking News

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Food & Agriculture

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Supreme Court Ruling Supports Breakthrough 21st Century Technologies, Ensures That **Patent Law Will Protect Continued Advancement In Agriculture Products**

Monsanto wins Supreme Court case over biotech seed patents



BIO: It's not too late to change the **conversation on GMOs**

BIO calls for **approval of biotech salmon**

Key Senators, Including **Senator Grassley**, Urge USDA, USTR to **Address Ag Biotech Barriers with Trading Partners**

Fact Sheet: **Benefits of Food Biotechnology**

Vermont House gives nod to biotech labeling bill

Biotech labeling law clears Connecticut Senate

Compulsory **biotech labeling** would mislead consumers

Senate votes down biotech food-labeling measure

NutraGenesis to sell **Plandai's plant extracts** in North America

USDA approves **Del Monte's biotech pineapple**

Makers of **infant formula** reject call to **stop using biotech ingredients**

J.R. Simplot submits **biotech potatoes** for review

Willows to distribute **Plandai's extracts** in Europe

Next-generation biotech crops have appeal for consumers

Genomic Initiative Launched to **Develop More Resilient Lines of Rice and Wheat**

Scientists identify the **mystery killer behind Ireland's potato famine**

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Healthcare & Pharmaceutical

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Johnson & Johnson

J&J to seek approval of more than **10 new drugs by 2017**

IDx LLC's Diagnostic Device Receives CE Certification

Test can ID 13 diseases in single blood sample

FDA panel considers promise of **drugs for radiation exposure**

Foundation Medicine signs companion Dx deal with cancer center

AbbVie's hepatitis C regimen wins breakthrough designation from FDA

Nimbus, Shire Collaborate to Co-Develop **Small Molecule Treatments**

Researchers use **stem cells to grow human bone**

U.S. gives **emergency authorization for H7N9 flu test kits**

Trial is under way for **SynapDx's early autism test**

Two New Studies Uncover a **Dozen New Testicular Cancer Risk Loci**

Immunotherapy could bring paradigm **shift in cancer treatment**

Making **Vaccines from Parts**

PTC, Esperion, bluebird join the IPO frenzy in biotech with **genetic therapies**

FDA suggests guidelines for expanded access to **experimental drugs**

OHSU Team Uses Sequencing to ID Drug Targets, Dx Markers for Two Types of **Leukemia**

Stem-cell treatment restores sight to blind man

Intercell's Japanese encephalitis vaccine wins FDA nod for **children**

HHS partners with GSK on **antibiotics for superbugs**

Fat-derived stem cells may be **more potent** than marrow cells

Synthetic Sea Anemone Toxin Could Be Newest Weapon in **Obesity Battle**

Alexion's hypophosphatasia drugs wins breakthrough status

Study of **Gut Microbe Metagenomes** Unearths **Gene Clusters** for Predicting **Diabetes Risk**

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Industrial & Environmental

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IOWA STATE
UNIVERSITY

Iowa State University Uses High-Frequency **Sound Waves** For **Enhancing Biofuel** Production

Big Oil's assault on RFS is bad for the U.S.

Lawmakers vote to **ban ethanol in Maine**

Biofuel groups encourage lawmakers to **maintain the RFS**

Canergy names partners in **California cellulosic-ethanol project**

American Process hopes to break ground on **cellulosic projects in 2014**

MSU bioenergy research looks for **food and fuel solutions**

Brazil's BNDES issues \$150M loan for **cellulosic-ethanol project**

U.S., European firms making **strides in next-generation biofuels**

\$19M biofuel facility to be constructed in **Canada**

Volcano-dwelling algae could boost **advanced-biofuel development**

Farm bill with \$800M for energy programs advances in the Senate

Enerkem gets \$1.1M boost for **advanced-biofuel R&D project**

California cellulosic ethanol plant achieves operational **milestone**

Farm waste may demand return of **biofuels**

162 advanced-biofuel producers get **funding** boost from USDA

Cost of biofuels no longer sky high

Proposed rule **defines corn fiber ethanol, butanol as advanced**

Iowa plant, Absolute Energy, launches direct **E85 distribution** to retailers at \$1.93 per gallon

Support growing for **veto of ethanol bill**

Pentagon signs **3 biofuel planning contracts** totaling \$16M

Researchers report breakthrough in **miscanthus pretreatment**

Seaweed: **Sea Fuel?**

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Learn More About...

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Iowa State University Fermentation Facility

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The Fermentation Facility at Iowa State University offers biotechnology researchers access to the latest equipment and expertise to help develop new fermentation technologies and products.

"Iowa State's fermentation facility is dedicated to fulfilling our clients' research and development requirements," said Zhiyou Wen, professor-in-charge of the fermentation facility and associate professor of food science and human nutrition.

Wen joined Iowa State in 2010 and earned a doctorate in biochemical engineering in 2001. His research specialties include bioprocess engineering; fermentation for functional foods and non-food products; algal culture development; biofuels and value-added products from microalgae; and anaerobic digestion of food and animal wastes.

He said one of the most attractive aspects of the facility is its ability for scaling up the production of industrially important chemicals, chemical feedstocks, genetically modified organisms and enzymes. Projects are possible from benchtop (1- to 5-liter) to pilot scale (15- to 115-liter) volume capacities.

Other features include:

- Controlled growth of microorganisms
- Simultaneous and long-term fermentations
- Parallel benchtop-scale fermentations
- Continuous and batch fermentations
- Downstream processing including centrifugation, ultrafiltration and freeze-drying
- Training for industry personnel

The Fermentation Facility is a partnership between the Center for Crops Utilization Research, Office of Biotechnology, College of Agriculture and Life Sciences, Department of Food Science and Human Nutrition, Department of Chemical and Biological Engineering, and Bioeconomy Institute. Those units provide opportunities for tapping into additional laboratories, services and collaboration.

For example, the Fermentation Facility works jointly with the BioCentury Research Farm to study systems to turn a variety of biomass feedstocks into ethanol and industrial chemicals. Researchers can test new processing systems using benchtop- and small pilot-scale equipment before going to large pilot-scale at the BioCentury Research Farm.

The BioCentury Research Farm is an integrated research and demonstration facility dedicated to biomass production and processing, and presents a unique opportunity for industry collaboration. There are many ways it can accelerate innovation and production capacity associated with biobased fuels, chemicals and products.

Additional fermentation and processing capabilities are available in the Biochemical Processing Train located in the Biomass Processing Facility, including fermentation vessels of 50-, 200-, 500- and 1,000-liter working volume capacities.

More information about the Fermentation Facility is available at: <http://www.ccur.iastate.edu/fermentationfacility/index.html>



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Subscriber Information

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This message was sent to you as a benefit of membership in the IBA and/or a subscriber of our monthly newsletter. If you know of a company that would benefit from the Association's advocacy, financial savings and education/workforce focus, please have them contact the Association at 515-327-9156 or email rachelhurley@iowabio.org. Membership details are also available at www.iowabio.org.

If you would like more information on any topic or no longer wish to receive these messages, please email melissa@iowabio.org or call 515-494-9242.

Speaker Opportunities

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IBA staff members are available to give 15-60 minute speeches to interested groups, such as Rotary Clubs, trade associations, or civic groups. A broad range of topics could be discussed, included biotechnology, healthcare, food vs. fuel, legislative policy, investment and more. Contact Rachel Hurley at (515) 327-9156 or rachelhurley@iowabio.org.