

September 2018

# TWO B MONTHLY

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## The Global Biocontrol & Biostimulants E-Newsletter

A Dunham Trimmer and New Ag International Publication  
[www.2BMonthly.com](http://www.2BMonthly.com)

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### Welcome!

**T**he 2BMonthly Team is delighted to bring our subscribers the latest news in both the biocontrol and the biostimulant industries. We wish you good reading!

**The 2BMonthly Team**

### Trending Now

**Cytozyme Laboratories and Verdesian Life Sciences enter into a strategic marketing agreement.**

*Read more on page 1.*

**Agchem Project Consulting (APC) joins the Staphyt group.**

*Read more on page 1.*

**AgBiome and Luxembourg Industries Ltd announce a collaboration in Israel.**

*Read more on page 2.*

**Certis Europe BV signs a collaboration agreement with the Tecnova Experimental Centre**

*Read more on page 2.*

**De Sangosse acquires and merges Biologicas Canarias and Biotecnologia del Mediterraneo to form Biológica Nature**

*Read more on page 2.*

**Executives Speak: Ashish Malik, CEO, Bee Vectoring Technology (BVT) and Erik Van den Bergh, Managing Director, Van Iperen International**

*Read more on pages 4-6.*

### Mergers, Acquisitions and Partnerships

**C**ytozyme Laboratories and Verdesian Life Sciences have entered into a strategic marketing agreement with Verdesian becoming the exclusive Midwest distributor of the products SEED+ DRY and CROP+. SEED+ DRY and CROP+ will now become key products in Verdesian's line of nutrient use efficiency (NUE) technologies in the Midwest region. Cytozyme's biologically-derived nutritional seed treatment, SEED+ DRY, is designed to improve seedling vigor, increase root and shoot mass, and reduce the impact of abiotic stress on the seedling, leading to uniform emergence and higher yields. Cytozyme's CROP+ is a foliar nutritional supplement that is designed to stimulate the plant's metabolism for improved activity and growth, offsetting the effects of abiotic stress at critical stages of phenological development.

**A**gchem Project Consulting (APC) joined the Staphyt group in order to grow their regulatory capabilities for companies dealing with agrochemicals, biocides and general chemicals. APC is a major player in regulatory consulting, providing its clients with bespoke global solutions with local focus. The Staphyt Group's regulatory department is now organized into two independent but highly complementary business units: APC and Staphyt Regulatory. APC will retain its brand name and its existing team, as well as its technical and commercial organization. Both teams remain unchanged and preserve their privileged relationships with their customers. Today, the combined regulatory capability of the Staphyt group is the following:

- More than 60 regulatory and scientific specialists covering all areas related to chemical risk assessment ready to manage larger regulatory and study programs
- Regulatory offices in 8 countries,
- A network of more than 70 consultants worldwide offering exceptional capabilities for national, European and international registrations,
- A high-quality service based on the teams' commitment, expertise and reactivity.

**AgBiome and Luxembourg Industries Ltd have entered a joint registration, development and commercialization agreement for Howler™ fungicide in the crop and non-crop markets in Israel.** Under this initiative, Luxembourg Industries will develop the completed registration for Howler fungicide in Israel for use in crop and non-crop segments. Luxembourg will be the exclusive distributor for Howler Fungicide in this area, focused primarily on the seed treatment, in-furrow, drench, and foliar applications in Israel crop and non-crop markets.

**Certis Europe BV signed a collaboration agreement with the Tecnova Experimental Centre** to establish the new Certis Research Excellence Centre (CREC) for the development of integrated pest management (IPM) on protected vegetables in Almería, Spain. With the signing of the new agreement, Certis Europe B.V. will have at its disposal in Almería facilities to continue with its development of full IPM programs that include biorationals, conventional specialties and an innovative range of special nutrition products, and to continue with its research and the development of solutions for the management of protected vegetables. With support from Certis, the new facilities, located in the center of production for trade and export of vegetables, will enhance collaboration with grower cooperatives, and allow development of new protocols to support sustainable agriculture and food security.

**De Sangosse has acquired the companies Biologicas Canarias and Biotecnologia del Mediterraneo** and created a new company, **Biológica Nature**. Biologicas Canarias and Biotecnologia del Mediterraneo are key players in the field of biofertilizers and natural biostimulants. Both companies have met with success for over 20 years in Spain and several other European countries in developing and marketing a range of specialties using an innovative and specific process based on microorganisms. The benefits of these formulations include improvements in the physiological conditions of plants and an increase in soil fertility. These products are suited for all types of agriculture - conventional, organic and integrated farming. They have been recognized for many years for their excellent performance and meet current and future societal and agronomic expectations. The two companies have developed know-how in the areas of research, development, product registration, production and quality control through a dedicated laboratory and modern fermentation unit based in Valencia. Biologicas Canarias and Biotecnologia del Mediterraneo are merging to form a new company, **BIOLÓGICA NATURE**, which will benefit from the additional resources provided by DE SANGOSSE to continue and improve the development of new products in collaboration with the Group's research and development laboratories. DE SANGOSSE's international presence will boost the marketing of the specialty products produced by Biologicas Canarias and Biotecnologia del Mediterraneo. DE SANGOSSE and the founders of Biologicas Canarias and Biotecnologia del Mediterraneo

share the same strategic vision. Carmelo Cabrera Pulido, Francisco Javier Soriano Pons and Emilio Jesús Villanueva have joined the group and will ensure the continuity of operations.

## Company News

**Marrone Bio Innovations, Inc. has provided its financial results for the second quarter ended June 30, 2018.** "We have continued to make solid operational progress, highlighted by our submission of MBI-014 bioherbicide to the EPA in August of 2018, continued excellent progress on international trials and submissions, and our support of growers in the burgeoning cannabis market through the launch and approval of the CG brand of Regalia, Venerate and Grandevo," said Dr. Pam Marrone, Founder and CEO of Marrone Bio Innovations. "We also continued to expand our reach both internationally — through a new partnership with Lidorr Chemicals in Israel and a forthcoming partnership in Vietnam — and domestically, through the expansion of our sales team into Idaho and eastern Washington."

### Q2 2018 Financial Summary

- Revenues in the second quarter of 2018 totaled \$5.8 million, compared to \$6.5 million in the second quarter of 2017.
- Gross margins in the second quarter of 2018 increased 850 basis points to 47.3%, compared to 38.8% in the second quarter of 2017.
- Operating expenses in the second quarter of 2018 totaled \$7.2 million, compared to \$7.9 million in the second quarter of 2017.
- Net loss in the second quarter of 2018 improved to \$4.8 million, compared to a net loss of \$7.4 million in the second quarter of 2017.
- Cash and cash equivalents, including restricted cash totaled \$24.9 million on June 30, 2018 and \$16.8 million on March 31, 2018. In April 2018, the company raised net proceeds of \$12.7 million through the sale of common stock.

### Recent Operational Highlights

- Submission of MBI-014 bioherbicide to the EPA.
- Successful field trials and an on-farm demo with Ennoble™ (MBI-601) biofumigant in organic strawberry, resulting in an estimated increase in profit of \$3000/acre.
- Expanded MBI's international distribution network through a new deal with Lidorr Chemicals in Israel. Launched Amplitude, a new biological fungicide for the row crop market.

**Futureco Bioscience is part of the team involved in the PALVIP project (Alternative Protection of the Interregional Vegetable Productions of the Pyrenees),** a cross-border investigation and experimentation project Catalonia - Roussillon, to develop biocontrol products adapted to Mediterranean crops. PALVIP combines universities and technical structures such as the Chamber of Agriculture of the Eastern Pyrenees (CAEP), the Catalan Institute of Vineyard and Wine (INCAVI), the Autonomous University of Barcelona (UAB), the University of Girona (UdG), the University of Perpignan Via Domitia (UPVD) and Futureco Bioscience. The purposes of the PALVIP project are to characterize the biological control products adapted to the Mediterranean crops such as wine, fruits and vegetables; to collect and disseminate information to guide farmers on the use of these products; and to promote the

development of the biocontrol industry and sustainable agriculture. The project is co-financed at 65% by the European Regional Development Fund (ERDF) through the Interreg V-A Spain-France-Andorra Program (POCTEFA 2014-2020), whose aim is to reinforce the economic and social integration of the border area Spain-France-Andorra.

**Marrone Bio Innovations, Inc. submitted the registration package for its new bioherbicide, MBI-014, to the United States Environmental Protection Agency (EPA).** Weeds are a major source of yield losses for most cropping systems. According to various market research reports, herbicides account for 40% of the \$50 billion global pesticide market. Of the approximately \$7.2 billion chemical pesticides sold in the U.S. each year, nearly \$4 billion are chemical herbicides. Grower surveys repeatedly show that weed control is the number one cost of organic food production since chemical herbicides are not allowed.

**Valagro signed a preliminary agreement with the regional Abruzzo department of the Italian Revenue Agency** that will allow the company to benefit from the tax concessions of the Patent Box. The Patent Box is an optional tax regime offering tax incentives for five years (2015-2019). Introduced by the Italian government as part of the 2015 Stability Law, the Patent Box is an optional tax regime that allows a percentage of the income derived from the use of intellectual property, industrial patents, trademarks, designs and models to be exempt from taxation, in addition to processes, formulas and information relating to experience acquired in legally-protected industrial, commercial and scientific sectors. The Patent Box is a tax incentive for those who invest in research and development and helps to increase investment in innovation.

## Regulatory

### Biopesticides

**AgBiTech launched bioinsecticide Surtivo Soja against *Helicoverpa armigera* in Brazil for the control of caterpillars including *Helicoverpa armigera* and *Chrysodeixis includens*.** According to the maker, Surtivo Soja is the first pre-mixture of baculovirus for the biological control of caterpillars. According to the global development vice president of AgBiTech, entomologist Paula Marçon, the company invested in the 150-plus large-scale experiments, which were conducted in the states of Bahia, Goiás, Mato Grosso, Mato Grosso do Sul, São Paulo, Minas Gerais, Paraná, and Rio Grande do Sul.

**STK bio-ag technologies announced that its hybrid fungicide STK REGEV® is now registered in Argentina for peanuts, with future label extensions on potatoes, wine grapes, tomatoes, peppers, blueberries and tobacco.** STK REGEV® protects from a variety of diseases, including *Cercospora arachidicola* (early leaf spot), *Cercosporidium personatum* (late leaf spot) for peanuts, powdery mildew, Alternaria, rust and botrytis for other crops. STK REGEV® is the first foliar hybrid fungicide and is currently used successfully in 10 countries in various regions of the world, with plans for global expansion in 2019. STK REGEV® is a ready-to-use fungicide, used exactly as other fungicides, combining tea tree oil and difenoconazole. This ready to use fungicide serves as a 'bridge,' enabling farmers who have never used any

biological product to try one, without having to mix, rotate or do anything differently, thereby expanding the use of biologicals products for sustainable agriculture.

## New Products

### Biostimulants

**Sherriff Amenity has announced the launch of E<sup>2</sup> Pro Elicitor - a new soluble plant biostimulant** which contains Harpin aβ. E<sup>2</sup> Pro from Sherriff Amenity is a brand of turf care products and the ever expanding portfolio features a range of both high performing water soluble and liquid fertilizers. Elicitor is the latest product to be welcomed to the E<sup>2</sup> Pro family. This unique soluble biostimulant contains an elicitor that stimulates gene expression in plants, delivering improved abiotic stress tolerance and better plant growth. Rigorous trial work has concluded that Harpin aβ specifically stimulates plant growth (above and below ground), nutrient absorption and tolerance to abiotic stress, including drought, temperature stress and pesticide detoxification.

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## Executives Speak

### Ashish Malik, CEO, Bee Vectoring Technology (BVT)

**You joined BVT in late 2016 after a successful biopesticide career with AgraQuest and Bayer. What about BVT made it attractive to you as the next step in your career?**

Just as we view biopesticides today as viable alternatives, or complements to traditional chemical products, I believe entomovectoring (using insects, or in our case specifically bees to deliver plant treatment agents to crops) is a viable alternative or complement to traditional application processes such as foliar sprays in many crops. And more importantly, the combination of the two technologies, biologically based crop protection and bee vectoring, creates a truly disruptive new tool for farmers who want to increase profitability in an environmentally responsible way. BVT is pioneering this new system, and joining the team as we approach the commercialization phase was quite exciting. So, I don't consider my career in biopesticides as being over, rather I am building on prior success!

**In brief, can you describe BVT technology and where it is being used successfully today. What crops and geographies are targets for current technology?**

BVT's technology is designed to harmlessly utilize managed bee hives as natural delivery mechanisms for a variety of plant treatment products to manage crop pests while simultaneously enhancing crop vigor and productivity. The technology is ideally suited for flowering crops where bees are being or can be used for pollination purposes – for example berry crops (strawberries, blueberries etc.), sunflowers, tomatoes, almonds and pome fruit (apples, pears). We are initially working in the U.S., but the opportunity is global, and we have already started early development efforts in Europe and Mexico as well.

**Your first product offer is based on a strain of *Clonostachys rosea*. What led you to focus on this biocontrol agent initially? What others do you see having potential in your system?**

*Clonostachys rosea* is a ubiquitous beneficial fungus that colonizes plant tissue. We chose this species, and our

strain in particular, from over 1400 isolates because its properties make it a great candidate for bee vectoring where the fungus can occupy plant tissue very early in a bloom period, thus preventing the attack of necrotrophic pathogens such as botrytis, sclerotinia or monilinia. In addition to developing *C. rosea* for bee vectoring use, we are also looking at its potential for more traditional applications like foliar spray or seed treatments. In addition to *C. rosea*, we have started evaluating several other biocontrol agents including from third party partners that can help manage other pests that affect a crop through or around the flower, such as *erwinia* (fire blight) or certain insect pests.

**Your initial system uses bumblebees. Do you anticipate adapting your approach to other pollinating insects?**

Our initial system was developed to work with managed bumblebee hives and has been successfully tested for several seasons in "real world" conditions on commercial farms. In addition, we have already filed patents and developed prototypes of a first-to-market honey bee delivery system that can be used with the commercial honey bee hives that are used in U.S. agriculture, and ultimately in other regions as well. This opens a huge opportunity for us, for example: every February alone there are about two million honey bee colonies that are used to pollinate almond trees in California; almond trees are susceptible to flower-related diseases such as brown rot, so our technology can be used to deliver plant treatments to manage these diseases while at the same time pollinating the crop.

**Do you see your system as focused exclusively on biopesticide solutions? Or do you anticipate potential applications with biostimulant active ingredients as well?**

Initially we are focusing on biopesticides, but the technology was designed to deliver any type of dry plant treatments or nutritional compounds that are safe to bees and that provide a benefit to the plant through the flower. Using bees is a very efficient delivery method – no water is required, and there is no wasted product unlike when you spray a crop where a lot of product never gets to the flower.

**Many start-up companies find the expense and time required for European approval daunting, but you**

# Proven expertise in registration of biorationals

IPM, biostimulants, fertilisers,  
precision/organic farming



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**announced submitting your submission in Switzerland in June. What led you to make Europe an early target for your efforts?**

*Europe is a strategic market, and growers in several European countries are early adopters of biologicals and sustainable ag practices. There is also a significant indoor market where bumblebees are already being used for pollination. For sure it is an expensive market to enter, but given the long approval times, we felt it is important to start the development sooner rather than later to keep creating value for the company, while also attracting potential business partners.*

**Your intellectual property portfolio, which includes the BVT dispenser system, the Vectorite proprietary formulation and the BVT-CR7 strain of *Clonostachys rosea*, is impressive. Of the three, which is most critical to performance of your offer?**

*We are building a strong global business, and one of our tenets is a strong IP portfolio. We are ultimately developing a whole system – new products that can be delivered in a novel way – and so all aspects of the IP portfolio are important. From the product that interacts with the plant, to the formulation that allows the product to be carried by the bees, to the design of the dispensing systems for use with both bumblebees and honey bees. They all contribute to the effectiveness and, ultimately, a system that is easy to use.*

**How do you see BVT products being distributed to end users? Will this be a “value added” solution together with pollination? Will you license your dispenser and formulation technology to other pollination companies?**

*We are looking at different business models, including with and without partners. In some cases where pollination is already being used, then yes, this could be considered a “value added” solution, and we are talking to beekeepers already. In other cases, we are going to develop new markets where the pest control aspect is the primary driver, and pollination becomes the secondary benefit. In certain markets, we will work with distribution partners where we would then license the technology.*

## **Erik van den Bergh, Managing Director, Van Iperen International**

**You are defining your company as a Dutch producer of specialty fertilizer solutions for fertigation and foliar application, combining your knowledge in mineral fertilizers with the opportunities of biostimulation, creating innovative products “where nutrition meets biostimulation.” When did you start showing interest for biostimulants?**

*In fact, this strategy started from the early beginning of Van Iperen International; we spent our first several years for R&D in this field to be sure that the products we launch are really “value of money.” We then launched five years ago the first formulas of liquid fertilizers including seaweed. And today, thanks to our R&D, we have under our tradename FoliaStim® a complete range of algae solutions, combining nutrition and biostimulation. Soon after, we launched the Iperen IPE® Technology for Increased phosphate efficiency. This patented technology has great potential on all the degraded soils and soils with low or high pH, like China, the Mediterranean region, Australia and South America.*

**Looking at your biostimulants product line, it is obvious that your main commercial interest, at least at this stage, is to deal exclusively with raw materials, let’s call them the biostimulants 1.0, namely seaweed extracts and humics, combining them with nutrients. Is this a definite policy to only propose products that combine nutrients and biostimulants?**

*This is for us a first step towards the future generation of new nutrition solutions. Our company expertise is plant nutrition. We believe that the added value Van Iperen International can bring in biostimulants is to work on the synergism with crop nutrients. That is why this is our primary focus. The current, first generation biostimulants will soon be followed by more novelties from other (vegetal) sources with more specific and stronger biostimulation. Our R&D works mainly in this field. However, the first generation biostimulants have lots of room to develop, with new formulations and synergism with other additives etc.*

**Your humic acids source is processed via a unique extraction method. Do you have direct access to this resource and have you developed this extraction method or is it just part of a package you acquire through a partner supplier?**

*In the Netherlands, we do not have this resource so we have indeed a global partnership with a U.S.-based market leader with a recognized top quality humic acid source. We also are their sole REACH registered partner for the European market. We believe in such partnerships where Van Iperen brings the market and agronomical know-how and formulation technology.*

**Why do you not include amino acids to your product line?**

*There are too many other exciting molecules to develop and amino acid is widely available, so we have little to contribute.*

**Can you talk about Iperen WAKE-up®, one of your New Solutions products?**

*Iperen WAKE-up Liquid is cutting edge, belonging to the new generation of Van Iperen products. After four years investigating and developing together with Landlab our R&D partner, we can claim that Iperen WAKE-up® Liquid can perfectly summarize our motto “Where Nutrition Meets Biostimulations.” It has been specifically developed to provide to the growers a solution to improve fruit quality especially under dry conditions.*

**You have recently announced the signing of a business and marketing partnership agreement with Acadian Plant Health™ (APH™). Can you enlighten us on the nature of this agreement?**

*Acadian Plant Health™ is a world leader in marine algae-based biostimulants with great knowledge in their application to overcome stresses and improve grower programs and crop results. Several years of successful collaboration has blossomed into a close working relationship and to the signature of an international marketing agreement. In this partnership, we are also developing together new solutions formulated at our production sites which might be marketed by either us or Acadian.*

**Your innovations department is working on screening and testing different molecules and substances. From the start of Van Iperen, you have been working closely together with Landlab, an Italy-**

**based R&D center in agriculture. Can you tell us a bit more about these new molecules and substances?**

*Our innovation department is investigating certain plant extracts for their biostimulating activity. We already have observed interesting results in trial programs and expect it will lead to the introduction of next generation biostimulants with very specific mode of action in the next two to four years.*

**Your company has grown impressively over the years. You are now selling in 100 countries. Where do you see the most potential for your products in the future, in particular those combining nutritional and biostimulation properties?**

*We see potential on all continents but to mention one, we have just opened our Miami office and foresee fast growth in the Americas.*

**Is the field of biocontrol a business segment which you may be tempted to enter, possibly by acquisition of an existing supplier or R&D platform?**

*Biocontrol is definitely an interesting field to enter, however currently we have no plans to enter this field but put all our focus on plant nutrition and how to overcome abiotic stress. But we may come across opportunities in the future and review our position.*

**You mentioned recently that you want to double your sales turnover within a few years. As consolidation continues in the sector, do you see external growth by means of acquisition as an interesting growth option for Van Iperen International?**

*Our focus is on internal growth by our own means and R&D. All our resources are currently put into this direction as we believe to have several potential winners in our R&D pipeline. Acquisitions are therefore not on our agenda.*

## Scientific Findings

**A new "vaccine" against Asian rust on soybeans is under development in Brazil and will be launched in 2020.** Rust is one of the major problems affecting the crop in the country. Created by the startup, Gênica Inovação Biotecnológica, from Piracicaba, state of São Paulo, the product activates determined genes of soybeans that protect the plant against the disease. "But it is important to emphasize that the gene activation does not mean genetic modification. The soybeans will not become a GMO food," explained Marcos Petean, CEO of Gênica. According to him, the startup's proposal involves the farmer using natural pesticides allied to chemical products. "Biological control is a sector still under growth in Brazil and also in the world. We have observed an increase in the market size and consistency of the technology in the field." Gênica received in 2018 a contribution of R\$6 million from the venture capital investment manager, SP Venture.

**For stink bugs to attract a mate or to communicate that they have found food, they use pheromones.** Virginia Tech researchers have discovered insights into this chemical language, which can be used to develop alternative pest controls. "We have gained a deeper understanding of how stink bugs synthesize pheromones, allowing us to produce pheromones in trap crops to lure the bugs away from cash crops," said Dorothea Tholl, a professor of biological sciences in the College of Science and a Fralin Life Science Institute affiliate. In Virginia, crops such as grapes, sweet corn and apples have been under attack by the invasive brown marmorated stink bug since 2004; cabbage has also been affected, but by the harlequin

stink bug. Tholl in her lab investigates the enzymes that produce stinkbug pheromones in an interdisciplinary collaboration with colleagues at Virginia Tech and national and international institutions. "Our recent paper provides valuable insight into our understanding of how insects synthesize complex sesquiterpene compounds that are typically used as pheromones," said Thomas Kuhar, a professor of entomology in the College of Agriculture and Life Sciences and a Virginia Cooperative Extension specialist. Very little was known about the biosynthetic evolution of these insect pheromones. "Pheromones for thousands of insects are known, but very little is known about the synthesis of the pheromones. Besides the development of possible trap crops, this research may allow establishing RNAi interference" type gene silencing mechanisms to disrupt the pheromone production of the insect. Other stink bugs such as the brown marmorated stink bug use enzymes in pheromone biosynthesis similar to that identified in the harlequin bug. Beyond the team's current study on stink bug pheromones, the research may allow for exciting future discoveries in the biosynthesis of pheromones of other insects and their application in pest management.

**Scientists at Australian National University (ANU) have engineered tiny carbon-capturing engines from blue-green algae into plants, in a breakthrough that promises to help boost the yields of important food crops such as wheat, cowpeas and cassava.** Lead researcher Dr. Ben Long from ANU said the discovery was a major leap forward in improving the way crops use photosynthesis, which is one of the main limitations to crop yield. "For the first time, we have inserted tiny compartments from cyanobacteria - commonly known as blue-green algae - into crop plants that form part of a system that could lead to a 60 per cent increase in plant growth and yield," said Long from the ANU Research School of Biology whose work has been funded by the international Realizing Increased Photosynthetic Efficiency (RIPE) consortium. These compartments, called carboxysomes, are responsible for making cyanobacteria so efficient at transforming carbon dioxide into energy-rich sugars. Rubisco, the enzyme responsible for fixing carbon dioxide from the atmosphere, is slow and finds it difficult to differentiate between carbon dioxide and oxygen, leading to wasteful energy loss. Cyanobacteria use a 'CO<sub>2</sub> concentrating mechanism' to deliver large amounts of the gas into their carboxysomes, where their Rubisco is encapsulated, increasing the speed with which CO<sub>2</sub> can be turned into sugar and minimizes reactions with oxygen. The Rubisco enzyme inside cyanobacteria can capture carbon dioxide and generate sugars about three times faster than the Rubisco found in plants. Computer models have shown that upgrading plant photosynthesis to use this mechanism will lead to a dramatic increase in plant growth and yield.

## Country Reports

**The New Zealand horticulture industry has welcomed the Environmental Protection Authority's (EPA) decision allowing the release of a tiny Samurai wasp into New Zealand, if ever there was an incursion of the brown marmorated stink bug (BMSB).** BMSB Council Chair Alan Pollard applauded the outcome as a major milestone against one of the greatest threats to New Zealand's horticultural industry and urban



communities. The Samurai wasp is the size of a poppy seed and completely harmless to humans and animals except stink bugs. It is a natural enemy of BMSB; the female wasp lays her eggs inside those of the stink bug, killing the nymph in the process. Studies overseas have shown that the wasp can destroy over 70 percent of the eggs in a stink bug egg mass.

## Personnel

**B**ioConsortia, Inc. announced the promotion of **Dr. Hong Zhu to Senior Vice President of Research and Development**. Dr. Zhu will lead the next phase of expansion of BioConsortia's Advanced Microbial Selection (AMS) technology platform, including discovery pipelines, product development, and commercialization. In his new role, Dr. Zhu will oversee R&D operations, set R&D strategies, and direct scientists at the company's New Zealand research center and U.S. headquarters.

**A**grinos announced **Valerie Leddy has joined the company as vice president, global human resources**. In this role, Leddy will develop and initiate the strategy, structure and measurement necessary for Agrinos' long-term growth, including the implementation of talent management, organizational design and a results-driven culture across the company. She will also have responsibility for advising the global leadership team, the management team and employees on human resource solutions, change management and collaborative practices designed to drive the company forward. Prior to joining Agrinos, Leddy served as director of human resources for a global biotech and medical device company based in Rancho Cordova, Calif. She holds certifications for Senior Professional Human Resources, SPHR (HRCI, SHRM), Professional Excellence in Coaching (IPEC) and a master's degree in organizational development (USF).

**STK has announced that Bertrand Desbrosses, VP business development & product management**, has departed from the company. **Shay Shannan**, VP R&D will take over his role, and secure the immediate activities planned.

**B**ionema has appointed **Stephen Burt to its board, and appointed him Finance Director**. Burt is a qualified chartered accountant with Price Waterhouse and has more than 20 years' experience across a number of South Wales's blue chip manufacturing businesses and was recently managing director of healthcare supplier Rocialle, part of the clinical solutions division of Berendsen plc.

**C**ytozyme announced **Carlos Fernando Moreno as New Business Manager for Andean Region of South America**. Moreno is responsible for leading Cytozyme's marketing initiatives in the region, developing new and existing channels and distribution partners, as well as managing regional talent. With nearly 20 years of experience in agronomic sales, Moreno specializes in creating, planning and implementing marketing strategies that propel companies forward. Moreno comes to Cytozyme after recently serving as the marketing manager for a German-based company in Colombia.

**A**minoA Biostimulants appointed **Michael Pruchnie as Business Development Manager Russia and CIS**. Pruchnie was educated at UWIST, Cardiff and Bath University, (M.Sc.) in the UK and has experience in market entry and development strategy implementation

for a wealth of global technology companies (including Ceca Chemicals, SGS, ApplusRTD and more recently with Velocys Technologies Limited) in the Russian Federation and Caspian regions.

**Dr. Mark Thompson has been named Vice President of Research and Development at Advanced BioNutrition Corp. (ABN)**. He succeeds Dr. Robert Ackerson who recently retired. Thompson joined ABN in June 2018. He brings over 35 years of experience from DuPont in a variety of R&D leadership roles, including 24 years in the crop protection business in R&D and operations and several years in DuPont's LYCRA Spandex business leading new products R&D. In his last position at DuPont, Mark served as Research Director in DuPont's Central Research Division where he collaborated with all businesses overseeing diverse, innovation projects in materials science, renewably-sourced polymers, industrial bioprocesses, and novel delivery systems for production agriculture.

## Job Vacancies

**H**eliae® is a platform technology company that produces high-value products from algae. Based in Gilbert, Arizona, Heliae seeks to fill the position of **Plant Physiologist** to lead efforts to explore the impact of Heliae agricultural products on plant physiology and performance. He/She will assist with overall planning and implementation aimed at developing and commercializing algae-based agricultural products. The plant physiologist will design and conduct experiments with input from other Heliae staff. The ideal candidate will have a solid understanding of high throughput screening and plant phenotyping, and provide insights leading to product improvement and novel product lines. For more information on responsibilities, qualifications and required attributes, visit [www.heliae.com](http://www.heliae.com). To apply for either position, please contact [lwilder@heliae.com](mailto:lwilder@heliae.com).

**M**arrone Bio Innovations, a leading provider of bio-based pest management and plant health products is seeking to fill multiple open positions including:

- Associate Research Scientist – Fermentation
- Associate Research Scientist II – Micro & Pathology
- Associate Research Scientist II – Formulations
- Senior Quality Assurance Specialist

To learn more about these positions and apply visit <https://marronebioinnovations.com/company/careers/> for a full job description. MBI is an equal-opportunity employer.

## Upcoming Events

**T**he Natural Products and Biocontrol Congress announced abstract submission have opened for papers and poster presentations. The Congress will be held in Perpignan, France from 25-28 September 2018. <http://biocontrol2018.fr/?lang=en>

**Biostimulants World Congress**  
**Digital Week**  
**4-DAY WEBCAST SERIES** 8-11 October 2018

Qualified audience of  
**100,000**  
 crop innovation and regulation professionals

**180+**  
 registrants per session

**NEW AG INTERNATIONAL**  
 KNect365  
 Life Sciences

Contact us for sponsorship details: [biostimulants@newaginternational.com](mailto:biostimulants@newaginternational.com)

**Biostimulants World Congress Digital Week - October 8-11, 2018** Don't miss the Biostimulants World Congress DIGITAL WEEK! To facilitate year-round engagement among the agricultural biostimulant community, New Ag International and KNect365 Life Sciences are pleased to introduce this special digital platform for you to raise your profile in the marketplace, engage prospects, and reinforce your thought leadership status - all while generating highly-qualified leads! Contact us for sponsorship details: [biostimulants@newaginternational.com](mailto:biostimulants@newaginternational.com) Contact us today to register your interest to attend.



**ABIM 2018**  
 22-24 October 2018  
 Congress Center Basel, Switzerland  
[www.abim.ch](http://www.abim.ch)  
 The Premier Global Meeting Place for the Biocontrol Industry

**ABIM 2018, the premier global meeting place for the biocontrol industry, will take place October 22-24, 2018** at the Congress Center Basel, Switzerland. ABIM 2018 is set for growth with a new and enlarged exhibition area, high caliber keynote presentations, and an improved 1 to 1 facility to help delegates connect with potential partners. A three-day program full of informative talks with over 1000 delegates and 400 companies participating will provide a great networking opportunity. For more information, please visit, <http://www.abim.ch/>. For exhibition and sponsorship, contact [anne.merz@fibl.org](mailto:anne.merz@fibl.org), Congress Secretariat.

## LATIN AMERICA IN FOCUS!

Biocontrol LatAm 2018 Conference and Exhibition. Organized by New Ag International and 2BMonthly

**2018 CONFERENCE & EXHIBITION**  
 The Largest International Event to Cover Biocontrol in Latin America!

**BIOCONTROL LATAM**

**Hotel Intercontinental Medellin, Colombia**  
 Wednesday 14th - Friday 16th November 2018

Organized by: **NEW AG INTERNATIONAL** **2B MONTHLY**

Co-organizer: **IBMA** Host Association: **Asobiocol** Supported by: **ABC Bio**

## The Largest International Event Covering Biocontrol in Latin America!

- Global Biocontrol Market
- Main trends in the LatAm industry
- Over 25 exhibitors from more than 10 countries

- Opening keynote from **Dr. Cesar Augusto Corredor Velandia**, Director de Innovación, Desarrollo Tecnológico y Protección Sanitaria, Ministerio de Agricultura y Desarrollo Rural
- Additional keynote presentations by **Mr. Nicolás Cock Duque**, President Asobiocol, **Dr. Juan Lucas Restrepo**, Executive Director Agrosavia, and **Mr. Ignacio Viteri**, Technology Catalyst Manager, Agropecuaria Popoyán
- Discussion of emerging regulatory issues for biopesticides in LatAm by **Ms. Amy Plato Roberts**, Regulatory Affairs Manager, Lallemand Plant Car
- Over 27 speakers from 13 countries
- Posters on broad range of topics and technologies

Register online **TODAY!**

[www.biocontrollatam.com](http://www.biocontrollatam.com)

**4TH BIOSTIMULANTS WORLD CONGRESS**

**November 2019**  
**Spain (Dates & Venue to be Announced)**

ORGANISED BY **NEW AG INTERNATIONAL**

**The 4<sup>th</sup> Biostimulants World Congress will be held in Spain in November 2019, announced New Ag International**, hopefully to coincide with the final approval of the EU legislation on biostimulants. Dr. Patrick du Jardin, Professor, Gembloux Agro-Bio Tech, University of Liege, and Chairman of the Scientific Committee for the Conference noted in his welcoming message that biostimulant use has grown dramatically based on the value they provide to growers, but much more needs to be understood about their mode of action. Previous Biostimulant World Congresses have helped to highlight advances in biostimulants and stimulate valuable exchanges between researchers. Dr. du Jardin expressed his expectation that these topics will be addressed in Spain along with new avenues on development and new substances being used as biostimulants. Also, included in the discussion will be regulatory challenges, taking advantage of participation from regulators, scientists, agronomists and producers. The final venue and dates will be announced shortly as well as the full composition of the Scientific Committee where Dr. Jose Maria Garcia (Spain), Dr. Jian-Kang Zhu (China) and Dr. Patrick Brown (USA) will join Dr. Du Jardin as Co-Chairs. Call for papers, stand booking and sponsorship will open this October but companies already wanting to show their interest should send an email to [biostimulants@newaginternational.com](mailto:biostimulants@newaginternational.com) as demand will be very high for the world leading event on biostimulants, where more than 1200 attendees are expected.