

**New Mexico Bioscience Authority (BSA) Board of Directors
Regular Meeting
September 22, 2022, 11:30 AM – 1:00 PM
317 Commercial St. NE, Suite 311, Albuquerque, NM**

Present: Dale Dekker (Chair), Sarah Boisvert, Christos Christodoulou, Alex Greenberg, Tom Kieft, Richard Larson; Paul Laur, Scott McLaughlin; Tanner Schaub, Prisca Tiasse

Absent: Sheryl Arvizu, Greg Byrnes, Jennifer Gifford

Staff Present: Stephanie Tofighi, Ryan Cangiolosi, Sterling Nichols

#	Agenda Items	Board Actions
1.	Call to Order and Confirmation of Quorum	The Chair called the meeting to order at 11:35 am. A quorum was confirmed.
2.	Approval of Minutes: <ul style="list-style-type: none"> Aug 19th, 2022 BOD Meeting Minutes 	<p>The Chair called a motion to approve the August 19th, 2022, BOD meeting minutes.</p> <p>A motion was made by Christos Christodoulou with a second from Richard Larson.</p> <p>A roll call vote of all board members was called with ten in the affirmative, none in opposition, none in abstention and three absent. The vote was as follows:</p> <p>Arvizu-Absent, Boisvert-Affirm, Byrnes-Absent, Christodoulou-Affirm, Dekker-Affirm, Gifford-Absent, Greenberg-Affirm, Kieft-Affirm, Larson-Affirm, Laur-Affirm, McLaughlin-Affirm, Schaub-Affirm, Tiasse-Affirm</p>
3.	Announcements and Chair's Report	The Chair informed the BOD he delivered the keynote address at the New Mexico Technology Council's Annual Meeting on Wednesday, September 21, 2022. The Chair said the keynote address was well received as he focused on identifying and filling the gaps between the state's economic development areas of interest as well as the economic development clusters that were presented as part of the state's strategic economic development plan which was prepared by the Stanford Research Institute in October of 2021. Also included in the address was

		<p>current information on large investments being made by the federal government in Science, Technology and Engineering and ideas on how the state could utilize it's \$2.5 Billion surplus in which the Chair proposed creating Co-Investment Funds for six primary technology and engineering clusters:</p> <ol style="list-style-type: none"> 1. Intelligent Manufacturing 2. Sustainable Agriculture 3. Renewable Energy 4. Bioscience 5. Aerospace 6. Sustainable and Green Energy <p>The Chair concluded his announcements and report after his update on his keynote address.</p>
4.	President's Report	<p>President Larson provided an update on the status of the negotiation with the New Mexico Angels on the current Co-Investment program. As discussed at the August 19th board meeting, the Angels moved forward with their investment without the BSA but had offered language to the agreement that could allow it to be altered in which the joint investment would be an LLC. Larson said he provided the Angels offered language to the University of New Mexico Office of University Counsel who opined that the language could be acceptable with some minor modifications, providing they receive documentation relative to the Angels investment. At present, the UNM Office of Legal Counsel has received two sets of documentation from the Angels which are under review, to determine if there is an <i>'affirmative'</i> or <i>'non-affirmative'</i> ability to proceed with the investment based on the submitted documentation.</p> <p>Larson concluded his report stating that if the documentation is deemed appropriate, he envisions the BSA moving forward with the Co-Investment.</p>
5.	Executive Director's report	<p>Executive Director Stephanie Tofighi provided an update on the following items for her Report: NMBSA Annual Report – Tofighi is currently working on the final draft of the Report which is due at the end of September.</p>

		<p>2022 Science Technology and Telecommunications Committee Presentation (STTC) – Tofighi is preparing the presentation for the STTC which is the state’s Legislative committee that the BSA reports to annually in November</p> <p>Crunchbase Subscription – The BSA has obtained a subscription to the Crunchbase investor platform that allows users to search companies as well as investors by using selective criteria such as funding, location, and industry. Through Screen Share, ED Tofighi, shared the current CrunchBase spreadsheet printout that was shared with the BOD in the September meeting packet per request of the Finance Committee. Tofighi explained that the current data in the spreadsheet was compiled by searching through industries that are most relevant to bioscience. When performing a search for companies, 638 companies are listed Tofighi said. However, when searching for companies by <i>‘funding’</i> the list of companies rapidly condenses which will be the focus when presenting to the STTC as the reason to fund the current Co-Investment program. When continuing to search for companies querying various types of funding the number of companies condenses significantly in which a total of 49 companies listed have not received funding recently. If expanding the search to include companies being funded in the last ten years the list of companies contracts even further which demonstrates a lack of growth utilizing venture capital. Tofighi also made a point that many of the companies listed who received funding were not located in New Mexico or were viable which will also be included in the STTTC presentation. Director Prisca Tiasse commented on the printout stating that a majority of the companies listed were not bioscience companies and was not sure how the data was aggregated in Crunchbase. However, the smaller number of existing companies found, in terms of funding, makes sense as some of the companies are not bioscience companies Tiasse stated. Ed Tofighi confirmed Tiasse’s point that some of the companies found were not bioscience and that the current data has not yet been parsed accordingly. Tofighi said some of the</p>
--	--	--

		<p>companies are considered bioscience as they are categorized as dental and or medical equipment which could be viewed as misleading. Hence, the companies recognized by Tofighi are funded and classified as bioscience. Director Scott McLaughlin asked of the subscription cost for Crunchbase and what were there sources of information, to which ED Tofighi responded by stating that the subscription was \$588 for 12 months and that the information was compiled from public streams, Internet URL's, and mentions from Dunn and Bradstreet. President Larson added that Crunchbase was formed four or five years ago with a specific mission to provide financial information to potential investors interested in early-stage investing.</p> <p>Executive Director Tofighi concluded her report for the month of September.</p>
6.	<p>Presentation on Sustainable Agriculture and related NMSU ACES Programs</p>	<p>Vice Chair Schaub introduced Dean Rolando Flores from the New Mexico State University College of Agricultural, Consumer, and Environmental Sciences (ACES) as the invited speaker. Dean Flores holds a doctorate in grain science and industry with a specialization in international trade from Kansas State University. In addition to his current position, he is a Water for Food Daugherty Global Institute Faculty Global Fellow and an active member of the Institute of Food Technologists, the American Association of Cereal Chemist International and the American Society for Agricultural and Biological Engineers.</p> <p>Dean Flores began his talk by introducing the BOD to the vision and purpose of ACES specifically pointing out that it is an engine for economic and community development in New Mexico, improving the lives of New Mexicans through academic, research, and Extension programs. Its overall vision is to become the best land-grant college in the Southwest and the best in the nation in their areas of strength serving arid and semi-arid lands. He shared that the ACES pillars for economic and community development are Food and Fiber Production and Marketing, Water Use and Conservation, Family Development and Health of New Mexicans, and Environmental Stewardship. All these pillars are</p>

		<p>supported by a strong foundation in education and training.</p> <p>Dean Flores shared an overview of the ACES demographics comparing them to the rest of NMSU pointing out that a higher percentage of students earning degrees in ACES are women (68.2%) compared to the percentage of women students (58.6%) earning degrees in general from NMSU. ACES has 8 academic departments, 33 cooperative extension offices, 6 extension departments, and 12 agricultural experiment stations supporting the education of ~1,400 students as well as the agricultural needs of New Mexican farmers and ranchers throughout the state.</p> <p>Dean Flores then transitioned the presentation into an introduction of ACES' principal research unit, Agricultural Experiment Station (AES). The AES system consists of scientists who work on facilities at the NMSU main campus in eight academic departments and at twelve agricultural science and research centers throughout the state. It supports fundamental and applied science and technology research to benefit New Mexico's citizens in the economic, social, and cultural aspects of agriculture, natural resource management, and family issues. AES scientists develop research programs that address key needs identified by advisory committees and local stakeholders. Each Agricultural Science Center (ASC) responds to specific research needs under New Mexico's varied geographical and environmental conditions. These research efforts sustain and support New Mexico's diverse environment, farms, ranches, forests, and rural and urban communities.</p> <p>Examples of sustainability initiatives included as part of the AES system include the following:</p> <ul style="list-style-type: none"> • Center for Dryland Resilience is being created to transform the understanding and management of natural capital in drylands under environmental change which is a critical challenge at the interface of science and society. This initiative has been integrated into
--	--	--

		<p>the state-wide efforts of the New Mexico Northern Rio Grande Corridor Collaborative (NRGCC)</p> <ul style="list-style-type: none"> • New Mexico Reforestation Center (NMRC) will help meet reforestation needs by producing five million seedlings per year, establishing programs to support the reforestation pipeline (from seed collection to planting), and helping to develop and support forest-based economic growth. • Corona Energy Initiatives includes wind turbines and commercial-scale 2MW Solar Array with battery storage. • Heritage Farm increases agricultural literacy and hands-on learning to develop an on-campus platform that connects communities of learners to the modern agricultural enterprise. • Digital Agriculture whose goal is to increase agricultural efficiency using multiple-source digital information (MSDI), data science, sensor development, and artificial intelligence (AI). Building capacity in drone development, as well as utilization and optimization for agriculture, is one focus area. <p>Dean Flores then discussed ACES’ plans to continue its development of regenerative agriculture which includes an integrative, interdisciplinary and multi-institutional approach to research, extension and education activities, centered around the improved understanding of the dynamics of ecosystems, interdependence and interactive processes, and their biological, physical, social and human dimensions. He then went on to introduce the NMSU Center of Excellence for Sustainable Food and Agricultural Systems (CESFAS) as an example of regenerative agriculture. CESFAS was one of the original Centers of Excellence created by Governor Lujan Grisham in 2019 along with the NMBSA. Dean Flores explained that the center is housed in ACES and is directed by Efren Delgado (Science) and Jay Lillywhite (Business). The mission of CESFAS is to be the leader in building a vibrant agricultural economy by conducting innovative, trans-disciplinary, collaborative research that facilitates and</p>
--	--	--

		<p>develops strong food and value-added agricultural businesses. The center provides interdisciplinary training and education to students to give value-added industries highly skilled, workforce-ready employees. In partnership with industry, the CESFAS works to help meet the complex challenge of feeding a growing global population using fewer natural resources.</p> <p>Projects being conducted by CESFAS include Controlled Environment Agriculture and the Natural Resource Conservation Service (NRCS) collaboration, and Carbon Sequestration. The first is a public/private partnership with Tri-State Generation and Distribution Association / EPRI that includes a food production system, an energy system, economic development, and educational programs. The second is five-year collaboration with New Mexico Natural Resource Conservation Service that includes Identifying a systematic approach to estimating benefits and costs of alternative conservation practices, conservation benefits and a cost app for producers, and an evaluation of NRCS payment schedules. The last is a project that uses Agricultural Experiment Stations as “living laboratories” to examine the viability and verifiability of carbon sequestration in arid and semi-arid lands.</p> <p>Dean Flores summarized the value-added approach taken by ACES by explaining that their common overall goal is to consider all opportunities through alternative forms of food production and supply chains, thus contributing to a strengthened competitiveness of the agricultural sector and towards better wellness of the population in NM. With the new facilities, ACES-NMSU will be working with the farmers and ranchers in NM to convert their products from commodities to niche products with information that has an attractive value-added. ACES has a key role to play by continuously deliver unbiased and solid scientific information that adds value and brings creative opportunities to support the credibility and trust of NM for sustainable production, processing and commercialization. Dean Flores went on to explain a vital contribution being made by ACES in terms of Dry Land Management. Dean</p>
--	--	---

		<p>Flores introduced this contribution by explaining how pastureland surrounding NMSU had been exhausted because of intensive use. Many problems have developed as a result, and ACES is working to revitalize the land through the introduction of various genetic material including a seed bank, nursery, and planting operations in forests, horticulture, pastures, and the introduction of Raramuri Criollo cattle which is a heritage breed coming from Chihuahua, Mexico that is adapted for dry land use.</p> <p>Dean Flores stressed the importance of the dry land management strategies being developed by NMSU and ACES as a means to cope with climate change.</p> <ul style="list-style-type: none"> • Water Management • Digital Agriculture • Carbon Management • Genetic Resources • Bio-Economy • Renewable Energy <p>Dean Flores went on to describe three related facilities currently being built through funds approved by the 2018 and 2020 GO Bonds that will contribute to NMSU’s teaching, research, and outreach especially in the fields of sustainable agriculture and consumer health.</p> <ul style="list-style-type: none"> • Food Science, Security and Safety Facility (Finished in March 2023) <ul style="list-style-type: none"> • Increase capability to work in the area of value-added foods. • Enhance partnerships with industry, including those through Arrowhead Center. • Create an additional revenue stream through services provided. • Increase capacity to provide training in federal, state, and other food regulations. • Biomedical Research Center (NIH grant will finish building) <ul style="list-style-type: none"> • Collaboration with NMSU College of Arts and Sciences.
--	--	---

		<ul style="list-style-type: none"> • Facilities support research for public health concerns, such as the West Nile virus, Dengue fever and Zika virus. • Provides the ability to test cancer fighting molecules by improving research productivity. • Animal Nutrition and Feed Manufacturing <ul style="list-style-type: none"> • Space to investigate new feed processes and blends. • Safety and efficiency improvements for all users through consolidation and technology upgrades. • Improved technology to reduce dust emission on campus and provide a safer environment. <p>Dean Flores thanked the NMBSA for the opportunity to share an overview of what is being done at NMSU in this space. Chair Dekker thanked Dean Flores for his detailed overview and opened the floor for questions.</p> <p>Director Tiasse asked whether NMSU works with local, tribal farms. Dean Flores responded that yes, they do, calling attention specifically to the science center NMSU has in Farmington, NM and the work being done there with the Navajo Agricultural Products Industry (NAPI) on Navajo Nation. Flores informed that it is the only such center in the country that is directly on tribal lands. He noted that NMSU also participates in an additional program called the Indian Resources Development Program which is a state funded program that promotes all New Mexico university opportunities to Native American high school students. Director Tiasse asked a follow up question regarding the nature of the relationship between NMSU and their tribal partners. Dean Flores expressed that NAPI is the largest production farm and cooperative in the world and that the NMSU developed irrigation system there is as technologically advanced and sophisticated as the NASA control room in Houston. He explained that the collaboration with Navajo Nation is different from those with independent ranchers, but it is productive for all participants given their many years of developing mutual respect and appreciation of one another.</p>
--	--	--

		<p>Chair Dekker asked another question about the number of graduate students coming to NMSU ACES from other Latin American countries. Dean Flores shared that currently they have about 80-100 but expressed that their goal is to have a significant amount of students because of his belief that New Mexico should be the main entry port from Latin America to the United States. He pointed out the cultural, language, and even production ties New Mexico naturally has with Latin America. As a result, he noted out ACES is working to attract more students from Latin America. He also shared that NMSU is part of an International Institute of Cooperation in Agriculture which is an organization that works in all the Americas from Canada to Argentina and the Caribbean. Dean Flores and NMSU Chancellor Dan Arvizu are working with them to develop an alliance on a sustainable system with Chihuahua in northern Mexico that can attract more student exchange between the respective universities. Chair Dekker contributed his understanding that Latin America is expected to grow by 168 million people in the next 28 years, so there is great opportunity to build a great Agriculture school and attract international students from Latin America.</p> <p>Chair Dekker thanked Dean Flores again for his presentation and expressed that the NMBSA is available to help in any way possible with NMSU’s mission of sustainable agriculture. Dean Flores expressed his gratitude and ended with the message that agriculture is one of the most efficient and safe systems in the country whose contributors account for less than 2% of the population but who feed the other 98%.</p>
7.	Finance Committee Report	<p>Strategy and Policy Director (SPD) Ryan Cangiolosi presented the Finance Committee report in place of Finance Chair Alex Greenberg who was not present at the September 15th Finance Committee Meeting to review the August Monthly Financial Statement and the 2023 Verge Building Lease Renewal.</p> <p>SPD Cangiolosi reported that there were no significant changes to the budget except for the standard monthly expenses such as staff salaries, legal fees, facility rent</p>

		<p>SPD Cangiolosi called for a motion to approve the 2023 Verge building lease renewal.</p> <p>A motion was made by Tanner Schaub with a second from Richard Larson.</p> <p>A roll call vote of all board members was called with ten in the affirmative, none in opposition, none in abstention and three absent. The vote was as follows:</p> <p>Arvizu-Absent, Boisvert-Affirm, Byrnes-Absent, Christodoulou-Affirm, Dekker-Affirm, Gifford-Absent, Greenberg-Affirm, Kieft-Affirm, Larson-Affirm, Laur-Affirm, McLaughlin-Affirm, Schaub-Affirm, Tiasse-Affirm</p> <p>Strategy and Policy Director Cangiolosi concluded his September Finance Committee Report.</p>
8.	Federal Plant Biostimulant Act Presentation	<p>Michelle Henrie from Pebble Labs in Los Alamos, New Mexico and David Beaudreau from the District of Columbia Legislative and Regulatory Services (DCLRS) lobbying and government relations firm joined the Board Meeting to present on the Federal Biostimulant Act. Michelle, whose employer is Pebble Labs, is part of an international organization called the Biological Products Industry Alliance (BPIA) whose focus is in the Bioscience-Bioproductions industry that includes developers, manufacturers, distributors and those that purchase biological products. Beaudreau is a lobbyist located in Washington, DC who keeps abreast of interests concerning public policy and developments. Currently, Beaudreau is providing insight on the Federal Biostimulant Act by working with Henrie in hopes that New Mexico Senator Ben Ray Lujan will sponsor or co-sponsor the Federal Plant Biostimulant bill in the U.S. Senate as it has already been introduced in the House.</p> <p>Ms. Henrie explained that the mission of the BPIA is to help provide access to biological products that will reduce the amount of chemicals needed to produce the food we need as consumers. She iterated that this is the reason the BPIA is working on ensuring that all</p>

		<p>consumers and users have access to these types of materials including biostimulants.</p> <p>Mr. Beaudreau explained that biostimulants are a broad and diverse range of materials that include acids, extracts, microbials, and other additives like nitrogenous compounds and enzymatic extracts. They all have common traits and attributes including the following:</p> <ul style="list-style-type: none"> • Generally derived from natural sources* • Help to stimulate natural processes of the plant • Complement other plant nutrition technologies to improve efficiency • Aid in plant health and productivity (as a consequence of improved nutrition) • Can be important contributors to sustainable ag practices • Many have long histories of safe and beneficial use in crop production <p><i>* May also include synthetic analogs for the naturally-derived products</i></p> <p>Mr. Beaudreau screenshared a slide illustrating the plant biostimulant market which is spread worldwide with the most business taking place in Europe, Asia, and Latin America amounts to a global market of about \$4B/year. Estimates predict a biostimulant annual growth of 10% in the United States.</p> <p>The vision and goals of the plant biostimulant act is to ensure a clear, consistent and predictable process for selling and marketing plant biostimulant (PBS) products in the United States. Details of this larger goal include the following:</p> <ul style="list-style-type: none"> • Ability to use the term “biostimulants” in commerce and education • Clarity on what claims can be made • Consistent standards /criteria for PBS: <ul style="list-style-type: none"> • Efficacy – safety –composition – labeling • An efficient process for certification to the standards • Global harmonization of standards
--	--	---

		<ul style="list-style-type: none"> • Broad acceptance and credibility for the industry and products • A clear, consistent, predictable process to market <p>Mr. Beaudreau pointed out that because guidelines currently differ from state to state, it is difficult for biostimulant producers to consistently get their products to market.</p> <p>Mr. Beaudreau went on to share the background of the Plant Biostimulant Act which even though has been worked on for over 10 years has only become very active in the last five or six years. He explained that language in the 2018 Farm Bill required the USDA, in consultation with the EPA and the States to submit a report to Congress and the President on the biostimulant path to market recommendations. In 2019, the USDA submitted the report to Congress and in 2020, the biostimulant industry began developing guidelines for safety, efficacy, and composition. In 2021, the Plant Biostimulant Act was drafted and in 2022 it was introduced to the U.S. House of Representatives. Now, Mr. Beaudreau’s lobby interest group is working to get the bill introduced to the Senate.</p> <p>Mr. Beaudreau explained that many national trade organizations support the bill including the American Seed Trade Association (ASTA), Biotechnology Innovation Organization (BIO), Crop Life America (CLA), Golf Course Superintendents Association of America (GCSSA), Humic Products Trade Association (HPTA), National Association of Landscape Professionals (NALP), and Fresh Produce Association of the Americas. In addition, Mr. Beaudreau explained that the BPIA has worked with the USDA to conduct educational outreach to farmers.</p> <p>Mr. Beaudreau summarized that the purpose of this bill is to officially define what a plant biostimulant is at a federal level in order to later determine a regulatory framework.</p> <p>In the House and prospective Senate Bills, the BPIA has been promoting the definition included in the USDA’s 2019 Report as the Alternative Definition 2: “A plant</p>
--	--	---

		<p>biostimulant is a substance(s), microorganism(s), or mixtures thereof, that, when applied to seeds, plants, the rhizosphere, soil or other growth media, act to support a plant's natural nutrition processes independently of the biostimulant's nutrient content. The plant biostimulant thereby improves nutrient availability, uptake or use efficiency, tolerance to abiotic stress, and consequent growth, development, quality or yield.”</p> <p>Mr. Beaudreau explained that the Environmental Protection Agency’s (EPA) published “Draft Guidance for Plant Regulator Products and Claims, Including Plant Biostimulants” in 2020 with the expectation to have a finalized guidance document by the end of 2022. This document will provide guidance regarding what kinds of claims producers can include on plant biostimulant labels while complying with pesticide regulations and any other regulations that may overlap.</p> <p>Mr. Beaudreau went on to screenshare information directly from the recently sponsored House Bill, H.R. 7752: Plant Biostimulant Act: introduced by Reps. Panetta (D-CA) and Baird (R-IN)</p> <p>The Bill stresses that currently there is no consistent and predictable path to market for plant biostimulant products in the United States. To address this, the Plant Biostimulant Act will:</p> <ul style="list-style-type: none"> • Establish a uniform national definition for “plant biostimulant”; • Amend the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) to exclude plant biostimulants from being regulated under the Act; • Establish a definition for nutritional chemical; • Amend the definition for a vitamin hormone product; • Require the EPA to review and revise existing Code of Federal regulations to include these new and revised definitions;
--	--	---

		<ul style="list-style-type: none"> • Require USDA to study how plant biostimulant products can contribute to soil health. <p>In addition to the previously introduced definition of what a Plant Biostimulant is, the Bill also includes definitions of what a Nutritional Chemical and Vitamin Hormone Product are.</p> <p>Nutritional Chemical (1) means a compound or mixture that interacts with plant nutrients in a manner which improves nutrient availability or aids the plant in acquiring or utilizing plant nutrients and (2) includes some plant biostimulants</p> <p>Vitamin Hormone Product means a product consisting of a mixture of plant hormones, plant nutrients, inoculants, or soil amendments.</p> <p>Mr. Beaudreau concluded his presentation by explaining how the NMBSA could get involved by helping to advocate for these changes in the 2023 Farm Bill, i.e. writing a letter of endorsement to Senator Ben Lujan’s office or by calling or emailing them directly. Mr. Beaudreau explained that Senator Lujan has expressed interest in sponsoring or co-sponsoring the Bill, but that he wants to know from New Mexicans how it would help them before moving forward.</p> <p>At the conclusion, Chair Dekker thanked Mr. Beaudreau for his presentation and opened the floor for comments and questions.</p> <p>Director Christodoulou asked for clarification regarding Mr. Beaudreau’s position on the Plant Biostimulant Act. Mr. Beaudreau responded that he works for a lobbying firm in Washington, D.C. (DCLRS) which is a small, boutique firm that represents various groups of clients before Congress and federal regulatory agencies including BPIA. He explained that Pebble Labs along with about 140 other related companies are members of the Biological Products Industry Alliance (BPIA) who are manufacturers of biopesticides as well as biostimulants and other biological products. DCLRS is advocating on behalf of those companies as are the other supporters listed earlier.</p>
--	--	--

		<p>Director Tiasse asked for clarification regarding the law Mr. Beaudreau, DCLRS, and the BPIA are advocating for especially considering the broad definitions included in the proposed Bill which could include anything from adding salt to your soil or developing a bacteria that could help your plant absorb more nutrients. Because it is so broad, Director Tiasse expressed concern regarding what the subsequent regulatory framework would entail. Mr. Beaudreau explained that most of the related plant biostimulant products on the market are currently registered at the state level as fertilizers because companies currently have no other path to market. In order to be registered as such, they may add some percentage of nitrogen to their product to comply with the various state agencies. The Plant Biostimulant Act, whose broad definition has been modeled after laws recently put into place in the European Union (EU) as of July 2022 after about 10 years of deliberation, is aimed at including all the products that could potentially be labeled as plant biostimulants based on what they will do in terms of improving soil health, etc. Mr. Beaudreau suspects that the EPA will need to clarify what the definition means and what companies or products can be included under that definition.</p> <p>Chair Dekker asked how many companies in New Mexico are part of BPIA. Ms. Henrie responded that to her knowledge, Pebble Labs is the only company.</p> <p>Chair Dekker followed up to say that the NMBSA would be discussing this request as part of their next agenda item. Before ending, he asked for clarification regarding the law this bill was being modeled from to which Mr. Beaudreau explained that the EU law amended their pesticide and fertilizer laws to explain that plant biostimulants are not pesticides but are instead different products under their fertilizer framework.</p> <p>Chair Dekker thanked Ms. Henrie and Mr. Beaudreau for their presentation and conveyed that this topic would be discussed by the Board in their next agenda item. Mr. Beaudreau thanked Chair Dekker and the Board for this opportunity to join the discussion.</p>
--	--	--

<p>9.</p>	<p>Executive Committee report</p> <ul style="list-style-type: none"> • Discuss Possible Federal Plant Biostimulant Act Endorsement 	<p>Executive Committee Chair Dale Dekker led the discussion on the biostimulant endorsement explaining that Marie Henrie and David Beaudreau attended the Executive Committee at the September 13th meeting, seeking an endorsement from the BSA for the Federal Plant Biostimulant Act. Henrie and Beaudreau presented to the Executive committee with the understanding that they would return to address the full board at the September 22nd, 2022 meeting for an official approval of endorsement. The endorsement request requires the BOD to write a letter to Senator Ben Ray Lujan of New Mexico to support legislation for the act.</p> <p>Chair Dekker opened the floor for discussion concerning the endorsement.</p> <p>The following board members provided input on the endorsement and subject matter for the presentation</p> <p>Director Christos Christodoulou expressed his concerns about the presentation regarding the ambiguity of fertilizers associated with bio-stimulants and the usage of vague language to justify the usage of mild chemicals for production. Christodoulou is in support of organic methods for production and is opposed to an endorsement at this time. Director Prisca Tiasse stated that the information in the presentation was vague and unclear and that in which she could not approve for an endorsement. Director Tanner Schaub was in alignment with Director Tiasse's response in which he also felt the material in the presentation lacked clarity. Schaub also declined an endorsement. Director Paul Laur expressed that he has an understanding of what Pebble Labs is trying to accomplish. Laur said that Pebble Labs is using Endophytic bacteria that are symbiotic in plants that can express interfering RNA's (Ribonucleic Acid) and block the replication of pests which is targeted specifically at the DNA (Deoxyribonucleic Acid) of the insect, fungus and viral infections that affects crops. Laur pointed to conversations he had with representatives at the University of New Mexico's Agricultural program in Farmington, New Mexico about performing tests on</p>
-----------	---	--

		<p>Potato Virus Y using endophytic bacteria in which they found was not a harsh chemical but rather a bioactive genetic modification. Lauer said he supports using endophytic Bacteria, stating it is good for the environment and that he has performed regulatory work with the Environmental Protection Agency and the United States Drug Administration to run field trials for the Tobacco Mosaic Virus in which he conducted using the bacteria. Going forward, Laur said endophytic Bacteria represents the future in agriculture for crop production and food security as a targeted technology as it contains RNA which is in everything we eat. If the interfering RNA does not match the DNA of the intended target (insect, fungus, viral infections) exactly, there are no side effects. Laur confirmed that the bacteria is safer than using pesticides and herbicides and that other companies besides Pebble Labs are working with endophytic bacteria. Director Prisca Tiasse followed Director Laur's comments stating that she does not doubt the endophytic technology he described but asked for clarity regarding the nature of the regulation proposed and reasoning behind the need for a law that would regulate a very broad range of products that are already on the market only to facilitate the marketing of products that have yet to be developed, tested and commercialized. Laur responded to Tiasse stating that he was not sure what the presenters were asking for as this was his first encounter with such an endorsement request however, based on the lack of clarity in the presentation more due diligence is needed. Laur also mentioned that what the presenters could be asking for is a show of support with a letter addressed to Senator Lujan from the BSA. Director Christodoulou thanked Director Laur for his clarification on the endophytic bacteria and made a suggestion for the presenters to return and make things clear as they failed to cite endophytic bacteria which Laur discussed. Christodoulou also asked of the benefits to New Mexico utilizing the technology for endophytic bacteria to which Director Laur explained potatoes are a big crop in New Mexico which Pebble Labs is working on along with tomato and potential chile production. The technology for endophytic bacteria is a platform and is applicable to</p>
--	--	---

		<p>New Mexico considering the toxic usage of chemicals in some industries like Hemp and Cannabis Cultivation, Laur said. He suggested including Secretary Jeff Witte and Brad Lewis of the New Mexico Department of Agriculture for their input on the Biostimulant Act endorsement. <u>Director Tom Kieft</u> thanked Director Laur for his explanation on the endophytic technology and said he agreed with Director Prisca Tiasse in that the Biostimulant Act is a very broad topic and why would the presenters come to the BOD as a single company. Kieft said he would like the presenters to find other companies in New Mexico that this would benefit. The impression from the presentation is that writing a letter of endorsement would benefit one company with one technology. Kieft could not agree to an endorsement. ED Tofighi replied to Director Kieft stating when Henrie and Beaudreau approached her they were looking for farms that used biostimulants instead of fertilizers to gain a perspective on how it is being used. In reference to Directors Laur’s explanation on endophytic bacteria, Tofighi said biostimulants are being used in New Mexico, however, since they are not classified in the same category as fertilizers, biostimulant information may not be as transparent compared to producers using products by Monsanto. Tofighi said her understanding in talking with Henrie and Beaudreau about the endorsement was that the letter from us would be a part of the grass roots effort rather than a unilateral effort originating at the BSA. A grass roots effort would expand throughout New Mexico by examining how biostimulants are affecting New Mexico agriculture and how getting them classified through federal guidelines would help with production, manufacturing, and the usage of Biostimulants. <u>Director Sarah Boisvert</u> said more information is needed and if possible the BOD can gather questions to submit to the presenters to avoid a follow-up presentation that fails to address the specific questions and concerns from the board.</p> <p>The Chair agreed with the responses that more clarification on the subject matter in the presentation was needed and that by collecting questions from the BOD to submit to the presenters, the board can have a</p>
--	--	--

	<ul style="list-style-type: none"> • Discuss Executive Order on Advancing Biotechnology and Biomanufacturing Innovation for a sustainable, Safe and Secure American Bioeconomy 	<p>better perspective on the biostimulant act to approve of an endorsement. The Chair asked for the BOD to email all questions regarding the presentation to ED Tofighi. Tofighi will then submit the questions to presenters Michelle Henrie and David Beaudreau in which they will address in the follow-up presentation. Director Laur said he would contact Secretary Witte to see if he would be interested in joining the discussion.</p> <p>Chair Dekker moved on to introduce the next topic of business as being a discussion related to the recently released Executive Order on Advancing Biotechnology and Biomanufacturing Innovation for a sustainable, Safe and Secure American Bioeconomy.</p> <p>Chair Dekker began the discussion by asking for insight regarding how the CHIPS Act, Inflation Reduction Act, and this Executive Order (EO) are being examined by the state Economic Development Department, local ED organizations, and the Universities to develop respective action plans to secure some of that funding. He went on to suggest that the NMBSA Board may want to provide insight regarding how this particular EO may be beneficial to the biosciences in our state and how the action of the state legislation could take advantage of these federal initiatives and opportunities. He went on to open the floor for related conversation by the BOD.</p> <p>Director Tiase called attention to how this EO fits well with the strategic planning session the BOD had earlier in the year led by Director Boisvert that talked about building into the already defined system and their opportunities and initiatives. She pointed out how this EO echoes some of those priorities and confirms work being done by the NMBSA.</p> <p>Chair Dekker reminded the Board that the NMBSA will be presenting our update and funding request to the Science, Technology, and Telecommunications Committee (STTC) in a couple months and asked if this may be a work item that we may want to move forward to provide an analysis that we may author as the NM Bioscience Authority to try to connect the work we are doing, New Mexico's capabilities, and these federal</p>
--	---	---

	<p>priorities and financing that could position the state to take advantage of these opportunities to help move our agenda forward. He pointed out that there are timeframes and responsibilities assigned at the federal level but it would be nice to be part of that ongoing discussion so that when funding does get attached to the EO, we can better take advantage of it at the state level.</p> <p>Director Laur expressed his agreement in Chair Dekker’s call to action.</p> <p>Chair Dekker continued by asking the Board members to send their top-level comments regarding the EO, CHIPS Act, and Inflation Reduction Act to ED Tofighi who could compile the comments so that the Board can develop a plan to best take advantage of these federal opportunities and bioscience related priorities particularly regarding anything we would need to do with the state legislature in this coming session or with research institutions to ensure we take advantage of these opportunities.</p> <p>ED Tofighi made a comment regarding the NSF Engines program mentioned in the EO. The intent of the National Science Foundation (NSF) Regional Innovation Engines funding solicitation is to catalyze and accelerate innovation ecosystems across the United States to advance critical technologies, address societal and economic challenges, promote economic growth and job creation, and cultivate regional talent. The New Mexico research universities, national labs, and University of Texas at El Paso (UTEP) have created the Northern Rio Grande Corridor Collaborative (NRGCC) to create a unified Type 2 proposal to this solicitation. If awarded, the NRGCC will receive \$165M over the next ten years to support the commercialization of academic research to support the societal needs of the region. The proposed topic areas of the NRGCC’s proposal are water and energy resilience to climate change and their related health effects. The NMBSA has been asked to participate on the proposal team to support the health and academic/government/industry collaboration components of this statewide effort. ED Tofighi noted that in a recent meeting with the Engines team, she had</p>
--	--

		<p>explained how the NMBSA could help by sorting through these previously mentioned articles of legislation to identify potential funding opportunities business, organizations, and institutions in the region could take advantage of to contribute to the Engine’s intent to generate economic growth through academic innovation. She expressed that this effort could fall under Chair Dekker’s ambition to provide a pathway for the state and its organizations to follow to take advantage of the opportunities available whether they are on the state or federal level. ED Tofighi concluded by saying that because the NSF Engines program was included in this bioscience EO, it meant that that program can now champion proposals that include a bioscience/biotechnology component which gives the one being submitted by New Mexico extra motivation to include a bioscience focus.</p> <p>Chair Dekker finished by asking the Board to coordinate their efforts around these pieces of legislation and the related Executive Order to help the state of New Mexico best champion and take advantage of these opportunities whether it be at the national lab, university, or local level. He noted the importance of calling attention to these priorities when communicating with legislators and other policy makers who influence state spending.</p> <p>Director Scott McLaughlin left the meeting at 12:45 PM.</p> <p>Director Tom Kieft left the meeting at 12:50 PM.</p> <p>Chair Dekker asked the Board for their opinion regarding how to move this agenda item forward.</p> <p>Director Laur explained that he had had a conversation with NSF Engines PI, David Hanson regarding the potential of the program to help stimulate commercial growth through up to \$100M of internal grant funding. Director Laur shared that he had identified some other startup companies in the state including Open Eye Scientific that could take advantage of that grant funding to continue to grow within the state of New Mexico.</p>
--	--	---

		<p>Chair Dekker concluded discussion by asking the Board members to take some personal time to think about what the NMBSA should do to develop an action plan to help the state and its organizations take full advantage of the CHIPS Act, Inflation Reduction Act, and this recently released Executive Order. He asked members to send ED Tofighi their comments and suggestions in time to be discussed by the Mission Accomplishment Committee at their next meeting on October 12th. ED Tofighi asked Board members to send their feedback by Friday, October 7th or by October 10th at the latest. At Director Tiasse’s behest, ED Tofighi said she would send an email with the request and deadlines to the Board members after the meeting.</p> <p>Director Christos Christodoulou left the meeting at 12:55 PM</p> <p>Chair Dekker closed the Executive Committee’s report and asked for a motion to adjourn the meeting.</p>
10.	Adjourn	The Chair adjourned the meeting at 1:07 PM.

Respectfully submitted by Sterling Nichols and Stephanie Tofighi