

New Mexico Bioscience Authority (BSA) Board of Directors Regular Meeting January 19, 2023, 11:30 AM – 1:00 PM

317 Commercial St. NE, Suite 311, Albuquerque, NM

Present: Tanner Schaub (Acting Chair), Sarah Boisvert, Christos Christodoulou, Jennifer Gifford,

Alex Greenberg, Tom Kieft, Paul Laur, Scott McLaughlin, Prisca Tiasse

Absent: Sheryl Arvizu, Greg Byrnes, Dale Dekker

Staff Present: Stephanie Tofighi, Sterling Nichols, Ryan Cangiolosi

#	Agenda Items	Board Actions
1.	Call to order and Confirmation of Quorum	Director Tanner Schaub, the appointed Chair for the January 19 th meeting called the meeting to order at 11:34 AM. A quorum was confirmed.
		Director Schaub chaired the meeting on behalf of elected BSA Chair Dale Dekker who was not present at the meeting.
2.	Approval of Minutes: • November 17 th BOD Meeting	Acting Chair Schaub called for a motion to approve the October 20th, 2022, BOD meeting minutes.
		A motion was made by Prisca Tiasse with a second from Scott McLaughlin.
		A roll call vote of all board members was called with seven in the affirmative, none in opposition, none in abstention and five absent. The vote was as follows:
		Arvizu-Absent, Boisvert-Absent, Byrnes-Absent, Christodoulou-Absent, Dekker-Absent, Gifford-Affirm, Greenberg-Affirm, Kieft-Affirm, Laur-Affirm, McLaughlin-Affirm, Schaub-Affirm, Tiasse-Affirm
3.	Announcements and Chair's Report Review Duties of the	Acting Chair Schaub reviewed the 2020 Bylaws regarding the Vice President taking on the role of acting president Article IV Officers via Screen Share for
	NMBSA of the NMBSA	edification of the board.



Vice President acting as President

ARTICLE IV: OFFICERS

Section 5: Additional Officers. ... At the request of the President, or in their absence or disability, the Vice-President, in the order designated by the Board and the President, shall perform all the duties of the President and, when so acting, shall have all the powers and be subject to all the restrictions upon the President. The Vice President designated to succeed the President must be a member of the board appointed from UNM in order to assure proper administration of the NMBSA. When authorized by the Board, the Vice-President may also sign and execute, in the name of the Corporation, deeds, mortgages, bonds, contracts, or other instruments authorized by the Board, except in cases where the signing and execution thereof shall be expressly delegated by the Board or by these Bylaws to some other Officer or agent of the Corporation...

Section 3: President. The President shall be elected by majority vote of the Board of Directors and serves a four (4) year term or the remainder of their term whichever is less. The president will be a board member employed by UNM in order to execute and oversee the administration of the NMBSA. President oversees and assures administration of BSA at UNM. The president shall have signature authority to execute and sign on behalf the BSA, with board concurrence when required, on all contracts, agreements, and other official documents.

Following review of Article IV Officers, Acting Chair Schaub identified Director Christos Christodoulou as the BSA's Elected Vice President who will currently serve as Acting President in place of retired President Dr. Richard Larson. Schaub confirmed that Director Christodoulou will serve as President until a new BSA President is appointed by the current University of New Mexico (UNM) President Garnett Stokes. Executive Director Stephanie Tofighi provided further clarification on Christodoulou's status by adding that UNM President Garnett Stokes has asked Christodoulou to take on the



		role as president while Stokes reviews the application process which will be an 'Internal' process that will require more time in making the final decision. Depending on Stokes' timeline for the hire, in which more information will be available by the next board meeting Tofighi said, the BOD may need to hold an election to officially recognize Christodoulou as the President but because of the Bylaws, Christodoulou is able to serve as 'Acting president' now. In conclusion of the Announcements and Chair's report, ED Tofighi informed the BOD that Acting President Christodoulou would be joining the meeting at 12:15.
4.	President's Report	ED Tofighi presented the President's report on behalf of BSA Acting President Christodoulou who was not present.
		Tofighi reported that administrative oversight of the BSA is being maintained by the UNM Health Sciences Center Office of Research following former President Larson's retirement. Michelle Parra, Supervisor of Fiscal Operations for the UNM Office of Research (OOR) will continue to oversee finances as the BSA continues to interact with the OOR in its daily functions. While serving in the role of Acting President, Christodoulou will possess signature and decision-making authority for any and all BSA expense approvals.
		ED Tofighi concluded the President's Report. Acting Chair Schaub left the meeting at 11:41 AM
5.	Executive Director's Report	ED Tofighi presented via Screen Share the following items for the Executive Director Report; NMBSA Crisis Letter of Collaboration and the 2023 Draft Coinvestment Bill.
		NMBSA Crisis Letter of Collaboration
		ED Tofighi described the letter as a collaboration for a National Science Foundation (NSF) Engines proposal being led by the University of Arizona. The proposal will advocate for the implementation of a Climate In the



Colorado RIver BaSIn States Resilience (CRISIS) program which is looking at working with land grant universities to revise their education platform to be more responsive to the users by addressing the urgent need for scalable innovation in food and energy production with sustainable water management. To fighi said the BSA would participate in the program if the proposal was awarded. The BSA would receive travel funding to present bioscience business accelerator training material in collaboration with Arrowhead Center from New Mexico State University (NMSU) as part of the CRISIS training program. Tofighi also provided an explanation of the language that was used in the letter she drafted. The language used is standard for the National Science Foundation (NSF) and does not include anything the BSA cannot contribute to the NSF. The language coincides with the goals of the BSA with no monetary incentives.

2023 Draft Co-Investment Bill

ED Tofighi introduced Strategy and Policy Director (SPD) Ryan Cangiolosi to review the draft copy of the Co-Investment bill. Cangiolosi explained that the current draft is proposed legislation that has been revamped since its last submission. Senator George Munoz was the past sponsor of the bill Cangiolosi said, however, as Munoz is the Chair of Finance and there have been changes in the House appropriations committee, Munoz is not sure if he will have the time that is needed to be the sponsor. At present, he is contemplating on who should be the new sponsor of the bill. Cangiolosi said he would be informed of the new bill sponsor by end of the day on Thursday January 19, 2023. Once informed of the new sponsor, Cangiolosi said he will work with the legislator to get the bill dropped as soon as possible. Cangiolosi informed that there were some changes to the revamped legislation in that more information was included about what are the expectations in regard to who the BSA will partner with, and certain criteria that must be followed which will allow the Legislature and Governor to avoid placing onus on the BOD in choosing an investment partner but in choosing a partner with



		expertise in due diligence to identify investment opportunities. Cangiolosi added that he has been working with the State Investment Council (SIC) on the legislation, to include a statement requesting an SIC staffer or a representative from their board to serve on the BSA Task Force Investment Committee to assist with the investment process. Cangiolosi said the changes in the legislation have been met with approval and hopes to get the bill dropped with the end result of obtaining a committee hearing as soon as possible while continuing to collaborate with Munoz staffers. ED Tofighi concluded her Executive Director Report. Director Sarah Boisvert joined the meeting at 11: 47 AM.
6.	Presentation on OpenEye Scientific	Director Scott Mc Laughlin left the meeting at 11:55 AM President Christos Christodoulou joined the meeting at 12:15 PM. ED Tofighi welcomed Dr. Amy Migliori to the meeting and Director Laur introduced her as the Head of Partnerships and Business Development for OpenEye, Cadence Molecular Sciences. She earned a doctorate degree in biochemistry from UCSD and spent time in industry at and LANL prior to joining OpenEye in April 2022. Director Laur went on to describe Dr. Migliori as being passionate about the New Mexico business community and is a strong advocate for research that has an impact on human health. Before moving to OpenEye, Dr. Migliori had been a program manager at the Los Alamos National Laboratory involved in tech transfer and as a business development executive she has done extensive work with startups advising them and helping them secure funding which he hopes are services that can also be provided by the NM Bioscience Authority. Dr. Migliori thanked the Board for the invitation to present and opened her slide deck to first introduce the name of the company as being OpenEye Scientific Cadence Modular Sciences since the recent \$500M



acquisition of the New Mexico based company by the California based, publicly traded, Cadence Design Systems, Inc. She divided her presentation into four main points: (1) history of OpenEye, (2) their field of research and entrepreneurship, (3) challenges being faced and how they are being addressed, and (4) more about their 2022 acquisition.

Dr. Migliori began by sharing with the Board that OpenEye has been a leader in computational molecular design for the last 25 years delivering rapid, robust, and scalable software products, toolkits, and partnerships and engagements services across the small molecule discovery process particularly related to the drug delivery process. They also pioneered the creation of Orion which is a trademarked a software cloud platform for all molecular design and simulation needs that removes the requirement to run and maintain expensive infrastructure hardware. Instead, with Orion, the OpenEye computational tools can be accessed on the cloud. It is the first of its kind to be built in this manner which contributed significantly to the value of OpenEye at their time of acquisition. This platform is able to leverage the full compute services of Amazon Web Services (AWS) and the immense number of resources available there to effectively address extreme, difficult questions without requiring expensive hardware and IT support that is typically more difficult for early-stage companies to have available.

OpenEye was founded in Santa Fe in 1997 and they are still in Santa Fe now and will continue to be there even after the acquisition. This was one of the negotiations made at the time of the purchase. Dr. Migliori informed the Board that up until last year, OpenEye had never taken any outside funding and had instead bootstrapped their revenue to create new offerings and grew at a moderate pace. Their software tools were intended to help researchers in the biotech space to move forward with their discovery efforts more rapidly. They are headquartered in Santa Fe but have another large office in Boston and have other offices in Cologne, Germany and Tokyo, Japan that serve the European,



Middle Eastern, and Asian regions. 19 of the top 20 pharmaceutical companies in the world are their customers along with a large number of mid-cap companies as well as startups in pharma and biotech. They have 500 academic labs using their tool kits with many of them taking advantage of the free products available. They also work with a number of agrochemical companies, flavor and fragrance manufacturers, venture capital companies, and governments and NGOs which demonstrates their wide array of customer base which has helped them have a stable growth over the years.

Dr. Migliori shared that OpenEye has an annual meeting customer meeting at La Fonda in Santa Fe for their customers, users, and programmers to come in and have a collaborative meeting which is always well attended and appreciated by attendees. Recently they had a full company meeting for a week in Albuquerque. Dr. Migliori stressed the adoration that OpenEye has for New Mexico and its commitment to stay and continue to grow here.

Dr. Migliori went on confirm that the majority of their clients are in the pharmaceutical industry and she went on to explain the uphill battle that many experience when trying to develop a new small molecular therapeutic or drug and how OpenEye has been able to alleviate some of these problems. Dr. Migliori screenshared a slide titled Drug Discovery is Hugely Risky and Costly. On that slide, she included a graphic that divided the typically ~10 years of development into a series of milestones that must happen linearly before a drug makes it to market.

Target Discovery: 2-3 years

Discovery & Screening: 0.5-1 years

Lead Optimization: 1-3 years

ADMET: 1-2 years

Development: 5-6 years **Registration:** 1-2 years



The slide pointed out that this decade of work also comes with a hefty price tag of anywhere from \$1-5 Billion depending on the amount of failed hypotheses and wasted resources.

OpenEye helps primarily during the Discovery & Screening and Lead Optimization periods. Dr. Migliori explained that the quicker you know whether you actually have a potential drug being developed, the sooner you're able to confidently move on to the next stage of development or cut your losses and move on to a new endeavor. She described that companies that make it through phase I or phase II of a clinical trial before they determine that a drug is not actually viable have just lost an incredibly large amount of money in the process. These losses could be salvaged by bringing what has been learned back to the drawing board and starting over, but this is not always possible or prudent given the cost. Regardless of the screenings and expertise of the companies, Dr. Migliori shared that only 10% of drug research actually results in a successful product even after 10-17 years of development. She explained what are some of the reasons these drugs fail. 40-50% fail during the Development stage because they do not show efficacy in clinical trials. She professed that all the work done by the team on the computer and in in vitro assays with animals many times do not translate into efficacy in humans. 30% of drugs fail because they are too toxic to give to humans. 10-15% fail because they have poor drug like qualities. They may not dissolve well or if they do not form pills well, they must be administered as a shot which may not fit with the market for that particular kind of therapeutic. Some of these causes for failure are predictable and some of them are not. Dr. Migliori went on to explain that if a drug company is successful and has a drug ready for market in 12 years, then it becomes a race to make a profit. They want to recoup their investment and turn a profit so that they can go back and develop more drugs and therapeutics that will also have a 90% chance of failure. She concluded her summary of the perils of drug and therapeutic development by explaining that



OpenEye Scientific is devoted to helping this process improve.

OpenEye operates at the nexus of science and technology. They have created a cloud system that allows their pharma and biotech clients access powerful physics based scientific methods that scale and streamline workflows to shorten drug discovery or small molecule discovery pipelines by many months thus saving companies billions of dollars. They can also share a library of millions, soon to be trillions of molecules with their clients that they can then computationally screen to better find that proverbial "needle in the haystack" molecule needed to meet the client's small molecule needs. Once OpenEye has identified the potential lead molecule, they also have tools to help researchers identify more similar molecules. This system allows researchers to more quickly and effectively narrow down billions of possible molecules and antibodies to thousands of leads which can result in a handful of preclinical candidates. From there, OpenEye is able to help clients find more leads like those preclinical candidates so they have a higher rate of success with one of the molecules. They have a series of different simulations that are available for their clients to help them identify the appropriate molecules and to better understand the potential effect of those molecules. OpenEye is continuing to research better ways to improve their products and tool kits to meet all the needs of their clients.

Dr. Migliori transitioned her presentation to focus on their newly developed Orion cloud platform. Orion is a molecular design platform that enables users to create and edit the application of the latest OpenEye and 3rd party scientific methods, calculate complex molecular modeling in minutes or hours instead of days, analyze and aggregate datasets to streamline development process decisions and accelerate results for their end customers, and collaborate with teams and key stakeholders, seamlessly sharing data, managing projects, and getting a clearer view of their modeling effots. Key platform technology features include



scalable high-speed search and calculation through Amazon Web Services, analysis tools, method development environment, annotating and sharing, unlimited storage and archiving, and world-class data security. Being on the cloud enables any users from anywhere in the world to easily access and use the platform without the need to install or download anything or rely on IT professionals.

Dr. Migliori then screenshared a slide that demonstrated the effect of the Orion tool on the revenue of OpenEye. The slide demonstrated that the development of the original command line tool kits allowed for study revenue that was sustainable but not substantial though it was greatly valued and appreciated by its clients. When the company decided to develop Orion and move the tool kits and application to the cloud, it was a big gamble that required a lot of work to develop the infrastructure and to market the platform. For the first time, OpenEye leadership decided to seek out outside investment. Initially, they considered forming an IPO (initial public offering) which would have taken a great amount of time and money to build the internal infrastructure for the effort. The next consideration was equity funding, but they were concerned that the subsequent IPO would then be dictated by the venture firm and not directly with the company even though the IPO would likely not come for another 4-5 years. Finally, they ruminated on the path of acquisition which they found with Cadence who then offered them the resources to continue to grow in the way most meaningful to them without the need to form an IPO of their own since Cadence is already a public company. Cadence presented OpenEye with a unique opportunity to lead since prior to the acquisition they did not have any other company working in the biotech space. They also were very committed to keeping the OpenEye staff which included everyone from researchers to accountants and HR and they agreed to allow the company to maintain its headquarters in Santa Fe. Cadence has made the commitment to work with OpenEye to help it grow and to subsequently grow



itself through the internal collaborations that now applicable.

Dr. Migliori screenshared a slide that depicted Cadence's statistics in terms of their growth over the years revenue, employees, and number of countries with a Cadence presence. At this time, their annual revenue was \$2.998B, they have 9,300 employees, and are established in 23 countries. Over the last 10 years, they have seen annual increases in revenue. They are a pivotal leader in electronic systems design, building upon more than 30 years of computational software expertise headquartered in San Jose, CA. The company applies its underlying Intelligent System Design strategy to deliver software, hardware, and IP that turn design concepts into reality. Cadence customers are the world's most innovative companies, delivering extraordinary electronic products from chips to boards to complete systems for the most dynamic market applications including hyperscale computing, 5G communications, automotive, mobile, aerospace, consumer, industrial, and healthcare. They acquired OpenEye Scientific for \$500M in cash last year during the 3rd quarter. Dr. Migliori reiterated that that value was directly the result of the big gamble that OpenEye made when they launched Orion on the cloud. Creating a platform with a SAS (software as a service) offering was key to their successful payoff.

Dr. Migliori provided a comparison between OpenEye Scientific and their parent company in terms of their computational designs and products. She explained that both companies have been able to design platforms that allow their customers to design simulations of very complex systems and test them out in the computer. The big difference is that Cadence's software and their system are designing semiconductors and microchips. They are able to simulate the exact environment the products will be placed and in turn order as many as needed in a short turn around. The same is not true when working with drug discovery. There is no one to one correlation of what you find in the computer and what becomes a drug. It is very complicated but there



are similarities between both operations and there is room to collaborate between both companies.

Dr. Migliori went on to explain her role in the company as the Head of Partnerships and how her previous experience working in the LANL Tech Transfer office really prepared her to be invested in helping New Mexico based companies to succeed which includes small businesses throughout the state since one company growing will help all the other companies grow too. She concluded her presentation by reminding the Board that OpenEye Scientific is now a member of publicly traded company and that it is not possible to share future plans during a presentation. She then opened the floor for questions.

Director Laur thanked Dr. Migliori for her presentation, particularly for the extensive description of the drug delivery system and the hardships and obstacles experienced along the way. He then went on to ask for clarification regarding what it means for a drug to have "poor druglike qualities" which had been discussed earlier in the presentation. Dr. Migliori responded that this could be a number of problems includes not pilling the medicine correctly, not being able to dissolve in water, having formula discrepancies, an availability issue, or having a number of polymorphs that cannot be controlled, not being able to be stored for long periods of time, or a quality control related issue. Director Laur then went on to ask whether Dr. Migliori believes that another paradigm may be eminent that does not require 12 years, 90% failure, and \$1-5B investments to development a new drug. Dr. Migliori responded that we are at an exciting time right now that has huge potential. She noted her optimism that there could be dramatic savings in the 40-50% of drugs being developed that turn out to not be usable by humans with the development of new testing models that clearly demonstrate not only the response by the cell being targeted by the drug but also the effects to the other cells and systems could be very beneficial. This type of model would demonstrate how the drug is moving throughout the cell and interacting with all the



relevant biological components to more accurately demonstrate the complications that are not currently being identified through the currently used models. She noted that this type of more effective modeling will help developers identify complications quicker that can allow them to more efficiently pivot to create better drugs at a reduced rate, faster. She went on to express her appreciation of the FDA's decision to end the need for animal testing since from her experience animals do not provide an appropriate model to effectively test human usability of a new drug.

Director Tiasse thanked Dr. Migliori for her comprehensive presentation regarding OpenEye's bootstrapping operations that is so different from the expectations of today where a start up has two years to develop the product and get the outside investment in order to continue their growth. She then asked Dr. Migliori if OpenEye does any work with NTx since she can see some parallel between the work both companies are pursuing. Dr. Migliori agreed and said that she does have a connection with Dr. Koglin from their time together at LANL. She then went on to say that she's currently working on some programs that would provide OpenEye software at a reduced rate for minimal costs to small companies in New Mexico.

ED Tofighi thanked Dr. Migliori for her presentation and then asked of the 500 academic labs using OpenEye software across the world, how many are using it in New Mexico. Dr. Migliori said that she does not know that number off hand but there are people at UNM and NMSU that use their software and that now they have a dedicated sales person that is handling university licenses and will be working to determine who else in the state needs to be approached. Director Christodoulou chimed in to say that UNM has used Cadence software for years and attested that it is more beneficial to the work being done at UNM than Microsoft at least in terms of the research Director Christodoulou pursues.



		Director Tiasse then asked for clarification regarding the use of a limited amount of the software for free by academic laboratories. Dr. Migliori clarified that the free software is not limited but is instead the full versions of the applications that have limits on how they can be used. She explained that this is not an option yet for Orion because they do not yet have a way to control computing costs when using AWS which is a system that can rack up costs that may exceed grant funding for an academic project. She wrapped up this discussion item by reiterating that that command code software that has been available for the last 25 years is available to academics for free. In turn there are academic licenses that can be used if a revenue making product is created using the free software then the user must repay OpenEye for the cost of the software. Director Tiasse asked if this could be a possible arrangement for startups as well. Dr. Migliori responded that that model is definitely the goal of OpenEye and it is exactly what she is working on setting up through her office. ED Tofighi thanked Dr. Migliori again for her time and presentation. Director Laur echoed the sentiment and added his gratitude that the company was staying in the state. He then went on to encourage Dr. Migliori to share her story with legislators during the open session this year. She replied that she was also happy to be staying in the state and that after they were done renovating the offices in Santa Fe there was even prospects of other Cadence employees coming to work out of Santa Fe. Dr. Migliori thanked the Board for this opportunity to present and left the meeting.
7.	Finance Committee Report	Finance Chair Alex Greenberg shared the November 2022 and December 2022 Financial Statements with the BOD via Screen Share. Greenberg reported that the November and December statements were combined for the January board meeting as the BOD did not meet in December of 2022. November Financial Statement



 Monthly Financial Statement Review (November & December)

Chair Greenberg reported that for the November Financial Statement, there were no significant changes to the budget except for the standard monthly expenses such as staff salaries, legal fees, facility rental, and equipment fees.

December Financial Statement

Chair Greenberg reported that for the December Financial Statement, the only significant change was the \$75,000 co-investment with NM Angels in BennuBio, LLC. Otherwise, there were no other significant changes to the budget except for the standard monthly expenses such as staff salaries, legal fees, facility rental, and equipment fees. .

Chair Greenberg called a motion to approve the November and December 2022 Financial Statements.

A motion was made by Paul Laur with a second from Jennifer Gifford.

A roll call vote of all board members was called with seven in the affirmative, none in opposition, none in abstention and five absent. The vote was as follows:

Arvizu-Absent, Boisvert-Affirm, Byrnes-Absent, Christodoulou-Affirm, Dekker-Absent, Gifford-Affirm, Greenberg-Affirm, Kieft-Affirm, Laur-Affirm, McLaughlin-Absent, Schaub-Absent, Tiasse-Affirm

 Co-Investment Fund Advocating Costs ED Tofighi explained that the Advocating costs, which is a substantial amount, had been discussed previously with the board for the possibility of hiring someone who would be able to help with the advocacy of the Co-Investment Fund. Since discussing the cost, members of the BOD have expressed their approval and have demonstrated their personal investment by educating members of the Science Technology and Telecommunications Committee at a November Roundtable meeting in Santa Fe about the Co-Investment and by reaching out to the state



Representatives and Senators for edification. Tofighi said Michelle Henrie from Pebble Labs is available to assist with advocacy and who also sees the value in the Co-Investment, as a way to support New Mexico's Bioscience industry. Henrie has offered a Statement of Work (SOW) in which she would be willing to provide effort and time towards edification. Tofighi said there is monies available from the City of Albuquerque's EDACT grant that is not tied to the state funding which Tofighi confirmed was originally allocated to the pilot program for the Co-Investment. As a result, Tofighi and Cangiolosi have been in communication with the UNM Procurement Office to ensure that it is applicable to use the described funds for payment of Henrie's services, should the board agree the funds can be put to this use. Tofighi reiterated that the funds would have been already allocated for the Co-Investment by looking at the budget's 'Other Operating Costs' which is the monies leftover that was originally part of the Co-Investment that now could be used for advocacy should the BOD agree. If the board agrees, UNM will require further approval which has not yet been finalized. Following Tofighi's explanation on the Co-Investment advocacy,

Director Tiasse asked whether Pebble Labs could participate in the Co-Investment program if it is funded and whether that could be a conflict of interest. ED Tofighi responded that the organization of the Co-Investment program transfers responsibility to initially select viable companies to invest in to the professional investment firm we partner with and that only then would the NMBSA's Co-Investment Task Force review the company and decide whether to recommend coinvestment to the Board who would then make the final decision whether to invest. Director Tiasse agreed that these processes would alleviate any potential conflicts of interest with Pebble Labs if the Board decided to pay for Michelle Henrie's time advocating on behalf of the BSA. Director Paul Laur added that Michelle Henrie is respected within the Legislature and is very good at identifying the 'decision makers' who will vote on the legislation and educating them on why it is important to



support certain legislation including the Co-Investment Fund bill. Laur sees Henrie as an invaluable asset with her knowledge of the bioscience industry in working at Pebble Labs and pledged his full support. He also stated that this is an important decision for the BOD by utilizing Henrie in that it demonstrates a professional stance and the capacity to manage a significant amount of money.

ED Tofighi called for a motion to approve the Co-Investment Fund Advocacy Costs after Director Laur' comments.

A motion was made by Christos Christodoulou with a second from Tom Kieft.

A roll call vote of all board members was called with seven in the affirmative, none in opposition, none in abstention and five absent. The vote was as follows:

Arvizu-Absent, Boisvert-Affirm, Byrnes-Absent, Christodoulou-Affirm, Dekker-Absent, Gifford-Affirm, Greenberg-Affirm, Kieft-Affirm, Laur-Affirm, McLaughlin-Absent, Schaub-Absent, Tiasse-Affirm

As the BOD approved the Co-Investment Advocacy costs, ED Tofighi informed the Board that if more funding would be needed, it would first be presented to the BSA Finance Committee before being presented to the full board.

Before conclusion of the Finance committee report,
Director Laur asked about the timeline of the proposed
legislation for the Co-Investment as the current
Legislative sessions have started. To fight said the
dropping of the legislation is not contingent on the
BOD's approval of the Co-Investment Advocacy costs.
However, To fight informed that Michelle Parra;
Supervisor of Fiscal Operations at the UNM Health
Sciences Center is working with the UNM Procurement
office to arrive at a decision by Friday; January 20, 2023.



		Chair Greenberg concluded the Finance Committee report following the BOD's advocacy cost discussion.
8.	Mission Accomplishment Committee Report	ED Tofighi presented the Mission Accomplishment Committee (MAC) Report on behalf of MAC Chair Tom Kieft.
		Tofighi stated that the current MAC report for the January 2023 board meeting would consist of the following topics:
		Review of 2022 GoalsOverview of 2023 Priorities
		Through Screen Share ED Tofighi presented a slide presentation addressing the 2022 Goals and a draft of the 2023 priorities.
		Slides:
		NMBSA Current Initiatives
		Community Readiness Program – partners with municipalities and counties throughout the state to identify and certify zones as being ready to accept bioscience businesses
		Pilot Co-Investment Program – partners with professional investment firms to invest in start-up businesses in New Mexico or business relocating to New Mexico
		3. SBIR/STTR Bioscience Business Accelerator Program – provides training and mentoring to small businesses or inventors looking to submit to the federally funded SBIR/STTR programs
		4. Centralization of Statewide Resources – website directs bioscience inventors, entrepreneurs, and investors to resources throughout the state that can help them effectively commercialize, expand, or invest effectively



**Tofighi briefly reviewed the BSA's Current Initiatives as the four items will be continually discussed to assure the organization's efficacy. Tofighi expects movement in the Pilot Co-Investment program and the SBIR/STTR Bioscience Business Accelerator Program following the state's Legislative Session.

2022 Successes

Promoted *Community Readiness* program across the state

- Las Cruces
- Santa Fe
- Los Lunas
- Socorro
- Los Alamos
- Santa Ana Pueblo
- Certified 7 new sites by June 2022
- Promoted certified zones at BIO Conference using map and handouts
- Successful Completion of Co-Investment Pilot Program
- Finalized partnerships with approved investment firms resulting in signed MOAs
- Developed approved evaluation criteria to evaluate recommended bioscience companies
- Approved co-investment with NM Angels in BennuBio, created LLC, and worked with UNM legal and purchasing to make the investment

Increased social media followers, finalized listserv, distributed first newsletter, increased NMBSA visibility by participating in events throughout the state.

For the **2022 Successes, Tofighi said the BSA was exceptional in promoting the <u>Community Readiness</u>

<u>Program</u>. Tofighi said that sites were certified in Las

Cruces and Santa Fe. Key contacts were made in Los

Lunas, Socorro, Los Alamos and Santa Ana Pueblo who is

working on identifying sites and getting them 'SelfCertified'. Tofighi said seven new sites were certified by



June of 2022 with the BSA able to promote those certified sites at the 2022 BIO Conference which contained maps and handouts. The maps were also referenced on the BSA website. To fight said she will work with the Albuquerque Regional Economic Association (AREA) and Colliers International to promote the Community Readiness Program in a more effective and efficient manner.

For the <u>Co-Investment program</u>, the pilot program was completed with all partnerships finalized. The MOA's were signed and an evaluation process was developed for the companies when they were recommended. A Limited Liability Corporation (LLC) was formed with the New Mexico Angels to enter into a partnership to coinvest with the Bennubio Corporation. The success of the Co-Investment Pilot program will be used to advocate for the full \$50 Million Co-Investment fund.

2022 Bioscience Business Accelerator Program Challenges:

2022 Goals

- NMBSA staff will learn SBIR/STTR training material currently available through UNM and NMSU
- NMBSA staff will adapt the training material to best fit audiences
- NMBSA staff will conduct a four week commercialization workshop & a 2 hour SBIR training workshop twice a year (spring & fall)

2022 Achievements

- NMBSA staff did participate in SBIR/STTR training currently available through UNM and NMSU
- NMBSA hosted panel discussion on how to improve academic and industry collaborations through online platform at UNM event
- NMBSA spoke about recourses available at NIH NCATS SBIR/STTR webinar
- Began working with Tummi Yummi to develop SBIR/STTR proposal



2022 Challenges

- Did not have personnel or resources available to conduct the workshops
- **Tofighi said the challenges the BSA had this year were also impacted in the Goals for last year. She sees the challenges being in the Bioscience Business Accelerator Program. For the **2022 Goals** in which NMBSA staff will adapt the training material to best fit audiences outside of their perspective, Tofighi identified such audiences as small businesses that may not be directly affiliated with UNM, NMSU or businesses connected to the labs. In the **2022 Achievements**, Tofighi and Program Specialist Sterling Nichols participated in SBIR/STTR training currently available through UNM through the UNM Health Sciences Center and through the New Mexico FAST program at NMSU. Tofighi and Nichols expanded their knowledge of the SBIR/STTR programs with the training. Tofighi said that her participation in the **NIH NCATS SBIR/STTR webinar** was a great way to advocate what the BSA is able to provide for the state as well as to learn about the priorities of that particular NIH institute. The BSA hosted a panel discussion on how to improve academic and industry collaborations through online platforms at a recent UNM event in which Director Prisca Tiasse participated in the event along with John Chavez from the New Mexico Start Up Factory, Ben Booker from Small Businesses and UNM Collaborators. In meeting the **2022 Challenges**, Tofighi said one of the priorities in obtaining personnel or resources available to conduct the workshops, is to increase the amount of funding for programming costs to hire someone that will be fully engaged with the program.

Introduction of 2023 Priorities

State Funding Priorities

• \$50M Co -Investment Fund Bill



• \$650k Jr. Bill Inclusions to Support Programming Costs particularly SBIR/STTR Program

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- Encourage increase of annual operating expenses through Governor's budget to \$1M
- **Tofighi identified the operating expenses through the Governor's budget of \$1M as the \$300K the BSA currently receives and \$650K for increased programming costs.

The operating expenses have been discussed with representatives across the state with SPD Cangiolosi included in those conversations.

Continue Building Statewide Collaborations:

NMSU Arrowhead Center NSF Engines CRISIS Collaboration

- Contribute to business accelerator training related to food and agricultural sciences in the state
- Proposal being led by University of Arizona to energize land grant universities to meet the needs of today
- **Tofighi stated that the NSF Engines collaboration would be great if it is funded along with other programs that include a Bioscience piece because the BSA has been identified as being the Bioscience umbrella for the state.

NM Startup Factory SBA Growth Accelerator Fund Competition

- Collaborate on application to support the acceleration of bioscience businesses within the state
- **The BSA has been asked to participate in the SBA Growth Accelerator Fund Competition Tofighi said which will be submitted in February. Tofighi will present the details to the Mission Accomplishment Committee.

Continue Building Statewide Collaborations



		AFF D. I. C. II
		AFF Roadrunner Studios
		NSF Engines Raliwest Venture Studios
		AREA Bioscience and Healthcare Advisory Council
		• NMBio
		**The following collaborations are interactions that
		have been started and or will be increased.
		Thave been started and or will be increased.
		<u>AFF Roadrunner Studios</u> – Communications have been
		established with company manager to work with them
		regarding programming involving Bioscience. AFF is
		Deep Tech however they include bioscience within their
		Deep Tech programs.
		NSF Engines Raliwest Venture Studios-if NSF Engines
		Program is awarded, the Venture Studio will be involved
		-
		with sheparding companies that would be coming from
		the Universities into commercialization. The BSA would
		be able to assist with the bioscience related companies.
		AREA Bioscience and Healthcare Advisory Council-ED
		Tofighi and SPD Cangiolosi are scheduled to attend their
		scheduled AREA meetings
		NM BIO-The BSA will continue to participate in their
		annual Knowledge Fair events and endeavors.
		amidal knowledge rail events and endeavors.
		Support NM Bioscience Businesses
		Support MM bioscience businesses
		Turneri Vurneri i CORRC area calle and CRIR area and
		Tummi Yummi i-CORPS proposals and SBIR support
		One Cell Foods, Inc investor introductions
		Hire full time person to lead SBIR/STTR Accelerator
		Program
		President Christodoulou left the meeting at 12:43 PM
9.	NMBio Knowledge Fair Report	Director Prisca Tiasse left the meeting at 12:51
_		
		Director Paul Laur who attended the 2023 NMBio
		Knowledge Fair presented his report to the BOD
		highlighting each presentation during the event and
		some key discussions.
		Director Laur shared his report via Screen Share with
		the BOD.
		NMBio Knowledge Fair 1/10/23



Opening Comments were made by Greg Byrnes who welcomed the attendees and thanking the event sponsors, including the marquee sponsor; PhRMA, and three NMBio board members who provided planning and logistics; Tricore's Rick VanNess; J.D. Cook, Fund Manager, Ingenuity Venture Fund, and Sue Prelozni, Executive Director, Global IQ.

PRESENTATIONS:

The View from Washington, DC

- Expect Drug Price Control legislation to be considered by NM
- Possible SBIR/STTR funding reduction. Freedom caucus wants 9% reduction in spending.

<u>New Mexico Startups Succeeding</u>: Chuck Call-Bioflyte, Kristina Trujillo-T-Neuro Pharma, Sergey Dryga-QBiotech, Janeth Pena-Biotech

- Chuck Call of Bioflyte reported working on airborne Fentanyl Detection for DARPA. Bioflyte recently closed on \$6.5M Series A. Funding.
- Kristina Trujillo of T-Neuro Pharma is working on blocking Alzheimer's disease by; 1) blocking the T-cells that cause it from crossing the blood/brain barrier and 2) blocking the secretion of the enzyme that T-cells secret to destroy brain cells
- Sergey Dryga of Q Biotech has developed a purification system for proteins, DNA and RNA using low pressure chromatography. Affordable at < \$5,000 capex and uses disposable cartridges to make cleaning and sterilization unnecessary. Will work with local companies to Beta test.
- Janeth Pena, Sandia Biotech is making molecular labeling and imaging simple with spheroid staining, technologies licensed from Los Alamos National Labs (LANL) and UNM. Pena works with BennuBio's flow cytometry technology.



<u>The Rapid Growth and Mission of the Biotech Research</u> Institute: Jacob McDonald-CRO of Lovelace Biochemical

- Lovelace Biomedical is located south of Kirkland AFB. McDonald is Chief Revenue Officer of Drug development. where minimum test is \$50K, average \$100 200K, IND studies \$1Milion. Can run tests on multiple animal species. Past projects: Efficacy testing for COVID therapy for Gilead Pharma; Toxicology tests for Renvisidor in pill and inhalant form.
- LBERI is the sister company of Lovelace Biomedical with expertise in CBRNe Chemical/Biological/Radiological/Nuclear and explosives weapons.
- Other areas of expertise include GLP toxicology, bioanalytical, gene therapy custom pharmacology, respiratory drug development, neuroscience medical countermeasures, and infectious disease.
- Lovelace Biomedical is a 375,000 Square foot facility with 400-plus employee who possess 50 PhD Degrees. The facility was acquired by Touro University in New York and NY Medical College. There is potential funding interest for investment in NM Companies.

<u>Policies that Help Patients Pay Less</u>: Katelin Lucariello-Senior Director at State Policy PhRMA

- Lucariello, says that drug prices have been flat, much less than the overall inflation rate.
- Pharmacy Benefit Managers (PBMs) leverage cost savings for customers.
- Insurance companies are shifting drug cost to customers thru higher co-pays,
- www.mat.org is a patient assistance program offered by PhRMA.
 Katelin will be in NM for the legislative session. Taskforce recommends lower costs to patients.

New Sources of financing for New Mexico's Biotech
Sector: Waneta Tuttle-Tramway Ventures, Dave BlivinCottonwood Ventures, Ryan Cangiolosi-New Mexico
Bioscience Authority (NMBSA), Harold Lavendar-State
investment Council (SIC), Stuart Rose-The Bioscience

Center



- Waneta Tuttle supports the NMBSA Co-Investment fund. and the NM Venture Capital Fund for \$35Million.
- Dave Blivin, also supports the NMBSA Co-Investment fund. Blivin is looking regionally and in Europe to make early-stage investments at \$2Million to give start-ups the runway they need.
- Ryan explained the NMBSA Co-Investment Fund request
- Harold Lavender stated that the Fund has grown from \$13 Billion to \$41 Billion. It is a fund of funds so dollars will go to Venture Capitalists (Venture Capitalists) to invest. \$1.9 Billion severance tax fund from Oil & gas in 2022, more than last 20 years, so SIC will make more investments.
 - ✓ American Frontier Fund is setting up business in NM with a \$10 M over 10 years largely because NM has over 10,000 unused patents. Half funds will go to Tech Transfer with half going to traditional VC funding.
 - ✓ Working closely with NM Venture Capital Fund.
 - ✓ America's Future Fund \$20 Million
 - ✓ Build Back Better \$74 Million over three years for investment and technical assistance. See State Small Business Credit Initiative (SSBCI) at New Mexico Economic Development Department for collateral support and VC/Equity Program.
- Stu Rose led the Panel Discussion on the needs for building the Bioscience Sector. Rose provided some of the key points from the discussion:
 - ✓ Capital is here in New Mexico
 - ✓ Need CEO talent with a national network to attract capital and talent
 - ✓ Facility Requirement: need labs, but ROI for lab space is not attractive to real estate developers
 - ✓ Need incentives to get companies to move here
 - ✓ Biotech benefits from following spouses of National Lab hires.



		How CNM is preparing Students for Science/Biology
		Careers: Tracy Hartzler President Phillip Lister Science &
		Technology, TJ Cook-Ingenuity Venture Fund
		Tracy Hartzler wants to know what companies
		require. Has a robust intern program. Will also advertise
		positions for companies.
		T.J. Cook. Said a \$5M fund exists to micro invest. Will
		present a Ski-lift Pitch event Feb 22-23 Taos Ski Valley,
		New Mexico
10.	Adjourn	Executive Director Tofighi who presided as the
		meeting's Acting Chair on behalf of Director Tanner
		Schaub who left the meeting called for a motion to
		adjourn the meeting.
		A motion was made by Paul Laur with a second from
		Tom Kieft.
		A roll call vote of all board members was called with five
		in the affirmative, none in opposition, none in
		abstention and seven absent. The vote was as follows:
		Arvizu-Absent, Boisvert-Affirm, Byrnes-Absent,
		Christodoulou-Absent, Dekker-Absent, Gifford-Affirm,
		Greenberg-Affirm, Kieft-Affirm, Laur-Affirm,
		McLaughlin-Absent, Schaub-Absent, Tiasse-Absent
		Wieleaugiiiii Abseire, seriaub Abseire, Hasse Abseire
		ED Tofighi adjourned the meeting at 1:01 PM
		25 Tollight dajourned the meeting at 1101 Tivi
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Respectfully submitted by Sterling Nichols and Stephanie Tofighi