Meeting Minutes
July 19, 2012, 9:06 AM
Executive Committee Meeting
and
K-20 STEM Pathway Subcommittee
Miami Dade College-North Campus

Attendees: Russell Allen, Jeffrey Anderson, Madeline Baro, Irma Becerra-Fernandez, Heather Belmont, Eric Brewe, Valerie Bristor, Jill Diodata, Japp Donath, Andrew Duffell, Tod Fairbanks, Kenneth Furton, Delia Garcia, Marci Greene, Jorge Guerra, Cecile Houry, Mohammad Ilyas, Norma Kenyon, Gary Margules, Ed Massey, Amir Mirmiran, Jennifer O'Flannery, Maureen Pelham, Gary Perry, Roy Pocknee, Al Roberts, Mark Rosenberg, Shawn Rowan, Mary Jane Saunders, James Sweeney, Ronald Toll, Mike Tomas, Susan Webster, Richard White

Absent: Ivan Baines, Dennis Gallon, Dennis Gallon, Todd Holt, Dawn Johnson, Ronaldo Montoya, Susan Neidman and Frank Nero

The meeting commenced at 9:06 am on July 19, 2012.

I. Welcome

President Mark B. Rosenberg thanked everyone for coming to the meeting. Dr. Rosenberg personally thanked Miami Dade College, Dr. Heather Belmont, Dr. Jose Vicente and Dr. Rolando Montoya. He informed the members that Drs. Vicente and Montoya were not in attendance due to a board meeting. Dr. Rosenberg introduced Dr. Irma Becerra-Fernandez to the committee as the new manager, director, coordinator, dreamer and extraordinaire for Life Sciences South Florida. The committee was informed by Dr. Rosenberg that Dr. Divina Grossman decided it would be more advantageous to be the Chancellor of the University of Massachusetts at Dartmouth and wished Dr. Grossman the best of luck. Dr. Rosenberg thanked Dr. Saunders for being in attendance and other members of the Executive Committee.

Dr. Rosenberg opened the meeting with a few remarks regarding the agenda and hoped the Executive Committee would have a mutual consensus on some of the new initiatives for this upcoming year. Dr. Rosenberg expressed to the Executive Committee that it is time to figure out how to enhance the life sciences in South Florida and realize that although the state is in

the path of recovery, there are still significant challenges in the economy that are long term and short term, given the nature of the globalization in the economy. In addition, Dr. Rosenberg said the Executive Committee has to work harder with the leadership in innovation, job creation and improving the quality of life. Furthermore, Dr. Rosenberg said the Executive Committee has already gone through a phase where they have done a lot of organizational work, reflecting the importance of the group and the need to become even closer together. According to Dr. Rosenberg, the Executive Committee needs to experience a phase that is more action-oriented through collaborations and networks, which they are more easily able to do now than in the past.

II. Review of Meeting Minutes

The meeting minutes of the Executive Committee Conference Call on March 23, 2012 were reviewed and approved.

III. Industry Report --- BioFlorida

Dr. Becerra-Fernandez introduced Russell Allen, President and Chief Executive Officer of BioFlorida to provide an industry report. Before Mr. Allen gave his report, Dr. Becerra-Fernandez stated there is still an opportunity to sponsor the BioFlorida annual conference; Life Sciences South Florida will sponsor BioFlorida with $10,000 and some universities will individually provide additional contributions to sponsor BioFlorida. Mr. Allen thanked everyone for their sponsorship and stated that BioFlorida has been a part of the life sciences within South Florida community for a while and that they are based in Downtown West Palm Beach. He mentioned that the BioFlorida's Annual Conference will occur in October 2012 in Downtown Miami. The BioFlorida's Annual Conference will be a chance to showcase what has happened in the region in connection with the partnerships.

Mr. Allen explained to the Executive Committee members that during his presentation, he will be providing a general state overview of the bioscience industry, highlight where they are as an industry, and proceed with focusing on South Florida and how they are managing growth. He started his presentation by mentioning the recent Bio Convention that was held in Boston a few weeks ago. During that convention, as they do every other year, they released a state of the industry report done in partnership with the Battelle organization. This year, the Battelle organization decided to change things around on how they produce the industry report, he added. He started with a new definition of their industry according to Bio. They adopted Bio's definition— the one they use to define their membership and who they are as an industry. The definition added the field of bioscience related distribution. By adding that category, Florida became the number one state in bioscience distribution companies.

Mr. Allen informed the Executive Committee about biosciences bucking the trends over the last few years; it hasn't been immune to decline, but it has declined at a much lower pace. Mr. Allen shared some Florida trends with the Executive Committee. First, Mr. Allen indicated that in the early 2000 time frame most sectors have decreased, but biosciences did show some increase. Secondly, he mentioned that even during recessionary years, biosciences lost some of their employment, but not as significantly as other sectors. In order to grow an industry cluster, there are several key factors: research and commercialization, workforce and education, infrastructure, capital, industry support, marketing, and public policy. Florida's strengths in cluster development include attracting talent, a growing infrastructure, and support to grow industry. Mr. Allen proceeded with addressing some of the challenges. The first challenge is geographic spread of industry and commerce. The second challenge is retaining top research and executive talent. The final challenge is having access to capital.

Mr. Allen indicated that the Executive Committee needed to know where the companies were located on the map and stressed the importance of it. The research institutes are partnering with our university and creating companies and attracting companies. Mr. Allen produced some results by looking at the ten employment states, which he considered to be competition. Mr. Allen stated that Florida is in the top five number of companies in every category and that they are number one in pharmaceuticals, drug companies, and medical devices in growth rate. He mentioned that employment is a little lower ranking in 6th; they don't have the large successes and is trying to catch up. The ultimate goal is to improve and save lives. Mr. Allen is pleased to see Florida continuing to grow. He added that Mr. Day from University of Florida, who was at the last meeting, is the head of the incubator and that Patricia LeBow, also from the University of Florida, is the director of the St. Mark incubator. They have partnered to form the Florida Database, which can be accessed at www.floridabiodatabase.com. The database will provide growth of the companies. He mentioned that Florida is growing at a rapid pace, over 40% in the last 5 years.

Mr. Allen concluded his presentation by giving an overview of BioFlorida and where they are in the state. BioFlorida consists of three staff persons. They have spent a good amount of time in Tallahassee and in Washington, D.C. to encourage the legislatures to provide incentives. BioFlorida networks and promotes within their own members and among their members outside of the state. BioFlorida wants companies to contact them and ask where they can find lab space. BioFlorida and the Banner Center are in the process of creating an initiative to create a statewide clearinghouse. BioFlorida and Banner Center have a database of companies and will allow others to be able to drill down further for a consultant or architect. The database will eventually grow to include educational resources, workforce training, and other resources that support life sciences. They already have a good way to gather data and will be adding additional data to their newly launched website. BioFlorida's headquarters is in

West Palm Beach and they have locations at the University of Miami Life Science Park, University of Florida St. Mark Incubator, and University of South Florida Connect in Tampa; they hope to add an office at the Florida Atlantic University Research Park. Mr. Allen added that these spaces are for member use and can be reserved online through BioFlorida's website. He also mentioned the creation of an online career center connected to other Bio Group organizations. The last thing he mentioned was the BioFlorida Institute. The BioFlorida Institute was created as a separate organization to address education, which is a high priority. The organization is a 501(C)(3). They have great programs in the BioFlorida Institute. The BioFlorida Institute has a great Board of Directors that is willing to help with some of their initiatives. In conclusion, Mr. Allen stated Florida is a fast growing state with challenges that can be overcome through collaborations, working together with the community, and finding access to capital. He also added that Florida is number one in clinical trials, which presents opportunities to attract more companies and grow the life sciences.

After Mr. Allen presented his industry report, Dr. Becerra-Fernandez asked if anyone had any questions regarding the report. Mary Saunders, President of Florida Atlantic University, wanted to know how they can populate BioFlorida's career center link regarding job placement. She indicated that she noticed six Florida jobs were posted and asked what they could do to populate the page. Mr. Allen responded that there are only six jobs posted because the page is new and tied into other organizations that have been using this system prior to BioFlorida launching this site. They are in the early stages and Mr. Allen suggested that everyone get the word out and share the link with their internship and career services departments to help make it nationwide.

Dr. Rosenberg asked Mike Tomas, President and Chief Executive Officer of Bioheart, Inc., if he had anything to add about job placement or any other aspects. Mr. Tomas indicated that they are starting to see a huge growth in regenerative medicine. Mr. Tomas explained that Bioheart, Inc. focuses on heart muscle repair, has invested over $100 million in jobs, and all of their work is being done right here in South Florida. Bioheart, Inc. has a company called StemLogix and is fixing animals with their own stem cells. Bioheart, Inc. has another company called Ageless that focuses on cosmetic applications. Mr. Tomas stated they started the Bioheart Institute where they offer a one weekend course to scientists and physicians that teaches them how to culture stem cells. The course cost up to $10,000, but the same course is offered for students to sit in on just for the cost of materials, typically $300-$500. He feels LSSF should show some focus on the new phase of life sciences, which is regenerative medicine.

Mr. Allen agreed and added this is a real opportunity and that the purpose of the BioFlorida Institute is not to create training programs but to identify them and spread the word. There is a

separate site for members to share opportunities and training programs so BioFlorida can help find students.

Dr. Rosenberg asked Mr. Tomas to clarify the history of the Bioheart Institute. Mr. Tomas stated that the Bioheart Institute was started for self-serving reasons. The Bioheart Institute uses only adult stem cells and not embryonic, and for many years people didn't know the difference and were challenged in efforts to get grants or funding. Mr. Tomas stressed to the Executive Committee that the more people understand about regenerative medicine, the more they can become ambassadors. At the institute they teach how to culture stem cells and the applied uses for them. Dr. Rosenberg asked for Mr. Tomas to share and circulate the information. Mr. Tomas added that the number one request from the high school students who come to the Bioheart Institute is how to make it a full credit course. Dr. Rosenberg thanked Mr. Tomas for his remarks and said he looked forward to working with Mr. Tomas.

IV. Subcommittee Reports

a.) Talent Recruitment– Provost of Florida Gulf Coast University, Dr. Toll, stated that the talent recruitment subcommittee has a variety of initiatives and wanted to list them by using the strengths of the university system and the other affiliated institutions and organizations to recruit the best students in medicine, engineering, arts and sciences and other allied areas. The Talent Recruitment subcommittee wants to make available to students and research investigators the combined expertise and assets that exist in the South Florida region. He added that the talent recruitment subcommittee wants to apply a regional approach which will significantly increase the opportunities for students to find resources in this area to keep them here in South Florida. In addition, they want to develop a regional internship program for the cross pollination of talent to have students move around. Thus, through the students, future employees move around and see cooperative opportunities among the organizations that make up Life Sciences South Florida. Dr. Toll stated he wanted to cover four items regarding talent recruitment in Florida and in the South Florida area.

Dr. Toll stated that the talent recruitment subcommittee became aware of the Banner Center because of the life sciences report that was produced on talent recruitment. Dr. Toll introduced Dr. Tod Fairbanks, a professor at Palm Beach State College and Chair of the Banner Center Industry Advisory Council in South Florida, to give a brief subset on the report focusing on South Florida. Dr. Fairbanks stated that the Banner Center conducted a survey early in the year throughout the state; Dr. Fairbanks took a small subset of the data from the survey. The state survey and the subset of South Florida results were almost the same. The numbers are a little bit smaller because there were some larger companies up North. There were 28 companies that were represented in

the survey. Broward County represented 25 percent, Miami-Dade County represented 11 percent, and Palm Beach County represented 64 percent. In the subset, 82 percent of the respondents had headquarters in Florida. The respondents represented 4 percent agriculture, 7 percent clinical trials, 21 percent consulting/CRO, 18 percent medical devices, 29 percent biopharmaceuticals, and 18 percent other. As far as the state demographics, the only thing that will be different on the survey is that there are a lot of medical device companies in South Florida. He gave some generalizations and breakdowns on how employees are currently employed in these companies. There are 56 percent management companies that are not necessarily production companies; however, they are similar to research companies. The distribution of M.D.'s and Ph.D.'s are in other categories. The graph he showed represented 350 employees over the 28 companies. The two main questions that are asked relate to who is going to be hired in the next 12 and 24 months. The number of hires is somewhere between 40 percent who have bachelor's degrees. Employers are going to hire about 66 people across the different degrees. As it is grouped out to 13 to 24 months, the numbers change a little bit, but the majority are still going to be bachelor's degrees. The later hires are most likely going to be quality control. If you are a small company, you would likely expect to be successful and will actually have something as a product. There are a couple of categories where no one is being hired. Dr. Toll thanked Dr. Fairbanks for his report.

Dr. Toll's second item on his list was in regards to the executive team considering putting together potential additional data. Dr. Toll stated they have been in touch with Mr. Allen from BioFlorida to retrieve additional data. Mr. Allen is interested in using the BioFlorida Conference as a way to have additional companies participate in the survey. They will use students to interact with the companies.

The third item on his list pertains to the talent recruitment committee always being interested in meeting people from the industry regarding recruitment needs. Dr. Toll met with Kelly Smallridge and Tim Tracy from Business Development Board in West Palm Beach. He stated that they had four invitation only meetings that lead to the development of white papers, which went out to the county commissioners, describing the issues business leaders are facing. Dr. Toll believes their methodology is a valuable one and possibly could be employed across the geographical range in South Florida.

For the fourth and final item, the talent recruitment subcommittee had a teleconference call with two representatives from two counties to discuss a number of issues. The first representative was Carmen Carmelo from Workforce One in Broward County and the second representative was Douglas Sands from Workforce Alliance in Palm Beach County. They learned several interesting things about what on-the-job

training does. On-the-job training helps those who are in college, graduates, and recent graduate students, providing them with additional training to enhance their skills. It is also an opportunity for employers to get some funds back that were placed in the job training period. It will be a win-win situation for the student and the employer. Dr. Toll mentioned that as they bring different sectors together in this organization; they have to be mindful of the jargon. He added using the word "internship" in higher education may have a different meaning in the workforce; therefore, everyone should make sure they are using the correct terminology.

In closing, Dr. Toll stated that Florida Gulf Coast University is pleased to be a part of Life Sciences South Florida.

Dr. Becerra-Fernandez stated that Dr. Rosenberg expressed an interest in completing the industry that they serve and wanted to hear from Dr. Rosenberg to see if that would be a worthwhile opportunity. Dr. Rosenberg responded to Dr. Becerra-Fernandez by stating one of the conversations they had pertained to surveys and inventories done, but they still do not know exactly what companies are out there or what is being done by those companies. He added, maybe the upcoming BioFlorida Annual Conference in October will be a way to shorten the process. In addition, they need more interim knowledge of what people are doing. He suggested having a South Florida gathering where they can accelerate and enhance the benefit of the community. Dr. Becerra-Fernandez stated that they will take what Dr. Rosenberg said as an action item.

Jill Diodato, Program Manager from the Banner Center, stated that part of their contact with the state of Florida is to conduct a focus group specifically in the Miami area focusing on specialty pharmaceutical groups. The Banner Center will be interested in partnering with Life Sciences South Florida. They have already setup a program with the Health Center at the University of North Florida and they have a strong relationship. In addition, have focus groups with other Life Sciences entities throughout the state of Florida. Dr. Becerra-Fernandez stated she will take what Ms. Diodato said as an action item.

b.) Shared Technology and Communication Portal Asset Map and Cluster Analysis-Dr. Ivan Baines was unable to update the Executive Committee on the Shared Technology and Communication Portal Asset Map or the Cluster Analysis due to phone connection issues.

Gary Margules, Vice President for Research and Technology Transfer at Nova Southeastern University, stated that he spoke with Dr. Baines regarding the Shared Technology and Communication Portal. Dr. Margules stated that there were

conversations with FIU, FAU, and NOVA on how to share core equipment. He mentioned possibly receiving a grant with an economic development agency to help with the backing. They are looking at some examples of cooperative and collaborative projects to get the ball rolling. This would provide opportunities for smaller universities to grow; natural feeder operations and sponsors may be able to cooperate with universities to use resources. Dr. Becerra-Fernandez stated that when the resources are ready, it can be useful for small companies. Dr. Margules agreed by stating that small companies do not have access and this might be a way to give them access to technologies. Dr. Becerra-Fernandez asked Dr. Margules if their universities were identifying shared resources. Dr. Margules stated that the database is almost populated, but they're still working on getting everyone on the same page. He added that the University of Miami is ahead and smaller schools are still trying to figure out legal arrangements. Dr. Becerra-Fernandez thanked Dr. Margules for the update.

c.) STEM K-20 Student and Workforce Development-In Dr. Montoya's absence, Dr. Belmont updated the Executive Committee on the recent developments regarding STEM K-20 Student and Workforce Development. Dr. Belmont began by stating the two main agendas were that STEM K-20 needs to be strengthened—increase Student K-20 and enhance Workforce Development. Dr. Belmont was in charge of creating a STEM initiative inventory. In the inventory, she realized that in the region there are a tremendous amount of projects, but little knowledge about what everyone was doing. The inventory was created to know what institutions are doing so they can create or understand where they had commonalities and differences, as a means to possibly learn from one another. In addition, they can look over individual strengths and weaknesses moving forward. Dr. Belmont provided a sample of the inventory for the Executive Committee to review. Dr. Belmont stated that the inventory itself is extremely powerful and there was a report in *One Community One Goal* stating the inventory is an educational resource in regards to STEM.

The overall strengths reflected in the inventory are the amount of over 122 highly diverse initiatives that are spanning all STEM departments, which show a strong commitment to the community and K-20 system, while bringing in tremendous amounts of money even at the undergraduate level. All institutions and state colleges are drawing federal money from the National Science Foundation, U.S. Department of Education, and other agencies. The second sheet of the STEM inventory focuses on collaboration. Dr. Belmont mentioned that Life Sciences South Florida is about coming together as a group and working as a team to promote the region. Dr. Belmont stated that they applied for the fourth round grant funding for the National Science Foundation. They partnered with the University of Miami, Florida International University, University South Florida, Florida Memorial, Miami Dade College, Florida

Memorial, University of Florida and the University of South Florida, and other institutions. The overall weaknesses reported are far less collaboration and only 21 initiatives have been reported out of 122. She added, collaborations have been around a long time and collaborations are often within the districts. Finally, Dr. Belmont mentioned a lot of the projects are redundant. The K-20 Student and Workforce Development Committee has come up with a couple of recommendations. They have suggested an Annual LSSF Student Research Symposium. Dr. Belmont stated the symposium would be very useful, allowing students to band together and present their research. Also suggested is a LSSF "Common Threads" Collaborative grant, which will provide K-12 outreach, curriculum redesign, and professional development. She mentioned what she hears from talent recruitments is to integrate the strengths of LSSF to include the development of an industry internship repository. The repository is extremely critical, she added.

Dr. Becerra-Fernandez thanked Dr. Belmont. She reminded everyone that there will be another STEM session following the Executive Committee Meeting where questions could be answered.

d.) Regional Conferences and Seminars

On behalf of Linda Howdyshell, Broward College Provost and Senior Vice President, Roy Pocknee, the Dean of Academic Affairs, stated that there were two conferences held. He mentioned that there is a need to increase the frequency of the conferences to attract bigger audiences, and he stated that the main issue is that it is not open enough. He wants to open the conferences up to the entire state of Florida. He added that he wanted to have something on a regular basis so that everyone could mark their calendars in advance to get more interest. Dr. Pocknee suggested the Executive Committee nominate speakers and present the names to him. He wanted to create a good pool of candidates and an annual list to be distributed to members to attract a larger audience. Dr. Becerra-Fernandez suggested that the Banner Center could help assist with finding speakers. Dr. Rosenberg added that they needed to up the frequency of the distribution of material.

V. K-20 STEM Pathway Report

Dr. Pocknee reported that the Broward College Teacher Education Program is successful. The Broward College Teacher Education Program includes: middle grades general science, middle grades mathematics, secondary mathematics, and secondary biology. They have been getting Broward College graduates into the high schools. The main initiative in two years is to develop

a STEM Charter School in collaboration with Broward County Schools. They have already contacted a consultant and are actively moving forward.

Valerie Bristor, Dean of the College of Education at Florida Atlantic University, presented four priorities. The first priority was the Teacher Preparation Programs. She mentioned that the state university deans of the colleges of education meet twice a year to discuss teacher education programs and address changes in the education curriculum. At FAU they are focusing on how they can build a concentration or minor in the STEM areas. The second priority is grant awards. Dr. Bristor stated on the in-service side, they have grants to partner with the Broward County School District and other districts. They have a Teacher Quality grant which provides professional development in history and geometry. The third priority is Pine Jog Environmental Education Center, located in Palm Beach County and recognized for their green initiatives. They have developed a Master in Environmental Education and they are working on creating a Bachelor in Environmental Education. The fourth priority is a proposed STEM Education Center that is currently in the developmental stages. The STEM center will facilitate teaching, learning research evaluation, curriculum in the STEM areas, and involvement with the community in education and public outreach. It will also help facilitate access to STEM education resources.

Mohammad Ilyas, Dean of the College of Engineering and Computer Science at Florida Atlantic University, mentioned that they have a three front approach to work with schools, work from within and work from outside. He stated that working with middle and high school students in a Broward Public School activity, and having them prepare STEM related module, will help create a strong pipeline. He mentioned an engineering scholars program that program departments should work with to create a pipeline program— intensive two week training and working with the College of Education on how to train the teachers. He stated working with the outside as far as knowing what their needs are by modifying the curriculum. In addition, they work with the outside by getting feedback to know how the graduates are doing in the field.

Gary Perry, Dean of the College of Sciences at Florida Atlantic University, stated they have been focusing on interdisciplinary graduate programs. They have been working closely with their partners Max Planck and Scripps Florida. They have been concentrating on creating a master's program in various science areas. To some extent, they have been concentrating on implementing a master's degree education program. They feel that the future workforce will need more master level support. There are professional science master's degrees in biotechnology business, medical physics, and marine science. They also have looked into creating accelerated master's programs and certificate programs. Programs can help define what at student's formal training is about. Currently, there are several NSF funded programs in math education, science education, and chemical education. Recently they have opened their

focus onto getting into high schools and middle schools. They have been running a successful science olympiad for the past several years that has helped get them into the lower schools.

Kenneth Furton, Dean of the College of Arts and Sciences at Florida International University, stated the Deans have been working very actively this year. He mentioned that they have a STEM Transformation Institute led by the three Deans of the College of Arts and Sciences, College of Education, and the College of Engineering. There they are conducting research and looking at models that work at FIU, which can be implemented at other institutions. Furthermore, it will be made available to all students. He added FIU was ranked number one in the nation in awarding STEM degrees. Dr. Furton mentioned that they have adopted the style found in physics education that has been very successful using modeling classrooms. It employs a more active style of learning in all science courses. In all math courses, they have employed the inverted classroom model with less lectures and more time in computer labs. They have found dramatic increases in overall grades in science and math course.

Delia Garcia, Dean of the College of Education at Florida International University, stated that the third development will strengthen educational programs to promote public policies that will help establish a strong pre-kindergarten through 12th grade STEM teacher courses. The College of Communication has already created a strong collaborative model with the College of Arts & Sciences, as it relates to the production of teachers on the secondary level based on the content areas of physics, biology, chemistry etc. with educational certifications. It has been a strong component of the initiatives at Florida International University for a few years now. Secondly, they have begun to reconstruct, revise, and enhance the curricular programs in elementary education by infusing content in math and science courses. Thirdly, they have been working closely with Miami-Dade County Public Schools and developed graduate certificates for pre-kindergarten to 5th grade teachers and 6th through 8th grade middle school math and science teachers, to enhance their skills.

Amir Mirmiran, Dean of the College of Engineering at Florida International University, stated their focus was recruitment, retention, internship, and placement. They have been working with the Children's Trust for the elementary and middle schools. Furthermore, they have an active relationship with high schools and engineering magnets. He added they are trying very hard to build a very strong pipeline. They are proud, especially in the life sciences areas such as biomedical engineering, because they have the highest in-state employment among all the state universities at all levels. They will be working closely with the College of Medicine to build an area in entrepreneurship in life sciences, hoping that healthcare information technologies will play a major role in South Florida.

Marci Greene, Dean of the College of Education at Florida Gulf Coast University, stated that FGCU has a very strong and rich history in STEM education. They opened the Whitaker Center

for STEM Education over 15 years ago. The center is directed by the Deans of Education, Engineering and Arts & Science. She referred the group to the STEM inventory that reports over 4 pages of legacy in the area of STEM education and collaborations with school districts and colleges to better prepare our university faculty, students and school partners.

James Sweeney, the Dean of the College of Engineering at Florida Gulf Coast University, stated that they have been focusing on some new initiatives. They have added software engineering programs to meet needs in that area. They have building up their existing bioengineering, civil, and environmental engineering programs with active learning styles. He added they want to add master's degree programs in the near future. They are planning to have a renewable engineering program where they will partner with local industries. Recently, they have been working with Mr. Allen, from BioFlorida, through the Southwest Chapter of BioFlorida. They had their first event on campus with students and students at the surrounding universities.

Ed Massey, President at Indian River State College, stated he attended the STEM Solutions Conference in Dallas and met a lot of people in the STEM areas. Dr. Massey stressed the importance of reaching students at a younger age to start thinking about their future. He stated that they have great partnerships. In the summer, their pre-service teachers spent six weeks in field doing active research with companies and presented their research to the community, along with a short video to the classroom they will be teaching. The research is opening the eyes of teachers to science as they become very engaged; they are looking at different ways to excite kids about science. He mentioned since the next meeting will be held at Indian River, the Executive Committee can view the site of the new upcoming STEM Complex.

Heather Belmont, the Dean of the School of Science at Miami Dade College, stated that until last year, Miami Dade College didn't have college deans for their schools. Dr. Belmont introduced the Director of the School of Engineering and Technologies, Richard White, and Executive Director of Workforce Programs and Partnerships, Jorge Guerra, to join her to discuss Workforce Development. The first STEM priority is curricular redesign to promote student retention, completion, and career placement. Right now MDC is working on a major curricular redesign to get students prepared for college math. The second priority is to strengthen and/or develop industry-driven degree programs in STEM fields such as engineering, biological sciences, and information systems. She stated Dr. White is working closely with Florida Power and Light in nuclear energy program that has over 80% job placement. Dr. White added they are very happy with the program and their partner in FP&L. He added that they have been working with student more closely to refocus student particularly in their AA programs. They have added research experiences, and developed a few NSF funded project among other project. Dr. Belmont added that those initiatives fall in line with MDC's third STEM priority of

systematic promotion of research experiences and/or industry internships. Overall, they have added more research and changed the culture. They have added a summer research institute for students where they work at Miami Dade College and university partners on paid research, which will be presented at a symposium this September.

Gary Margules, Vice President for Research and Technology Transfer at Nova Southeastern University, presented their three top priorities which include: 1. Enhancing student performance engagement and retention in STEM fields, 2. Enhancing STEM program quality, 3. Enhancing targeted recruitment in STEM fields. Finally, he mentioned that they will assist STEM students by assigning research coordinators to help students with any transitions in the STEM fields. There is also an extra push for dual admissions programs at Nova.

Norma Kenyon, Chief Innovation Officer at University of Miami, stated that the vast majority of their effort is hands-on research for high schools and undergraduates. In addition, she will be following up with the Dean of Education and the Dean of Engineering to get additional information regarding other STEM initiatives.

Palm Beach State College President, Dennis Gallon, was not in attendance and could not present on any STEM initiatives.

VI. Closing Remarks:

Dr. Irma Becerra-Fernandez thanked everyone for coming to the meeting and stated all the materials will be linked to the Life Sciences South Florida website.

Dr. Rosenberg wanted to add a few comments stating that it is apparent that there is a ton of energy and significant investment that they have, which could be far more consequential for the community. He added that they need to find a way to harness that because there are some inefficiencies that they could take advantage of to foster greater collaboration such as: 1. The database potential from BioFlorida, especially in terms of jobs that could be a one stop shop for Life Sciences South Florida, 2. The bioscience initiative in terms of bioscience companies that they should be doing a lot more with, and 3. The expansion of webinars not just for their stakeholders, but for their communities. He asked how could they learn from others and emphasized the Whitaker Center as a way for them to draw lessons from other institutions. Dr. Rosenberg suggested having a student conference that would bring together the incredible work of their students in one platform; therefore, the students could learn from each other. In addition, he added that their source of innovation is their undergraduate and graduate students. In closing, Dr. Rosenberg gave his appreciation to the subcommittees.

Dr. Saunders introduced Jennifer O'Flannery-Anderson, the Vice President for the Office of Community Engagement at FAU, a position created to recognize that the university needs to interface better with our business and industry communities. She also introduced Andrew Duffel, the President of the Research Park at FAU which is a wonderful partnership that brings

in industry and fosters collaborations. She stated that Dr. Rosenberg is a visionary working with their state organizations and that they can afford dialogue between regions and others cannot. In addition, she was excited to work with others and not duplicate work. Furthermore, she was very excited about the work Dr. Belmont did in the inventory. Dr. Saunders stated that the inventory is the right thing they need to do to explore opportunities. She added it was great to see data collected and centrally available. Some of the action plans she mentioned referred to what the group can do next, what they need to do in Tallahassee, and what they need to do to allow their synergies to grow. The group is through the quiet phase of getting logistics together. Dr. Saunders said she hoped they will be working on being more public to support one another. She added that working with the legislature is key for funding and support. She thanked everyone.

Dr. Irma Becerra-Fernandez informed the Executive Committee that Miami Dade College organized a tour of their Science Complex immediately after the meeting.

VII. Adjournment

The meeting adjourned at 10:57 am on July 19, 2012.

ACTION ITEMS

1) Collaborate with BioFlorida to utilize the database potential in terms of jobs, which could be a one-stop-shop for Life Sciences South Florida.

2) Establish a student conference that would bring together the incredible work of students in one platform; therefore, the students could learn from one another.

3) Collaborate with the Banner Center to assist with finding speakers to increase the frequency of the conferences that will attract larger audiences.

4) Collaborate with the Bioheart Institute to circulate information to the different institutions.

5) Establish a Life Sciences South Florida Annual Conference that is structured and will benefit the community.

6) Amplify the number of webinars to appeal to a broader community.

7) Florida International University and other members of Life Sciences South Florida to collaborate with the Banner Center to convene for the life science industry in South Florida.