

New Brunswick Strategic Planning Proposal

Proposal Title: CREATING OPPORTUNITIES FOR INDUSTRIAL INTERACTIONS AND TECHNOLOGY TRANSLATION IN THE FIELD OF NEURO-ENGINEERING

Proposal Initiator: Joachim Kohn, Director, New Jersey Center for Biomaterials

Primary Contact Name: Joachim Kohn,
Phone Number: 732-445-3888
Email Address: kohn@rutgers.edu

Primary Strategic Priority/Foundational Element/Integrating Theme Addressed
(Select one)

X Envision Tomorrow's University

Proposal Abstract (brief summary of the proposal – 250-word limit):

This proposal addresses the need for enhanced interactions with industry as part of our vision for “Tomorrow’s University”. In a bold experiment, we have created a self-governing, interdisciplinary group of 12 founding faculty members, the **Rutgers University Neuro-Engineering Group** (RUNEG). In March 2014, RUNEG organized a first Neuro-Engineering Showcase for Industry that helped us understand the needs and interests of neuroscience-focused corporations willing to enter into partnerships with Rutgers. The lessons learned from this inaugural event have formed the basis of this proposal. We ask for support (1) to continue such Showcase events; (2) to use small amounts of seed funding to create preliminary data of interest to potential industrial partners; (3) to use matching funds to facilitate the development of industry-sponsored research partnerships. These program components have been discussed with industry and are of great interest to our potential partners. RUNEG will create a model for an enhanced, faculty-driven path for collaboration with industry. We expect that RUNEG’s experience will be copied by other faculty groups and will lead to more effective translation of Rutgers technologies into products that improve our healthcare. RUNEG, once established, can potentially be self-funded and self-sustained, requiring only administrative support but not necessarily continuing fiscal investments from Rutgers. Our proposal is modeled in part after the highly successful creation of the New Jersey Center for Biomaterials, which raised over \$100 million in external funding and became one of the most prominent faculty-initiated programs at Rutgers.

A) WHAT IS BEING PROPOSED

We request University support for the Rutgers University Neuro Engineering Group (RUNEG), an initiative of 12 senior faculty members to create enhanced opportunities for collaboration with industry. Our ultimate goal is to accelerate the development and translation of new clinical therapies. This proposal follows directly from the success of a March 2014 showcase and networking event that brought the RUNEG faculty together with representatives from 10 companies. We propose three program components that are designed to synergistically drive further collaboration among faculty and with external partners from industry. Specifically, the industrial participants of the March 2014 Showcase, endorsed the mission and goals of RUNEG as follows:

RUNEG's Goals and Mission

The Rutgers University Neuro-Engineering Group (RUNEG) will facilitate interdisciplinary scientific collaborations and translational research in the development of devices that enhance central and peripheral nerve regeneration, restoration of motor and sensory function, and transmission of neural signals by brain-computer interfaces. While being focused on biomaterials science and the engineering disciplines, RUNEG will bring together researchers from neuroscience, chemical biology, imaging, stem-cell technology, nanotechnology, computational modeling including clinician-researchers. RUNEG will foster collaborative and interdisciplinary research efforts to enhance our understanding of the multidisciplinary field of neural engineering and to enable the translation of technology from bench to bedside. The group will seek active participation from the members of the biomedical device and pharmaceutical industries to accelerate the transfer and commercialization of Rutgers inventions and technologies into clinically useful products and therapies. An important objective of RUNEG is to provide cutting-edge training and education, in the form of seminars and a yearly workshop, delivered by world-class investigators within RUNEG as well as invited speakers who lead their fields. These events will enhance learning, communication and collaboration for neuroscientists in industry and academia.

Proposed Activities:

This proposal is intentionally focused on interactions with industry, but we are aware that a faculty group like RUNEG has excellent potential to attract also federal (NIH, DoD) and foundation support for its scientific research activities. To capitalize on these opportunities, Dr. Kohn has joined Eileen Murphy as a member of the Steering Committee of the proposed TRIGGER Program. This proposal is co-pending and if funded, will complement RUNEG's industrial focus by providing support for attracting federal and foundation funding (see Letter of Support signed by Dr. Chris Molloy).

1. Semiannual Showcases to Connect Rutgers Research/Technologies with Industry

In order to build a community and a network of collaborations between RUNEG faculty and industry, infrequent but regularly scheduled events are needed that provide opportunities for information exchange. We started this process with the first RUNEG Industry Showcase on March 12, 2014 (see attached Press Release), which was attended by President Barchi and Dr Molloy (Senior VP, Research and Economic Development). This event was extremely valuable in fostering internal collaborations, and generating industrial interest in further collaboration with Rutgers.

The event attracted a total of 50 participants, including 21 industry members from 11 companies, the RUNEG faculty, and various affiliated faculty and students from all levels across the Division of Life Sciences, Biomedical Engineering Department, the Keck Center, the New Jersey Center for Biomaterials and the Chemistry Department. Critical feedback was actively sought from participants who, unanimously, supported three conclusions: (1) industrial-research collaborations are very desirable, and necessary; (2) future RUNEG events are critically needed; and (3) industrial scientists would like to participate as full partners and have an opportunity to present research conducted at industry along with their colleagues from academia. This format is now planned for upcoming events. Although the event took place only a few weeks ago, several projects are already germinating, and a number of companies have provided written expressions of interest in this proposal and in future collaboration with RUNEG faculty (see Table below).

Written Expressions of Interest from Industry to Participate in RUNEG		
Company Name	Contact Person	Position / Title
American CryoStem Corporation	A. Dudzinski	Chief Operating Officer
EMD Millipore Corporation	J. Hoberg	Business Development Manager
Gentis Inc.	D. Anderson	Chief Executive Officer
Integra LifeSciences Corporation	J. Kemnitzer	Senior Director, Product Development
Celgene Cellular Therapeutics	M. Bhatia	Director, Core Functions
Salvona Technologies Inc.	S. Shefer	Chief Executive Officer
The Plastic Surgery Center NJ	M. Kaufman	Surgeon
Lubrizol Corporation	M. Vyakarnam	Global Vice President for Research

In order to continue the momentum of RUNEG, additional opportunities for RUNEG-industry information exchange have to be created. The inaugural event of March 12 was modest in size since it was entirely supported by the participating faculty. In the future, events that attract a larger audience need to be arranged. We therefore propose that the University provides support for a series of two additional RUNEG Showcases, the first to be held during Fall of 2014, and the second to be held in late Spring 2015.

2. Internal seed funds to create preliminary data for possible interactions with Industry

If this proposal is selected for funding, all RUNEG faculty members will work together over the next few months to reach out to their respective industry partners with the enticing and inviting proposition that the University has provided a small amount of internal seed funding to create “proof of concept” data for possible future research interactions. This first step is a very important gesture that shows that the University is serious about reaching out to Industry, and is most welcomed by our potential partners: It turns out that corporations have become highly risk-adverse. Faculty members suggesting interesting and worth-while research projects to industry usually have exciting data for scientific publications, but do not answer the key questions that are critical to industry, such as “What is the shelf-life?” or “Can this synthesis be scaled up?” or “I like your result on this cell type, but could you repeat the experiment for the cell type we are interested in?”

All members of RUNEG are funded by various federal grants and have a functional research infrastructure in their laboratories. However, they lack the relatively small amount of seed funding needed to conduct the extra experiments critical to Industry. Here, modest resources may go a long way in creating a few key data of interest to industry. It is for this reason that we propose to provide \$36,000 (on average about \$3,000 per RUNEG faculty). These funds will be available to purchase supplies and pay for instrument time and other research costs, but not for salary of any kind.

We anticipate that most RUNEG faculty will participate in this intense initial attempt to connect with industry. Individual faculty or small subgroups of RUNEG faculty will develop brief research plans, which will be discussed by the entire RUNEG group and approved for funding by majority vote based on the following set of predefined criteria:

- A letter of interest from a neuroscience-focused company confirming the value of the proposed work as a foundation for future research sponsorship
- A statement of work (SOW) that describes how the seed funding will be used to generate initial data of interest to a potential industrial partner
- A statement outlining the potential intellectual property and patent issues. If needed a confidentiality agreement or materials transfer agreement will be executed before any data will be disclosed to the industrial partner.

The need to be responsive to industry and to be able to generate pilot data in a timely manner provides a strong rationale for distributing these small seed funds on a “first-come-first-served” basis. We will provide these seed funds to projects that meet the above eligibility requirements until all available funds (approx. \$36,000) are expended.

3. Institutional Matching of Industry-Sponsored Research

The New Jersey Center for Biomaterials (NJCBM) has substantial experience with running academic-industrial matching programs, dating back to NJCBM’s pilot activities in 1992. Starting from a modest seed fund similar to the one proposed here, the NJCBM grew over the next several years into a 60-member New Jersey-wide faculty network that collectively generated \$8M of federal funding, \$4M of industry funding, and \$8M of foundation and venture funding to support innovative biomaterials research in the State of New Jersey.

Here we propose to implement the lessons learned from the success of the NJCBM by asking for a modest amount of \$50,000 to initiate an institutional matching program for industry-sponsored research. We feel strongly that in today’s resource-limited environment, the availability of even such modest amounts of matching funding can be a key factor in convincing industry to work with Rutgers faculty. We have created *objective criteria* for the allocation of funds, eliminating the always subjective and potentially adversarial evaluation by panels of peers. We therefore propose that Rutgers seed funding be provided on a first-come-first-served basis to neuro- engineering projects that:

- (1) have a complete statement of work for the project agreed to by the academic laboratory and its industrial partner,
- (2) have at least a real dollar 1:1 matching commitment from the industrial partner, effectively doubling the available resources,
- (3) have a ready-to-sign research agreement that spells out the intellectual property arrangements between Rutgers and the company

If these conditions are fulfilled, the matching fund will provide up to \$25k per partnership per year. No team will be eligible for funding for more than two consecutive years and for more than \$25,000 per year. In this way, we will be able to fund 2 parallel industry-academia partnerships/year based on an initial allocation of \$50,000 for this purpose.

B&C) ALIGNMENT WITH THE STRATEGIC PLAN AND ADDITIONAL ELEMENTS ADDRESSED

The RUNEG INITIATIVE responds to the clearly recognized need for ***“Tomorrow’s University”*** to be connected with Industry for three key reasons: (1) State and federal governments require research activities to be increasingly linked to societal impact and measurable outcomes. One way to achieve societal impact is to translate Rutgers research advances into clinically used products by close collaboration with industry. (2) Research support from industry can be an important component of the university’s total research enterprise. In today’s climate of reduced government support for basic research, finding ways to enhance faculty interactions with industry is widely regarded as critical. (3) Since the number of new academic positions is limited, the vast majority of our science students will find employment in industry. To provide our students with industrial contacts and a clear understanding of how to integrate into the industrial workforce, we have an educational obligation to expose our students to industry-sponsored research experiences. This is particularly important at the graduate level.

RUNEG also responds to the strategic goal of ***“building faculty excellence”*** in the field of neuro-engineering by enhancing opportunities for internal collaboration among faculty from different disciplines, external collaboration with industry, and enhanced outreach to industry. In doing so, our initiative also builds greater capacity for internal and external partnerships as a key to creating “tomorrow’s university.” To the extent that the new collaborations created by RUNEG lead to funded research programs, RUNEG will generate ***“financial resources in support of our aspirations”***. Since RUNEG’s ultimate goal is to support the translation of the scientific work of its faculty into medical products and therapies, we will also contribute to ***“improving the health and wellness of individuals”*** worldwide who suffer from trauma and neurodegenerative diseases. The scope of RUNEG’s research combined with its collaborative approaches has the strong potential to lead to significant advances and/or translational successes, thereby enhancing ***“Rutgers’ public prominence”***.

D) WHO WILL BE INVOLVED: RUNEG’s MEMBERS AND GOVERNANCE

Twelve faculty members (see listing below) coalesced to found RUNEG as part of the larger “neuroscience initiative” at Rutgers. RUNEG’s cross-functional team is drawn from five departments in three schools: SAS, Engineering and RWJMS. RUNEG assembled under the leadership of Joachim Kohn, Director, NJCBM. RUNEG is a self-governing group; Joachim Kohn serves as its coordinator and facilitator. All decisions are made by majority vote of the faculty. Membership is open to any faculty member whose research matches the RUNEG focus. New members are accepted by majority vote of all existing members at the time.

RUNEG’s Charter Members

1. Bonnie Firestein, PhD – Professor, Cell Biology and Neuroscience, Rutgers
2. Martin Grumet, PhD – Professor, Cell Biology and Neuroscience, Rutgers
3. Ronald Hart, PhD – Professor, Cell Biology and Neuroscience, Rutgers
4. Hilton Kaplan, MBBCh, FCSSA, PhD – Associate Research Professor, NJCBM, Rutgers
5. Joachim Kohn, PhD, FBSE – Board of Governors Professor, Rutgers
6. KiBum Lee, PhD – Associate Professor, Chemistry and Chemical Biology, Rutgers
7. Prabhas Moghe, PhD – Distinguished Professor, Biomedical Engineering and Chemical and Biochemical Engineering, Rutgers
8. Zhiping Pang, PhD – Assistant Professor, Rutgers – Robert Wood Johnson Medical School, Child Health Institute of New Jersey
9. Melitta Schachner, PhD – Distinguished Professor, Cell Biology and Neuroscience, Keck Center for Neuroscience, Rutgers
10. David Shreiber, PhD – Associate Professor, Biomedical Engineering, Rutgers
11. Wise Young, MD, PhD – Distinguished Professor, Cell Biology and Neuroscience, Keck Center for Neuroscience, Rutgers
12. Jeffrey Zahn, PhD – Associate Professor, Biomedical Engineering, Rutgers

E) DESIRED OUTCOMES

The proposed Industry Showcases will open the door for increased interactions between Rutgers faculty and companies focused on neuroscience. RUNEG’s faculty will intensify the interactions and collaborations between them. Considering the breadth of faculty expertise, an interdisciplinary core group in the field of neuro-engineering will emerge. With increased visibility other faculty will join to further complement the collective expertise. As a short-term goal, RUNEG will be a focal point for industrial collaborations and for exploring new business models for industry sponsorship of research at Rutgers. The proposed seed fund mechanism will allow faculty to shift some of their research activities toward questions of particular interest to industry. With support from the proposed matching fund mechanism, the initial interactions will develop into industry-sponsored research programs. The overall outcomes of funding this modest request can be far-reaching: Increased research funding for faculty, enhanced training opportunities for our graduate students, visibility in the field of neuro-engineering, and a model for building similar faculty-driven initiatives in other fields.

F) ANTICIPATED RESOURCES TO SUPPORT RUNEG

This proposal requires \$94,000 to support the three-component RUNEG program for one year (see Table below).

Timeline of anticipated funding phases during FY2015.

FY2015	Q1	Q2	Q3	Q4
Internal Seed Fund to stimulate the development of preliminary data for future interactions with industry		12,000	12,000	12,000
Two RUNEG Industry-Academia Partnering Events (Dec 2014, May 2015)		4000		4000
Match to Industry Awards for Specific Projects (up to 25K/project/year)		25,000		25,000
Totals	\$0	\$41,000	\$12,000	\$41,000

=====END OF PROPOSAL TEXT=====

Proposed Measures to Mark Progress or Determine Success

This program has objective, quantitative measures of success.

Two RUNEG outreach events will be organized. The immediate indication of success will be an increasing number of participants from industry, representing an increasing diversity of companies. A doubling of the number of industry participants and represented companies at the third outreach event, as compared to the March 2014 inaugural event would be regarded as a success. This would require the participation of more than 42 scientists and managers from industry, representing 22 different companies

The number of companies participating in RUNEG activities is another direct and objective measure of RUNEG's progress toward the goal of becoming a magnet for industrial interactions. As an outcome of the first RUNEG Showcase on March 12, 2014, eight companies have agreed to provide letters of intent, or expressions of interest in future interactions with RUNEG faculty. This is an exciting and outstanding start. Upon successful completion of the RUNEG activities proposed here, we expect to have firm research or collaboration agreements in place with a select subgroup of at least three of these companies. In addition, we expect to have established a working connection with 15 neuroscience companies interested in working with Rutgers faculty.

Finally, the establishment of two new industrially sponsored research programs in the field of neuro-engineering would be an outstanding achievement. Since the companies have to maintain at least a 1:1 match, a minimum of \$50k of new industrial research support will be generated. The number of matched research interactions that grow into long-term sponsored research programs will be a measure of the success of RUNEG.

We also have the expectation that the interaction with Eileen Murphy's TRIGGER program will position the RUNEG faculty for attracting federal research support. The first immediate indication of success will be the generation of funding proposals that RUNEG faculty will credit to the TRIGGER program.

Appendix

Letter of support signed by Dr. Chris Molloy on the collaboration with the proposed TRIGGER Program

Letters of Intent and Expressions of Interest obtained from companies who participated in RUNEG's inaugural event on March 12, 2014

Press Release highlighting RUNEG and the inaugural event

**Letter of Support
From
ORED, Rutgers**

April 14, 2014

Richard L. Edwards
Executive Vice President for Academic Affairs
83 Somerset Street, Rm 101
Rutgers, The State University of New Jersey
New Brunswick, NJ 08901-1281

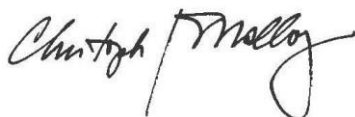
Subject: Letter of Support to Participate in "RUNEG"

Dear Dr. Edwards:

I am delighted that staff in my program and in Foundations are collaborating with Joachim Kohn and his group in their Rutgers University Neuro-Engineering (RUNEG) proposal. ORED is submitting a proposal through the New Brunswick Strategic Planning Project, Teeing up Rutgers Investigators for Gifts, Grants, Engagement, and Results, (TRIGGER) that includes participation by RUNEG. RUNEG will be one of the five focus groups being developed under TRIGGER for team building and intensive partnership-building for philanthropic and federal funding. While Joachim's focus is on industry funding, TRIGGER's focus is on foundation and federal funding opportunities. The efforts from each proposal will complement and enhance each other. Joachim has also agreed to serve as a critical member of the Steering Committee for TRIGGER, offering significant advice on the directions of future multidisciplinary research for the University.

I look forward to being part of this exciting effort to provide insights, vision and empowerment to the faculty of Rutgers-New Brunswick.

Sincerely,



Christopher J. Molloy,
Senior Vice President ORED

Expressions of Interest From Industry



April 10th 2014

To:
Joachim Kohn, Ph.D.
Board of Governors Professor
Rutgers, the State University of New Jersey
145 Bevier Road, Piscataway, NJ 08820

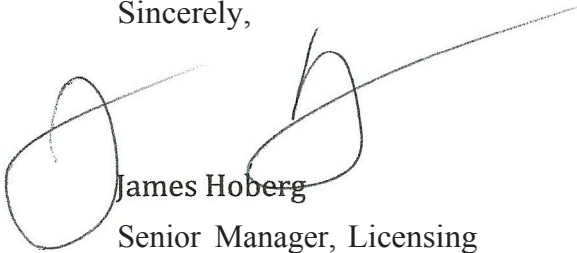
Sub: Letter of interest in participating in the future activities of RUNEG

Dear Prof. Kohn,

We truly enjoyed the March 12 Inaugural Industry Showcase of the newly formed Rutgers University Neuro-Engineering Group (RUNEG). The scientific projects presented by yourself and your fellow researchers at Rutgers provided us with a good understanding of your research interests and the expertise Rutgers can offer in the field of Neuro-Engineering.

We are very interested to see what else Rutgers has to offer and believe that the RUNEG initiative has the potential to grow into a platform for industry to interact with academia on a regular and productive basis. I am writing this letter to confirm to you that we at EMD Millipore are in support of the activities at RUNEG and will be delighted to participate in the future activities of this group.

Sincerely,

A handwritten signature in black ink, appearing to read 'James Hoberg', is written over a horizontal line. The signature is stylized and somewhat cursive.

James Hoberg
Senior Manager, Licensing



Celgene Cellular Therapeutics

7 Powderhorn Drive

Warren, New Jersey 07059

Joachim Kohn, PhD
Rutgers University
145 Bevier Road

April 13, 2014

Piscataway, NJ 08854

Dear Professor Kohn,

We are writing to express our enthusiastic support for enhanced interactions of Rutgers with industry as part of your vision for "Tomorrow's University". Our support comes from what we felt was a very successful inaugural Neuro-Engineering Showcase, which generated tremendous excitement within our division. We found this showcase to be a refreshing and unique opportunity for personal interactions between academia and industrial collaborators. The relaxed atmosphere provided a conducive environment for generating ideas, and the mutual enthusiasm for the approach was palpable.

As a follow up to the first showcase, it would be useful to hold subsequent meetings to maintain the progress of the program and further facilitate the discussions amongst collaborators. Further, seed funding to initiate projects between academic and industrial partners would be incredibly beneficial. This would provide an opportunity and outlet for industry to move forward with creative and innovative ideas, which may not fall within the current scope and budget of the immediate corporate goals. Collaborating with a reputable university such as Rutgers and working with their highly talented group of professors may allow some projects to come to fruition.

Once again, we would like to restate our interest in this Neuro-Engineering initiative. Please keep us informed of the next steps and let us know how we can help further facilitate this initiative.

Sincerely yours,

A handwritten signature in cursive script that reads "Kristen S. Labazzo".

Kristen S. Labazzo, PhD

Principal Scientist, Cell Therapy Research

Celgene Cellular Therapeutics

Subject: RUNEG

Date: Friday, April 4, 2014 9:43:56 AM Eastern Daylight Time

From: David W. Anderson <dwa@gentisinc.com>

To: Kohn, Joachim <Kohn@dls.rutgers.edu>

Dr. Kohn:

I was quite impressed by the session that you and the other researchers held as an industry interface the other day at Rutgers. The presentations clearly presented to industry a new, more outward focused set of programs that I think we all found refreshing. The opportunity to participate with Rutgers and your partners at UMDNJ in creating a new generation of therapeutic devices to help a large and growing market in this area is attractive and should result in a number of cooperative efforts to commercialize these breakthrough concepts.

Please continue to expand and enhance the program and broaden the outreach to all the potential industrial and commercial partners,

Sincerely,

David

David W. Anderson

President and CEO

Gentis, Inc.

dwa@gentisinc.com

610-771-0990 (O)

610-457-8707 (Mobile)

Subject: FW: Interest in Research Collaboration

Date: Friday, April 11, 2014 2:03:00 PM Eastern Daylight Time

From: Shrey Shah <shahs@dls.rutgers.edu>

On Apr 11, 2014, at 13:23, "faboharb@theplasticsurgerycenternj.com" <faboharb@theplasticsurgerycenternj.com> wrote:

Dear Dr. Kaplan

Please take this letter as a statement of our interest in working together to develop and use animal models for the study of Peripheral nerve regeneration.

At the Plastic Surgery Center of NJ, we are looking to develop novel techniques to facilitate peripheral nerve regeneration in patients suffering from PNS deficits. Dr. Andrew Elkwood and Dr. Matthew Kaufman's many years of experience have served as a basis for identifying shortcomings present in today's "standard of care" procedures for many debilitating PNS related conditions. The scientific literature is saturated with many nascent therapies we want to investigate, including the use of different biological active factors, conduits, and drugs to facilitate peripheral nerve regeneration.

Our innovative surgeries in the fields of diaphragm and upper extremity re-animation are our first steps toward changing how peripheral nerve injury is handled. We look forward to working with you and the Rutgers Animal Care facility in the near future.

Best Regards,
Farid Aboharb
Research Coordinator
The Institute for Advanced Reconstruction

Thursday, April 10, 2014 3:29:57 PM Eastern Daylight Time

Subject: FW: An update: RUNEG is asking Rutgers for internal funds to support Industry
Date: Thursday, April 10, 2014 3:29:37 PM Eastern Daylight Time
From: Shrey Shah <shahs@dls.rutgers.edu>

From: Sam Shefer <sam@salvona.com>
Date: Thursday, April 10, 2014 3:18 PM
To: "Kohn, Joachim" <Kohn@dls.rutgers.edu>
Cc: Shrey Shah <shahs@dls.rutgers.edu>
Subject: Re: An update: RUNEG is asking Rutgers for internal funds to support Industry

Thursday, April 10, 2014

Dear Prof Kohn

You initiative to form RUNEG, an industry focused research team, looks promising. My Company, Salvona Technologies LLC., would be very interested to collaborate with faculty, scientists, in the filed of delivery systems, skin therapies, transdermal delivery, biomaterials, biodegradable materials etc., for our applications. We are facing technical challenges that slowing our development and therefore delaying launching products that the market needs. I hope that academic research members of the RUNEG will be interested and able to support our industrial product development to eventually come out with products that help humanity.

Warm regards, Sam Shefer PhD
CEO Salvona Technologies LLC

Dr. Sam Shefer
CEO
Salvona Technologies Inc.,
Tel: 609 655 0173, Cell: 732 690 3173
Fax:
609 655 9291 skype: salvonasam
Address: 65 Stults Rd., Dayton, NJ 08810
WWW.SALVONA.COM

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RUNEG Press Release

New Initiative in Neural Engineering at Rutgers

The application of advanced research to address peripheral nerve regenerative medicine was the focus of the Rutgers University Neuro-Engineering Group's inaugural Industry Showcase recently at Rutgers, The State University of New Jersey.

More than 20 representatives of biomedical device companies participated in the event, which was held in the Life Sciences Building on Busch Campus in Piscataway March 12 and hosted by [The New Jersey Center for Biomaterials](#).

Rutgers President Robert Barchi opened the showcase and welcomed the visitors from industry and participating Rutgers scientists.

"I know there are significant opportunities for the development of innovative neuro-engineering therapies," Barchi said. "New Jersey can be a leader in this development both because of the concentration of forward-looking companies in our state and because of all the academic resources Rutgers brings to the table."

Richard Caruso, founder of Integra Life Sciences, based in Plainsboro, N.J., was the featured guest speaker. He was followed at the podium by Christopher Molloy, Rutgers senior vice president for research and economic development. Next were individual scientific presentations Rutgers faculty members, who detailed their research programs and laboratory facilities. Industry representatives were able to engage in one-on-one follow-up discussion with the faculty members to explore possible collaborative research projects.

This initiative is being led by Joachim Kohn, professor of chemistry and chemical biology and director of the New Jersey Center for Biomaterials. Kohn is a Fellow of the National Academy of Inventors and an expert in academia-industry interactions.

"This is a bold experiment, designed to create an enhanced, faculty-driven path for the formation of partnerships with industry with the goal of translating research advances into products and therapies that improve our healthcare," Kohn said.

The mission of the Rutgers University Neuro-Engineering Group is to facilitate translational research for the development of devices that enhance central and peripheral nerve regeneration, restoration of motor and sensory function, and transmission of neural signals by brain-computer interfaces. While focusing on biomaterials science and the engineering disciplines, RUNEG will bring together researchers from neuroscience, chemical biology, imaging, stem-cell technology, nanotechnology, and computational modeling, as well as physicians.

RUNEG will foster collaborative and interdisciplinary research efforts to enhance understanding of the multidisciplinary field of neural engineering, devices, and cellular therapies to enable the translation of technology from bench to bedside. The group will seek active participation from the members of the biomedical device and pharmaceutical industries to accelerate the transfer and commercialization of inventions and technologies into clinically useful products and therapies through streamlined steps.

An important objective of RUNEG is to provide cutting-edge training and education, in the form of seminars and a yearly workshop, delivered by world-class investigators within RUNEG as well as invited speakers who lead their fields. These events will enhance learning, communication, and collaboration for neuroscientists in industry and academia.

More information, including a list of participating scientists and links to their websites, is posted on [the RUNEG website](#). Industry inquiries can be directed to Prof. Kohn, kohn@rutgers.edu, and Louli Kourkounakis, 732-445-0488, ext. 40001, or cbmfrontdesk@dls.rutgers.edu.