

Rutgers University—New Brunswick Strategic Planning Proposal

Proposal Title: Rutgers University Consortium in Autism (RUCA)

Proposal Initiator: Graduate School of Applied and Professional Psychology (GSAPP)

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

- Envision Tomorrow's University
- Build Faculty Excellence
- Transform the Student Experience
- Enhance Our Public Prominence
- Strong Core of Sciences and Humanities
- Inclusive, Diverse, and Cohesive Culture
- Effective and Efficient Infrastructure and Staff
- Financial Resources Sufficient to Fund Our Aspirations
- Robust Shared Governance, Academic Freedom, and Effective Communication
- Cultures, Diversity, and Inequality—Local and Global
- Improving the Health and Wellness of Individuals and Populations
- Creating a Sustainable World through Innovation, Engineering, and Technology
- Educating Involved Citizens and Effective Leaders for a Dynamic World
- Creative Expression and the Human Experience
- Measuring Progress and Defining Success

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

Together with a range of talented autism focused investigators, clinicians, and faculty, the Graduate School of Applied and Professional Psychology (GSAPP) proposes to facilitate a strategic initiative to package together Rutgers' autism research and autism related projects in a cohesive, marketable consortium in two stages: Phase I: Near-Term Capacity Building (Years 1 – 3) and Phase II: Long-Term Development - Rutgers Center of Excellence in Autism (Years 3 – 6). Previous submissions to build centers for autism have involved significant resources, physical space, staff, and operating committees/structure, etc. However, this proposal seeks to leverage current resources across multiple units and disciplines with initial seed funding of \$390,000 over three years for a near-term capacity building period, followed by a second phase of long-term consortium development.

The proposed Rutgers University Consortium in Autism (RUCA), will position Rutgers as a national leader in autism, including education, training, treatment, and applied, clinical, and basic scientific research.

Full Proposal Description (5-page limit)

Rutgers University Consortium in Autism (RUCA)

Overview & Need

Autism and Autism Spectrum Disorders (ASD) are the fastest growing developmental disabilities in the United States. Autism is a serious and growing health issue facing the citizens of New Jersey and the US. The most recent national occurrence rate cited is at 1 in 68. However, the prevalence in New Jersey is much greater with estimates at 1 in 49 being affected.

There is significant breadth and depth of autism expertise across many units and disciplines at Rutgers whereby increased cross-collaboration will leverage new discovery, increased funding and national visibility. Together with a range of talented autism focused investigators, clinicians, and faculty, the Graduate School of Applied and Professional Psychology (GSAPP) proposes to facilitate a strategic initiative to package together Rutgers' autism research and autism related projects in a cohesive, marketable consortium. The proposed Rutgers University Consortium in Autism (RUCA), will position Rutgers as a national leader in autism, including education, training, treatment, and applied, clinical, and basic scientific research.

Rutgers University is uniquely qualified to integrate education, scientific research, clinical training, and direct service in autism. The Rutgers University Cell and DNA Repository contains the world's largest collection of autism biomaterials, and the availability of these samples without charge has provided a tremendous advantage to Rutgers researchers in competing for national research funding on autism. The integration of Robert Wood Johnson Medical School and the establishment of the Rutgers Biomedical and Health Sciences combined with strengths in cognitive psychology and over 40 years of behavioral clinical psychology at GSAPP and the newly established Karmazin Lillard Chair in Adult Autism position Rutgers as a powerhouse in autism. Research on the causes and treatments of autism is also a high priority for the State of New Jersey, with ~\$4M per year allocated for autism research, treatment, and education. Researchers at Rutgers and affiliated hospitals have been awarded approximately 75% of the current State autism research funding. This funding, together with federal and foundation grant support, has allowed strong individual research programs to thrive at Rutgers.

RUCA Mission: To position Rutgers as recognized among the nation's and the world's leading universities in autism research, improving the health and wellness of individuals and populations and supported by strong internal and external stakeholders.

RUCA Vision: To establish the RUCA as the platform necessary to build a federally designated Center of Excellence in Autism at Rutgers.

Previous submissions to build centers for autism have involved significant resources, physical space, staff, and operating committees/structure, etc. However, this proposal seeks to leverage current resources across multiple units and disciplines with initial seed funding for a near-term capacity building period, followed by a second phase of long-term consortium development.

Phase I: Near-Term Capacity Building (Years 1 - 3)

Initial goals will include leveraging existing personnel across multiple units as well as the deployment of new resources over a three-year period to support and facilitate Phase I Capacity Building, providing for: the development of a comprehensive website that catalogs, highlights and packages autism foci throughout the university; regular on-campus sessions for internal sharing key research interests; a central role for organizing multiple units for public and private grant proposals; leverage current Rutgers alumni and Rutgers donors along with past and present Rutgers volunteer leaders involved in agencies including Autism Speaks (National) and Autism Speaks (New Jersey) and private foundations; and establish task force to develop strategic plan for Phase II RUCA; and marketing opportunities/materials, media relations, and enhanced public awareness. Additional objectives may include the development of an annual conference involving Rutgers faculty, staff, local/state agencies, and the community.

These Phase I goals and objectives will be developed together with a champion from the proposed RUCA participants listed in the following chart.

Preliminary List of Consortium Participants:

Affiliation	Discipline	Location
New Jersey Autism Center (NJMS)	psychiatry, pediatrics, psychology	Newark
Robert Wood Johnson Autism Center	pediatrics	New Brunswick
Robert Wood Johnson Medical School Autism Clinic	psychiatry	Piscataway
Robert Wood Johnson Medical School Neuroscience and Cell Biology	neuroscience	Piscataway
Child Institute of New Jersey (CINJ)	pediatrics, pharmacology	New Brunswick
Graduate School of Applied and Professional Psychology (GSAPP)	psychology, Karmazin Lillard Chair in Adult Autism	Piscataway
Douglass Developmental Disabilities Center (DDDC)	clinical psychology, applied behavioral analysis, school psychology, speech, education	New Brunswick
College Support Program for Rutgers Students with Autism, ASD, Asperger's (CSP)	counseling, psychology	New Brunswick
Natural Setting Therapeutic Management (NSTM)	clinical psychology, behavioral psychology	Piscataway
Center for Molecular and Behavioral Neuroscience (CMBN)	language	Newark
Department of Genetics	genetics, language (NJLAGS)	Piscataway
Research on Autism at Rutgers (ROAR)	psychology	Newark
Cell & Neurobiology	neuroscience	Piscataway
RUCDR Infinite Biologics	biomaterial, generation of iPSC, high throughput sequence and gene expression analysis	Piscataway
Rutgers University Center for Cognitive Sciences (RUCCS)	cognitive psychology	Piscataway
Computational Biomedicine Imaging and Modeling Center (CBIM)	computer science	Piscataway

Center for Advanced Infrastructure and Transportation (CAIT)	planners, engineers, designers	Piscataway
Alan M. Vorhees Transportation Center and New Jersey Travel Independence Program (NJTIP)	transportation research, public policy research – (Bloustein School)	New Brunswick
John J. Heldrich Center for Workplace Development	research/policy in employment for individuals with autism	New Brunswick

In addition, it is proposed that RUCA members will work together to develop cross unit concept proposals for external funding; conduct and develop intervention-focused research projects in new areas such as sleep, nutrition, GI, and others; disseminate research findings and guidelines to providers, parents, and other relevant audiences; develop/distribute a quarterly newsletter; significantly increase publications in peer reviewed journals; and present findings and guidelines at national and international conferences.

Phase II: Long-Term Development - Rutgers Center of Excellence in Autism (Years 3 – 6):

Strategic Planning Task Force from Phase I to explore novel concepts and protocols for internal cross unit research opportunities as well as multi-center studies, including longitudinal studies to improve treatment interventions, transition/vocational/recreation planning for adults with autism.

Strategic Planning Task force may explore a number of potential opportunities, objectives, and directions, including, but not limited to:

- Endowed Chairs – i.e., Disabilities Technology - Computer Science, Engineering, Robotics; Autism Research – Genetics, Microbiology, Neuroscience; Translational Research – Behavioral/Cognitive Psychology, Clinical Psychology, Pharmacology, Clinical Trials;
- Postdoctoral Fellowships in Translational Autism Research - Neurochemistry, Neuropsychology, Neuroimaging, Behavioral Neuroscience; Clinical Research and Training;
- New longitudinal studies that will improve care/outcomes and inform public policy;
- New research studies on genetic risk, brain biology, and motor impairment to improve early diagnosis and intervention;
- Medical/Clinical Training Models - integrating mental health and health psychology with medical and allied health professional education and training;
- Genome studies to help guide the development of new medicines along with new drugs for to relieve autism symptoms;
- Large-scale training grants examining the socialization, daily living, residential living, and career paths of adults with autism; and
- Dissemination on evidence-based practices and emerging issues, including the growing economic burden created by autism that impact children, adolescents, and adults with autism and their families to researchers, agencies, policy-makers, service providers, and families.

Alignment with Rutgers Strategic Plan:

The proposed RUCA addresses Rutgers' primary strategic priority of Improving the Health and Wellness of Individuals and Populations: Adults with autism and ASD face growing challenges in overall quality of life and in health and wellness. Rutgers is committed to improving the health and wellness of these individuals and populations, and the RUCA will be poised to help address the health challenges of this growing population, locally and globally. Through our depth of expertise and broad range of interdisciplinary work in the field of autism, we have the combined intellectual capacity to make significant impact in addressing the challenges facing individuals and families touched by autism. Our faculty and students will work hand-in-hand with local agencies and communities to address critical health and wellness challenges in autism. From our position of strength in the biological and behavioral sciences, RUCA will help bridge the gap between knowledge and implementation, expanding the discovery and implementation of evidence-based treatments, prevention, and wellness strategies.

Build Faculty Excellence: The RUCA will enhance scholarship and discovery across multiple disciplines with leading academic and research integration of undergraduate, graduate, and professional education for Rutgers students. Enhance Public Prominence: The RUCA's comprehensive communications and marketing efforts will provide consistent, targeted ongoing internal and external promotion of faculty, student, staff, and alumni achievement in the autism field.

Rutgers Strategic Plan Themes, Priorities and Elements:

Through innovative education, research, and clinical training/service, the RUCA will foster interdisciplinary research and the education of tomorrow's professionals and leaders in a real world setting. The RUCA will give Rutgers students the experience of testing ideas in practice in on-campus settings where they can participate in a broad range of research, practice, and policy foci. Outcomes central to the RUCA academic and research platform will lead to the implementation of evidence-based treatments, prevention, and wellness strategies, helping to bridge the gap between education, practice, and public policy as it pertains to those challenged by autism.

Proposed Measures to Mark Progress or Determine Success:

Preliminary objectives and outcomes from the RUCA strategic initiatives will include:

- Recognition for Rutgers as the leader in the field of adult autism through fulfilling Rutgers' mission of education, research, and public service;
- Increased faculty recognition and participation in national awards/academies;
- Enhanced education and training of students in the autism field, supported by new undergraduate scholarship and graduate fellowship awards/funding;
- RUCA as an incubator for ongoing development of advanced technology for this population;
- Research opportunities complementing the Karmazin and Lillard Chair in Adult Autism;
- Widespread dissemination of programs in autism, garnering attention to Rutgers from governmental agencies, autism organizations, and private donors;
- Effective public policy relating to the service needs of adults with autism including access to services, housing, employment, transportation and other necessary programs;
- New state/federal grants, agency support, and private donations in autism; and
- Rutgers as the leading destination for students, faculty, professionals, and funders interested in autism discovery, supported by dedicated internal/external stakeholders.

Achieving our University's goals and realizing our aspirations will require leadership, strategy, and facilitation that can build a cohesive consortium in which everyone works together toward common goals. All members the RUCA will have the opportunity to contribute their talents and expertise for the common good. Building such a community requires leaders at all administrative levels who are collegial, responsive, and open; who lead efficiently and transparently; and who communicate effectively. The success of the consortium also requires shared responsibilities, utilizing existing faculty, staff, and resources to help facilitate the RUCA. Doing so will require a holistic approach to education, discovery, and translation across the entire biomedical, social, behavioral, and public health research continuum. This proposal is designed to be flexible enough to be integrated with any similar efforts around autism at Rutgers. The proposed RUCA, will put Rutgers at the forefront in developing solutions to a problem of increasing national importance and focus.

Phase I: Capacity Building (Years 1 - 3):

Grant Facilitation Support Public Sources	\$150,000
Grant Facilitation Support Private Sources	\$120,000
Marketing and Communications Materials/Support	\$ 70,000
Website Development/Ongoing Maintenance	<u>\$ 50,000</u>
Total Phase I (Over Years 1 - 3)	\$390,000

Our combined expertise in the autism field is unparalleled, and Rutgers faculty and staff have built national reputations on the education, research, and training of undergraduates, graduate students, and postdoctoral fellows. This breadth and depth of intellectual capacity at Rutgers has tremendous potential for innovation and discovery, supporting the aim of the RUCA to create new interdisciplinary approaches to expand education, research, and clinical activities at Rutgers. Bringing together all autism efforts at Rutgers, creates a powerful and productive combination of scientific research and clinical expertise to accelerate discovery and provide an ongoing forum for researchers, academics, educators, providers, policy makers, clinicians, and families to confer and share best practices.

Thank you for your time and consideration of this major and urgent initiative to accelerate discovery for our citizens and their families living with autism. The support of Phase I Capacity Building for the Rutgers University Consortium in Autism (RUCA) will bring immediate national and international visibility to Rutgers University.

Proposal Contributors:

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Please save your proposal as a Word document and submit it as an email attachment to NBStratPlanProposals@rutgers.edu by April 15, 2014.