Faculty

Over 70 funded laboratories in several Rutgers Colleges + Robert Wood Johnson Medical School

Faculty located in 9 different departments with most in near-contiguous space on Busch Campus
(some new faculty at Child Health and Animal Science, Cook)

Eighteen new Neuroscience Faculty last three years
(see next page for last several years)

See our Website for more information
New Faculty

29 New Faculty—last 9 years—(16 Rutgers; 13 RBHS)—18 from 2018 to 2020 in Bold

<table>
<thead>
<tr>
<th>Name</th>
<th>Department</th>
<th>Year</th>
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<tbody>
<tr>
<td>Zhiping Pang</td>
<td>Neuroscience &amp; Cell Biology/CHI</td>
<td>2011</td>
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<tr>
<td>Davide Comoletti</td>
<td>Neuroscience &amp; Cell Biology/CHI</td>
<td>2011</td>
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<tr>
<td>David Margolis</td>
<td>Cell Biology &amp; Neuroscience</td>
<td>2012</td>
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<tr>
<td>Qian Cai</td>
<td>Cell Biology &amp; Neuroscience</td>
<td>2012</td>
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<tr>
<td>Troy Roepke</td>
<td>Animal Sciences</td>
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<tr>
<td>Kelvin Kwan</td>
<td>Cell Biology &amp; Neuroscience</td>
<td>2013</td>
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<tr>
<td>Gary Aston-Jones</td>
<td>Psychiatry</td>
<td>2014</td>
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<tr>
<td>Elizabeth Torres</td>
<td>Psychology</td>
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<tr>
<td>Kasia Bieszczad</td>
<td>Psychology</td>
<td>2015</td>
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<tr>
<td>Ben Samuels</td>
<td>Psychology</td>
<td>2015</td>
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<tr>
<td>Nicholas Bello</td>
<td>Animal Sciences</td>
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<tr>
<td>Peng Jiang</td>
<td>Cell Biology &amp; Neuroscience</td>
<td>2018</td>
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<tr>
<td>Max Tischfield</td>
<td>Cell Biology &amp; Neuroscience/CHI</td>
<td>2018</td>
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<tr>
<td>Victoria Abraira</td>
<td>Cell Biology &amp; Neuroscience</td>
<td>2018</td>
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<tr>
<td>Abdelfattah El Ouaamari</td>
<td>Medicine/CHI</td>
<td>2018</td>
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<tr>
<td>Ping-Yue Pan</td>
<td>Neuroscience and Cell Biology</td>
<td>2018</td>
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<tr>
<td>Anna Konova</td>
<td>Psychiatry/UBHC/BHI</td>
<td>2018</td>
</tr>
<tr>
<td>M. Chiara Manzini</td>
<td>Neuroscience &amp; Cell Biology/CHINJ</td>
<td>2019</td>
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<tr>
<td>Detlev Boison</td>
<td>Neurosurgery</td>
<td>2019</td>
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<tr>
<td>Annika Barber</td>
<td>Mol. Biology &amp; Biochemistry</td>
<td>2019</td>
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<tr>
<td>Brian Daniels</td>
<td>Cell Biology &amp; Neuroscience</td>
<td>2019</td>
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<tr>
<td>David Barker</td>
<td>Psychology</td>
<td>2019</td>
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<tr>
<td>Rafiq Huda</td>
<td>Cell Biology &amp; Neuroscience</td>
<td>2019</td>
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<tr>
<td>Hai Sun</td>
<td>Neurosurgery</td>
<td>2019</td>
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<td>Chris Pierce</td>
<td>Psychiatry</td>
<td>2020</td>
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<tr>
<td>Aaron Milstein</td>
<td>Neuroscience and Cell Biology</td>
<td>2020</td>
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<td>Kevin Monahan</td>
<td>Molecular Biology and Biochemistry</td>
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</tr>
<tr>
<td>Hiroki Nobuto</td>
<td>Neuroscience and Cell Biology</td>
<td>2020</td>
</tr>
<tr>
<td>Morgan James</td>
<td>Psychiatry</td>
<td>2020</td>
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</tbody>
</table>

More to come!!
1. Currently 30 students including 1 MD/PhD

6 new students in Fall, 2020; ~5-9/yr; at least 6 for Fall, 2021

(Labs also include students from other entering programs including Molecular Biosciences)

2. Distribution of students among labs tends to reflect location of participating faculty (~60% Rutgers/40% RWJMS)

Support from national Fellowships (e.g. NIH--3 current), several other fellowships from foundations, state agencies (many NJ agencies focused on neuroscience!!-2 current fellows), T-32 Training Grants, Research Grants, Teaching Assistantships
New External Fellowships: 2019/2020

Nofar Engelhard
NJCSCI

Mark Presker
NIH F30

Alex Yonk
NIH F30

New Internal Fellowships
T32 – Clinical Translational Training Grant
Alex Yonk
Courtney McDermott

T32-Biotech Training Grant
Christen Crosta

T32-Translational Addiction
Manny Alvarez

Ileana Fuentes
Conacyt Predoc

Anton Omenchenko
NJCTBI Predoc
INDIVIDUAL GRANTS FROM A VARIETY OF AGENCIES ARE AVAILABLE; Also TAships to provide teaching experience!
Strengths of Neuroscience Program

1. Graduate student outcomes (2/3 academic post-doc/last 10 years)

2. Many new junior faculty (18 last three years) ensure that newest technologies, experimental approaches, equipment are available to our students.

3. Abundance of world-class research programs:
   a. Growth of Brain Health Institute-Dr. Aston-Jones
   b. Neuroscience is Signature Area at Rutgers—even more faculty expected

4. Flexible curriculum reflects the diversity of program

5. Highly-supportive, interactive faculty—several students have co-published with multiple faculty
Brain Health Institute Focus Areas

**Neurodevelopment**
- Schizophrenia
- Autism spectrum disorders
- Language disorders

**Neurodegeneration & Injury**
- Parkinson’s
- Multiple sclerosis
- Traumatic Brain Injury and Spinal Cord injury

**Motivational & Affective Neuroscience**
- Anxiety & Depression
- Addiction (cocaine, opioid, alcohol)
- Eating disorders

**Cognitive & Sensory Neuroscience**
- Alzheimer's
- Pain
- Auditory disorders
Application to Rutgers Neuroscience

• Direct link to application on our attached link document
• **Research experience very important**
  (consideration of Covid19 impact)
• GRE not required
• Remote interviews for competitive students

Acceptance—via Fellowships:
• Stipend: $32,605
• Health insurance, various fees
• Tuition exemption, remission
Neuroscience Program Academics

Flexible curriculum

Requirements

Advanced Neurobiology-Fall, 1st semester
Advanced studies-4 semesters-detailed study of current topics in Neurobiology-rotating faculty

Three (3) research rotations

*Statistics/scientific rigor-required since 2017; ethics

Evolving curriculum in computational biology

Courses from Biochemistry, Mol. Bioscience Core, Pharmacology, Bioinformatics, Psychology as appropriate for interests that reflect broad interests of faculty

*Opportunities “iJOBS” to explore career alternatives-part of program

Neuroconnections-multi-faceted grad student group
“Timeline” for Neuroscience Ph.D.

Year 0-Apply!!! **Deadline December 1!!!!**
(Research experience (abstracts; pubs); letters of recommendation; good (improving) grades) **STIPEND $29,605 + tuition + health**

Year 1-Courses, rotations, find lab for future support

Year 2-Choose “thesis committee” to oversee reading for part I of qualifying exam (QE)

Year 3-Complete course work as well as writing and defense of the thesis proposal (part II of QE)

Year 4-5/(6)-Complete dissertation requirements (Annual meetings to get committee advice; 2x/yr with program director)

Yearly evaluation by Admissions/Thesis committee
Additional opportunities available for Neuroscience students

Interdisciplinary Job Opportunities for Biomedical Students (iJOBS)

Rutgers Graduate School of Biomedical Sciences
And School of Engineering

1 of 17 NIH-sponsored programs in country

Goal is to expose students and post-doctoral fellows to careers outside of academia (see next slide for some of the opportunities)

Ensure course work (statistics, computation/coding, communicating science) is available to support this effort
5 Career Paths of Several Presented:

• Industry/business management,
• Science/health policy
• Intellectual property/patent law
• Clinical and regulatory testing
• “Big data” analysis

Provides:

• Course in skills needed to succeed in business
• Site visits to NJ-based industries
• Shadowing opportunities for each track
• Networking opportunities
• Didactic courses for each track
• Potential to earn certificate in track