Master of Science in Reproductive Science and Medicine

Online Info Session
Beth Sefton, PhD
Director of Graduate Studies, MS-RSM
November 3, 2017
Outline

1. Program Overview
2. Center for Reproductive Science
3. Application and Admissions
4. Questions
Center for Reproductive Science Leadership

TERESA K. WOODRUFF, PhD
- 1st CRS Predoctoral Trainee: (1986-1989)
- CRS Assistant Director: (2006-2015)
- Dean, The Graduate School, NU (2017-present)

FRANCESCA E. DUNCAN, PhD
- CRS Postdoctoral Trainee (2009-2011)

ELIZABETH SEFTON, PhD
- CRS Predoctoral Trainee: (2007-2013)

PAMELA MONAHAN, PhD

Teresa K. Woodruff, PhD
Director

Francesca E. Duncan, PhD
Executive Director

Elizabeth Sefton, PhD
Director of Graduate Studies

Bryan Runkel
Finance Manager

Pamela Monahan, PhD
Lecturer

Chelsea Castleberry
Program Assistant

Northwestern University
Fall 2016 Students

Azza Akasha, MD
Mentor: Julie Kim, PhD

Dana Kimelman, MD
Mentor: Mary Ellen Pavone, MD

Allison Grover
Mentor: Francesca Duncan, PhD

Tracy Zhou
Mentor: Francesca Duncan, PhD

Yi Luan
Mentor: So-Youn Kim, PhD

Megan Runge
Mentor: Teresa Woodruff, PhD

Atsuko Kato, MD
Mentor: Francesca Duncan, PhD
Fall 2017 Students

Julia Balouch
Biology
Santa Clara University

Jennie Chen
Integrative Biology
UIUC

Sergio Cardona-Gonzalez, MD
Medicine
Universidad Autonoma de Guadalajara

Sheila Egan
Biochemistry
UIUC

Jordan Machlin
Biology
Brandeis University

Jenny Rowley
Global Health and Environment
Wash U, St Louis

Alexandra Fontaine
Biology/Psychology
Loyola Maryland

Kaitlin Hitt
Biology
Lewis University

Bin Roh
Biology
Olivet Nazarene University

Sharron Manuel, MD/PhD
Bioengineering, Immunology, Medicine
Tufts

Cynthia Salas
Biology
SUNY College Cortland

Leah Simon
Biology
UIC

Northwestern University
MS in Reproductive Science and Medicine Program

Beth Sefton, PhD
Director of Graduate Studies
### MS-RSM

- **Non-Thesis, Thesis Tracks**
- **Coursework**
- **Research**
- **Science Communication**

<table>
<thead>
<tr>
<th></th>
<th>Q1 (Fall)</th>
<th>Q2 (Winter)</th>
<th>Q3 (Spring)</th>
<th>Q4 (Summer)</th>
<th>Q5 (Fall)</th>
<th>Q6 (Winter)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Thesis Track</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phys. Endo</td>
<td>Repro. Dev.</td>
<td>Health &amp; Dis</td>
<td>(TGS 512)</td>
<td>(1-3 units)</td>
<td>(1-3 units)</td>
<td></td>
</tr>
<tr>
<td>Male Repro.</td>
<td>Research</td>
<td>Career Dev.</td>
<td>Elective</td>
<td>Elective</td>
<td>Elective</td>
<td>Elective</td>
</tr>
<tr>
<td>Phys. Endo</td>
<td>Proposals</td>
<td></td>
<td>(optional)</td>
<td>(optional)</td>
<td>(optional)</td>
<td></td>
</tr>
<tr>
<td>RCR</td>
<td>Research</td>
<td>Research</td>
<td>Elective</td>
<td>Elective</td>
<td>Elective</td>
<td>Elective</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(optional)</td>
<td>(optional)</td>
<td>(optional)</td>
<td></td>
</tr>
<tr>
<td>Repro. Tech.</td>
<td>Elective</td>
<td>Elective</td>
<td>Elective</td>
<td>Elective</td>
<td>Elective</td>
<td>Elective</td>
</tr>
<tr>
<td>Lab</td>
<td>(optional)</td>
<td>(optional)</td>
<td>(optional)</td>
<td>(optional)</td>
<td>(optional)</td>
<td></td>
</tr>
<tr>
<td>Select Mentor</td>
<td>Select</td>
<td>Proposal</td>
<td>Progress</td>
<td>Thesis</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Committee</td>
<td>Defense</td>
<td>Report</td>
<td>Completed</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Non-Thesis Track</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female Repro.</td>
<td>Human. Repro.</td>
<td>Human. Repro.</td>
<td>Research-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phys. Endo</td>
<td>Repro. Dev.</td>
<td>Health &amp; Dis</td>
<td>TGS 512</td>
<td>(Optional)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male Repro.</td>
<td>Research</td>
<td>Career Dev.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phys. Endo</td>
<td>Proposals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCR</td>
<td>Repro.</td>
<td>Repro.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Research I</td>
<td>Research II</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(2 units)</td>
<td>(2 units)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elective</td>
<td>Final Exam</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(optional)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# Thesis and Non-Thesis Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Core Reproductive Science Courses</strong></td>
<td></td>
</tr>
<tr>
<td>REPR_SCI 405: Female Reproductive Physiology and Endocrinology</td>
<td>1</td>
</tr>
<tr>
<td>REPR_SCI 407: Male Reproductive Physiology and Endocrinology</td>
<td>1</td>
</tr>
<tr>
<td><strong>Advanced Topic Reproductive Science Courses</strong></td>
<td></td>
</tr>
<tr>
<td>REPR_SCI 406: Human Reproductive Development</td>
<td>1</td>
</tr>
<tr>
<td>REPR_SCI 420: Human Reproductive Health and Disease</td>
<td>1</td>
</tr>
<tr>
<td><strong>Responsible Conduct of Research</strong></td>
<td></td>
</tr>
<tr>
<td>REPR_SCI 425: Responsible Conduct of Research in Reproductive Science</td>
<td>1</td>
</tr>
<tr>
<td><strong>Professional Development</strong></td>
<td></td>
</tr>
<tr>
<td>REPR_SCI 455: Research Proposals</td>
<td>1</td>
</tr>
<tr>
<td>REPR_SCI 497: Assessment and Career Development</td>
<td>1</td>
</tr>
</tbody>
</table>
Scientific Skills Workshops and Communication

- Thursdays, 11:00am-12:30pm

- CRS Collaborative Suite

- Understanding scientific manuscripts, seminars, and presentations

- Write a blog, perspective, or news and views article about a seminar or oral presentation
  - Translational Lectures in the Reproductive Sciences
  - Translational Reproductive Science in Medicine Summit
  - Oncofertility Conference
  - Women’s Health Research Institute Forums
  - Illinois Symposium on Reproductive Science

- Submit an abstract and present a poster or oral presentation
  - Oncofertility Conference
  - Translational Reproductive Science in Medicine Summit
Non-Thesis Track Required Research Courses and Final Exam

**Research Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Quarter</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>REPR_SCI 442: Reproductive Research I</td>
<td>Q2-Winter</td>
<td>2</td>
</tr>
<tr>
<td>REPR_SCI 443: Reproductive Research II</td>
<td>Q3-Spring</td>
<td>2</td>
</tr>
</tbody>
</table>

**Final Exam**

- 3 research based questions
- Administered and evaluated by a final exam committee of CRS faculty
- 2 weeks to prepare exam responses

- Evanston campus
- 12 hours/week conducting research in a classroom setting
- Optional research during summer quarter
Non-thesis track reproductive research

Reproductive Research Laboratory is designed for students with limited or no research experience who wish to engage in active research but in a more structured and guided classroom setting.

- Reproductive Research Laboratory will provide students tutorials and assistance with:
  - Laboratory basics
  - Experimental execution
  - Data acquisition and analysis
  - Communication of scientific work
- Students will explore and utilize state of the art core facilities to aid in their research projects
  - Center for Advanced Molecular Imaging
  - Biological Imaging Facility
  - High Throughput Facility
- Team research provides a cooperative and collaborative group environment that fosters scientific discovery and inquiry
Repro Research Lab Class Structure

- Laboratory skills and techniques workshops (first 3-4 weeks of class)
  - Guided tutorials that will cover molecular and cellular techniques that will be utilized for student research team projects (such as gene and protein isolation and quantification, histological analysis, cell culture techniques)

- Following these workshops, student research teams will focus on experiments for their respective projects with assistance from the instructor

A representative week in Repro Research Lab

<table>
<thead>
<tr>
<th>Schedule</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>Journal Club, Team project experiments</td>
</tr>
<tr>
<td>Tuesday</td>
<td>Team project experiments</td>
</tr>
<tr>
<td>Wednesday</td>
<td>Team project experiments, Group meeting discussion of data</td>
</tr>
</tbody>
</table>
This year’s projects

The influence of estrogen on Notch signaling in reproductive tissues

• Relevance- Estrogen and Notch influence cell growth and may be involved in reproductive tract cancers

• Hypothesis- Estrogen modulates Notch signaling in regulating reproductive tissue growth and development

• Techniques- Cell culture of primary and immortalized cells, histology, gene and protein analysis, gene knockdown, promoter analysis using reporter constructs

Characterization of vascular defects in placental development in a rat model of preeclampsia

• Relevance- Preeclampsia is associated with decreased trophoblast cell invasion, impaired maternal and fetal vasculature and the development of a hypoxic fetal environment

• Hypothesis- Alterations in regulators of angiogenesis contribute to the development of abnormal vasculature in an established rat preeclampsia model

• Techniques- Histology, gene and protein analysis, and localization of angiogenic and antiangiogenic factors

Notch reporter expression in ovarian somatic cells

Normal-placenta

Preeclampsia model

Courtesy of Rexxi Prasasya
Thesis Track - Required Research Courses

- Thesis projects stem from research conducted by research mentors.
- Thesis research questions address a smaller question within the larger research theme of the faculty research mentor.
- Attainable within 12-15 months working 20 hours/week minimum during fall, winter, spring and 40 hours/week during the summer.
- Thesis committee members (at least 2) provide additional expertise and perspectives on research projects.

<table>
<thead>
<tr>
<th>Course</th>
<th>Quarter</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>REPR_SCI 440: Reproductive Technologies Laboratory</td>
<td>Q1-Winter</td>
<td>1</td>
</tr>
<tr>
<td>REPR_SCI 595: Research</td>
<td>Q2-Winter</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Q3-Spring</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Q5-Fall</td>
<td></td>
</tr>
<tr>
<td>REPR_SCI 591: Thesis</td>
<td>Q6-Winter</td>
<td>1-3</td>
</tr>
</tbody>
</table>
# REPR_SCI 440

*Intensive laboratory-based course designed to provide thesis track students with exposure to a range of topics and associated technologies used in reproductive science and medicine*

<table>
<thead>
<tr>
<th>Module</th>
<th>Theme</th>
<th>Technique</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Course Orientation</td>
<td>Tissue processing &amp; histochemistry principles</td>
</tr>
<tr>
<td></td>
<td>Male and female reproductive histology</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Reproductive histochemical techniques</td>
<td>Tissue staining and immunohistochemistry</td>
</tr>
<tr>
<td>3</td>
<td>Microscopy and image processing – Part 1</td>
<td>Brightfield microscopy</td>
</tr>
<tr>
<td>4</td>
<td>Oogenesis and folliculogenesis</td>
<td>Micromanipulation &amp; in vitro follicle growth</td>
</tr>
<tr>
<td>5</td>
<td>Oocyte meiosis</td>
<td>Oocyte culture &amp; live imaging</td>
</tr>
<tr>
<td>6</td>
<td>Male and female gamete biology</td>
<td>Immunocytochemistry &amp; sperm analysis</td>
</tr>
<tr>
<td>7</td>
<td>Microscopy and image processing – Part 2</td>
<td>Confocal &amp; deconvolution microscopy</td>
</tr>
<tr>
<td>8</td>
<td>Fertilization and gamete micromanipulation</td>
<td>In vitro fertilization, zinc spark imaging, intracytoplasmic sperm injection</td>
</tr>
<tr>
<td>9</td>
<td>Advanced biomaterials</td>
<td>Decellularization, 3-D bioprinting, bioinks</td>
</tr>
<tr>
<td>10</td>
<td>Poster Presentations Visions Article Submission</td>
<td>Science communication</td>
</tr>
</tbody>
</table>
Special Guest Lectures
Open to the CRS Community, save the date!

Na,K-ATPase and Sperm
11/6/2017, 4-5pm

V. Gustavo Blanco, MD, PhD
Professor,
Kathleen M Osborn Chair
KU Medical Center

Microbiome
2/13/2018, 1-2pm

Jennifer Wood, PhD
Associate Professor
University of Nebraska-Lincoln

Genome Editing
2/13/2018, 6-7pm

John Hennebold, PhD
Professor, OHSU
Co-Director ART Core, ONPRC

Northwestern University
Quarter 4, Summer Research, and TGS 512

- Non-Thesis Track students have the option to conduct research with CRS faculty

- Thesis Track students continue thesis research full time during quarter 4 (summer)

- TGS 512
  - Maintains full time status and access to University resources without taking courses
  - Lower cost than full-time tuition
Electives and Auditing Courses

**Electives**
- Optional
- Courses through other departments
  - Life Sciences: IGP/DGP; IBIS
  - Anthropology: ANTHRO
  - Medical Humanities and Bioethics: MHB
  - Clinical Investigation: MSCI
  - Gender Studies: GNDR_ST
  - Public Health: PUB_HLTH
  - Epidemiology: EPI_BIO

**Auditing**
- Taking a course **without** earning a grade or credit on the transcript
- Enables exploration and exposure
- Approved by the course director
CRS Programming

• Reproductive Research Updates

• Translational Lectures in Reproductive Science

• CRS Career Catalysts

• CRS Reproductive Science and Medicine Summit

• Oncofertility Consortium Conference
  • Organized by the NU Oncofertility Consortium
CRS Collaborative Suite
645 North Michigan Ave, Suite 630

Keycard access
• Studying
• Group work and meetings
• Practice presentations
• Computer and Printer
• Meals

• Windows Desktop
• Printer
• Variety of seating
• Video and conference call equipment
• Small conference room
• Shared kitchen space with Center for Genetic Medicine and Genetic Counseling MS program
  • Utensils/plates
  • Refrigerator/freezer
  • Microwave
Questions?
CRS is a historical Northwestern Center

At the forefront of reproductive research, medicine, and technology

- To **enhance** and **enable** research in reproductive science and medicine across disciplines
- To **apply** state-of-the-art research and technologies to human reproductive health
- To **train** the next generation of research, clinical, and thought leaders in our field
Center for Reproductive Science Members and Programming

- Anthropology
- Biomedical Engineering
- Cell and Molecular Biology
- Chemistry
- Endocrinology
- Molecular Biosciences
- Materials Science and Engineering
- Medical Education
- Neurobiology
- Obstetrics and Gynecology
- Pathology
- Physiology
- Preventative Medicine
- Psychiatry and Behavioral Sciences
- Psychology
- Religious Studies
- Surgery
- Urology

- Reproductive Research Updates
- Translational Lectures in Reproductive Science
- Career Catalyst Series (NEW!)
- Reproductive Science and Medicine Summit

Advisory Board

Affiliate Members & Large Network of Alumni

Over 200 Faculty, 50 Staff, 100 Trainees
Reproductive Research Updates

A 30+ year CRS tradition in which CRS members present their ongoing research to the broader reproductive science and medicine community.

- **Wednesdays, Noon – 1:00pm**
- **September 13th – May 30th, 2018**
  - Lunch provided to early arrivals!
    - Evanston: Pancoe 4103 (2200 Campus Drive)
    - Chicago: Lurie 10-123 (303 E. Superior)
    - Chicago: CRS Collaborative Suite (645 N. Michigan Ave, 630)
  - Other viewing locations:
    - Stanley Manne Children’s Research Institute (Conference Room D/E)
- 33 trainee research talks
  - 17 labs
  - 10 departments/divisions
  - Mix of graduate students, post-docs, and clinical fellows

- **Research Topics include:**
  - Molecular biosciences
  - Notch signaling in somatic cells
  - Epigenetic regulation
  - Maternal-fetal medicine
  - Role of zinc
  - Progesterone receptors
  - Engineering
  - Uterine Leiomyoma
  - Tissue transglutaminase
  - Polycystic ovary syndrome
  - Fertility preservation
  - In vitro modeling
  - Antibody potency
  - Type 1 diabetes

*Visit Planit Purple or the CRS website for the full schedule!*
Translational Lectures in the Reproductive Sciences

**Monday, October 9, 2017**
Kelly E. Mayo, PhD

Walter and Jennie Bayne Professor of Molecular Biosciences, Northwestern University Weinberg College of Arts & Sciences

“The Multiple Faces of Notch Signaling in the Mammalian Ovary”

4:00pm – 5:00pm, Baldwin Auditorium

5:00pm – 6:00pm Wine and Cheese Reception (Ryan Family Atrium)

**Wednesday, January 17, 2018**
Janice Evans, PhD

Professor, Biochemistry and Molecular Biology, Johns Hopkins Bloomberg School of Public Health

4:00pm – 5:00pm, Baldwin Auditorium

Followed by the **CRS Holiday Party**

5:00pm – 7:00pm, Ryan Family Atrium

**Monday, April 23, 2018**
Robin Lovell-Badge, PhD,

Stem Cell Biology and Developmental Genetics Laboratory, The Francis Crick Institute, London, UK

4:00pm – 5:00pm, Baldwin Auditorium
Career Catalyst Series

The Career Catalyst Series is a monthly seminar that will prepare trainees for success with a mix of professional development workshops, networking, and outreach activities. These will take place in the CRS Collaborative Suite, 4:15pm – 5:30pm.

- **September 21, 2017** – Industry Careers and Perspectives from Abbvie
- **October 19, 2017** – PubMed and Endnote Skills Workshop
- **November 2, 2017** – Preparing Manuscripts for Publication Skills Workshop
- **January 18, 2018** – Careers for Scientists at the Food and Drug Administration (FDA) and other Government Agencies
- **February 22, 2018** – Scientific Communications Coaching – The Elevator Pitch Skills Workshop (*RSVP Required*)
- **March 15, 2018** – Finding and Securing Funding Opportunities
- **April 5, 2018** – Careers in Secondary Education
- **May 2018** – Academic Career Panel

Visit Planit Purple for the 2017-2018 Career Catalysts Schedule!
Reproductive Science and Medicine Summit

- Annual event
  - Reproductive science and medicine research conducted at Northwestern and surrounding Chicago area institutions including University of Illinois-Chicago and De Paul University.
  - Presentations from distinguished speakers and trainee oral and poster presentations
  - Organized by trainees

2018 Reproductive Science and Medicine Summit

Tentative date: Friday, June 1, 2017
Makowski Award for Outstanding MS-RSM Thesis

T. Rajendra Kumar, PhD

This award is endowed by Dr. Edgar Makowski, a prominent physician who practiced at the University of Colorado and whose named Endowed chair is now held by Dr. Kumar. In the spirit of Dr. Makowski’s dedication to women’s health, Dr. Kumar invests $1,000 annually to honor the student with the most outstanding MS-RSM thesis.
Center for Reproductive Science

Stay Connected!

Center for Reproductive Science

At the forefront of reproductive research, medicine and technology

READ OUR MISSION

PlanIt Purple

Northwestern University
MS-RSM Application and Admissions

Admissions

Thank you for your interest in The Graduate School (TGS) at Northwestern University. Our admission pages are designed to help you easily navigate the application process. Please follow the steps below to review if TGS is right for you and learn how to submit your admission application.

APPLY NOW

REQUEST INFORMATION

Review Before You Apply.
Typical Applicant

• Biology or Life Sciences degree (undergraduate or post-bac)
• International applicants-MBBS
• Graduated within last 0-4 years
• Avg. applicant GPA: 3.3/4.0
• Research (basic or clinical), leadership, or employment experience

• Upon graduating from MS-RSM:
  • Medical school
  • Residency
  • PhD
  • Researcher
  • Assisted Reproductive Technologies
  • Public/Community Health
Application Requirements

1. Previous transcripts
2. Personal statement
3. CV or resume
4. Two letters of recommendation
5. GRE or MCAT scores- OPTIONAL

• January 19, 2018
• April 30, 2018
• Online application: http://www.tgs.northwestern.edu/admission/
• $95 application fee
Admissions Timeline

January 19, 2018
• February-Interviews concluded
• March-Admissions decisions
• March/April-Accept/decline offer

April 30, 2018
• May-Interviews concluded
• May/June- Admissions decisions
• June- accept/decline offer
Financial Information

• MS-RSM students are self-funded
  • Tuition
  • Fees
  • Health Insurance
  • Living Expenses

• CRS/MS-RSM cannot provide financial assistance
  • No scholarships, research or teaching assistantships, no stipends

• Seek internal and external funding
  • NU Alumni scholarships
  • Non-profits, professional societies
## Leadership Contact Information

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>E-mail</th>
<th>Office</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teresa Woodruff, PhD</td>
<td>Dean, TGS Director, CRS</td>
<td><a href="mailto:tkw@northwestern.edu">tkw@northwestern.edu</a></td>
<td>Lurie 10-119</td>
<td>312-503-2503</td>
</tr>
<tr>
<td>Francesca Duncan, PhD</td>
<td>Executive Director, CRS</td>
<td><a href="mailto:f-duncan@northwestern.edu">f-duncan@northwestern.edu</a></td>
<td>Lurie 7-117</td>
<td>312-503-2172</td>
</tr>
<tr>
<td>Beth Sefton, PhD</td>
<td>Director of Graduate Studies (DGS), MS-RSM</td>
<td><a href="mailto:e-sefton@northwestern.edu">e-sefton@northwestern.edu</a></td>
<td>CRS, 630-20</td>
<td>312-503-6306</td>
</tr>
<tr>
<td>Pamela Monahan, PhD</td>
<td>Lecturer, MS-RSM</td>
<td><a href="mailto:Pamela-monahan@northwestern.edu">Pamela-monahan@northwestern.edu</a></td>
<td>CRS, 630-19</td>
<td>312-503-6305</td>
</tr>
<tr>
<td>Chelsea Castleberry</td>
<td>Program Assistant, CRS</td>
<td><a href="mailto:Chelsea.castleberry@northwestern.edu">Chelsea.castleberry@northwestern.edu</a></td>
<td>CRS, 630-18</td>
<td>312-503-6303</td>
</tr>
<tr>
<td>Bryan Runkel</td>
<td>Manager of Research Administration</td>
<td><a href="mailto:b-runkel@northwestern.edu">b-runkel@northwestern.edu</a></td>
<td>Lurie 10-121a</td>
<td>312-503-4802</td>
</tr>
</tbody>
</table>
Questions?

End! Thank-you!