Reproductive Research Updates Kick Off: 2018-2019 CRS Programming Update

Francesca E. Duncan, PhD
Executive Director, CRS
Assistant Professor
Department of Obstetrics & Gynecology
CRS: A Year in Review

• The 2017-2018 academic year was an awesome year for the Center for Reproductive Science!

• Coming soon: A “Year in Review” Report
  • Includes highlights and photos from last year!
  • Watch your email for the full report
The CRS Portfolio

CRS Overview
Mission, History, Leadership
Stakeholders

Seminar Series and Meetings
Reproductive Research Updates
Translational Lectures in Reproductive Science
Reproductive Science and Medicine Summit
Illinois Symposium on Reproductive Science
Alliances

Career and Professional Development
Career Catalyst Series
Additional Resources

Education
Outreach
Graduate Courses in Reproductive Science and Medicine
MS-RSM Program

Stay connected and involved!
CRS is a historical Northwestern Center

Who we are, where we are, what we do
Reproductive health underpins the overall health of all people.

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 Leadership

Celebrating a 30+ Year History

Neena B. Schwartz, PhD
1987-2001

Kelly E. Mayo, PhD
2001-2015

Teresa K. Woodruff, PhD
2015-present
Center for Reproductive Science Members

- 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

Advisory Board

Affiliate Members & Large Network of Alumni

Over 200 Faculty,
50 Staff,
100 Trainees
2018-2019 CRS Seminar Series and Meetings

• Reproductive Research Updates (RRU) - weekly
• Translational Lectures in Reproductive Science (TLRS) – quarterly
• Illinois Symposium on Reproductive Science (ISRS) – annually
• Reproductive Science and Medicine Summit - annually

Stay Connected: Plan-It Purple, CRS website, Constant Contact Email List, Facebook, Twitter, and Linkedin
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 26, 2018 – May 29, 2019**
  - Lunch provided to early arrivals!
    - Evanston: Panoce 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)
- 31 member presentations
  - 13 labs
  - Mix of Graduate Students, Postdoctoral Fellows, Clinical Fellows, Lab Mangers, and Research Track Faculty
- 45 minute research/data-based talks
- New this year - faculty introductions!

- **Research Topics include:**
  - Molecular biosciences
  - Fertilization and early development
  - Regulation and activation of oocyte meiosis
  - In Vitro modeling
  - Carcinogenesis and therapeutics
  - Female reproductive tract
  - Urinary microbiome
  - Role of Zinc
  - MED12 mutations in uterine leiomyoma
  - PCOS
  - Engineering ovarian tissue
  - Epigenetic modulation in ovarian cancer

*Visit Planit Purple or the CRS website for the full schedule!*
Reproductive Research Updates

Join us next week!

Roslyn Taylor, PhD
Post-doctoral fellow, Hope Lab

Localization of infected cells in neonatal rhesus macaques after dual reporter virus and SHIV1157ipd3N4 oral challenge

Wednesday, October 3rd
12-1pm
TLRS: Neena B. Schwartz Memorial Lecture in Reproductive Science

Thursday, October 18th, 2018
4:00pm - 6:00pm

Northwestern University Evanston Campus, Pancoe Auditorium
Reception to follow, 6:00pm - 7:00pm, Pancoe Café

Speakers

Dr. Teresa Woodruff
"Welcome and Thank you"

Dr. Catherine Woolley
"The Schwartz Effect: Teacher, Scientist, Leader, Friend"

Dr. Joanne McAndrews
"Dr. Neena Schwartz: Scientist, Mentor, and Role Model"

Dr. Kelly Mayo
"Notorious NBS: Neena, Science, Inhibin & Northwestern"

In memory of
CRS Founder,
Neena B. Schwartz, PhD
1926-2018
CRS Holiday Lecture and Party

Thursday, December 13th, 2018
4:00pm - 5:00pm
Northwestern University Chicago Campus
Baldwin Auditorium
303 East Superior Street

Department of Ob/Gyn Holiday Party to follow
Prentice Women’s Hospital
5:00pm – 7:00pm

Sadie Wignall, PhD
Assistant Professor
Department of Molecular Biosciences
Weinberg College of Arts & Sciences
TLRS: Erwin Goldberg Lecture in Male Reproduction

Thursday, January 17th, 2019
4:00pm - 5:30pm

Northwestern University Chicago Campus
Baldwin Auditorium
303 East Superior Street

We welcome
Dr. Barry Zirkin
Professor of Biochemistry and Molecular Biology
Johns Hopkins Bloomberg School of Medicine

In honor and recognition of
Erwin Goldberg, PhD
TLRS: Danielle Maatouk Memorial Lectureship

Spring 2019
Date and Speaker TBD
Potential Speaker: Dr. Peter Koopman (The University of Queensland) or Dr. David Page (Whitehead Institute, MIT)

In her own words:
“The goal of my lab is to investigate how changes in the epigenome regulate gene expression and cell fate determination during fetal development. Specifically, I will investigate chromatin remodeling during sex determination and uncover regulatory elements that modulate the activity of genes required for ovary and testis formation. I will use this information to aid in the diagnosis of patients with Disorders of Sexual Development, the majority of whom never receive a genetic diagnosis.”

In celebration of Danielle Maatouk, Ph.D.
1977-2016
Illinois Symposium on Reproductive Science

• Since 2008, ISRS is an annual, trainee-focused meeting hosted by a rotation of Illinois universities including Northwestern, UIUC, UIC, and SIU.

• Goals:
  • Foster the exchange of scientific information
  • Facilitate the training of future reproductive scientists
  • Leverage our collective strengths to maintain Illinois in a preeminent nationwide position

• Registration is now open for ISRS 2018 at Southern Illinois University!
  • October 7-8th, 2018
  • Find the registration link on the CRS Website and/or Facebook!
  • Julia Balough and Jennie Chen (NU Trainee Reps)

** Registration is free and CRS sponsored transportation is available!
Save the DATES!! We are Back!!

Southern Illinois University invites you to the 8th Annual Illinois Symposium on Reproductive Sciences

SIUC Guyon Auditorium and Student Center
October 7-8 2018

Gabriel Bialy Memorial Lecture:
John R. McCarrey, PhD
The University of Texas at San Antonio

Keynote Lecture:
Andrzej Bartke, PhD
Southern Illinois University
School of Medicine

Tentative Schedule of Events:

**Sunday, October 7, 2018**

2:00 pm~
Registration Opens (Rotunda, Morris Library)

3:45-4:00 pm
Welcome Refreshment (Rotunda, Morris Library)

4:00-5:00 pm
Trainee Oral Session 1: T1 – T4 (Guyon, Morris Library)

5:00-5:15 pm
Refreshment Break (Rotunda, Morris Library)

5:15-6:15 pm
Keynote Lecture by Dr. Andrzej Bartke (Guyon, Morris Library)

6:30-8:00 pm
Poster Mounting (Ballroom D, Student Center)

8:00-10:00 pm
Trainee Poster Session (Ballroom D, Student Center)

10:00-11:00 pm
Social (Ballroom BC, Student Center)

**Monday, October 8, 2018**

8:15-8:30 am
Morning Refreshment (Rotunda, Morris Library)

8:30-9:30 am
Trainee Oral Session 2: T5 – T8 (Guyon, Morris Library)

9:30-9:45 am
Refreshment Break (Rotunda, Morris Library)

9:45-10:45 am
Trainee Oral Session 3: T9 – T12 (Guyon, Morris Library)

10:45-11:00 am
Refreshment Break (Rotunda, Morris Library)

11:00-11:15 am
Remarks and Background on the Bialy Lecture Series (Guyon, Morris Library)

11:15am-12:15pm
Gabriel Bialy Memorial Lecture by Dr. John McCarrey (Guyon, Morris Library)

12:15pm~
Award Presentation/Closing Remarks (Guyon, Morris Library)
Reproductive Science and Medicine Summit
(formerly CRS Mini-Symposium)

• First started in 1988 by Dr. Neena B. Schwartz.

• An annual event showcasing reproductive science and medicine research conducted at Northwestern and surrounding Chicago area institutions.

• An organizing committee composed of CRS trainees is central to the success of this event.

• Trainee awards for this event have been funded through the Constance Campbell Memorial Fund since 1989.
ISRS 2019 at Northwestern

- In lieu of the 2019 Summit, Northwestern will be hosting the 2019 Illinois Symposium on Reproductive Science!
  - November 2019
  - Satellite meeting in conjunction with the annual Oncofertility Consortium Conference
  - Increased global perspective

- Stay tuned for more information!
Alliances

Oncofertility Consortium

- Lauren Ataman
- Administrative Director
- lauren.ataman@northwestern.edu

- Brigid Martz Smith
- Clinical Director
- brigid.martz@northwestern.edu

Women’s Health Research Institute

- Nicole Woitowich, PhD
- Associate Director
- nicole.woitowich@northwestern.edu
The Oncofertility Consortium is an international, interdisciplinary initiative designed to explore the reproductive future of those facing fertility threatening conditions or treatments.

Fundamental Question:
What regulates follicle growth and oocyte maturation? How can eggs and follicles be preserved without damage?

Scientific Community: New Ideas or Approaches

Oncofertility Multidiscipline Patient Management Board
Reproductive Endocrinologist
Oncologist New Scholar

Family Parents Cancer Survivor

Urgent Unmet Need: Preservation of Fertility options after cancer

Information Gap: Silo spanners, Building a Common Language, Integration Between Specialties

Legal, Ethical, Insurance

CRS Members across disciplines comprise a large portion of this team!

Woodruff, TK Nature Reviews Clinical Oncology 2010
Annual Oncofertility Consortium Conference

Bridging the Gaps in Oncofertility Research and Clinical Care: A Global Initiative
November 13-15, 2018

- A full-day of education, lab-courses, and breakout sessions
- Two more days of traditional lectures, poster sessions, and networking events
- Register and submit an abstract now (deadline September 30, 2018)!

- Dr. Karla Hutt, Monash University
- Dr. Richard Anderson, University of Edinburgh, Scotland
- Many others
The WHRI is dedicated to the promotion of women’s health through the inclusion of females in biomedical and clinical research, and the advancement of girls and women in science and medicine.

- Resource for the Northwestern community and beyond regarding the consideration of sex as a biological variable
  - Bench and clinical research
  - Clinical trials
- Educational programming for scientists, clinicians, students, staff, and the public on issues relevant to women’s health
- Professional development programming for women in academia
- K-12 and community-based science outreach
  - Focus on health and reproduction!
Women’s Health Research Monthly Forums

- **October 23rd, 2018** – Popi Siziopikou, MD, PhD
  - Pregnancy Associated Breast Cancer
- **November 20th, 2018** – Suzanne Harrison, MD
  - Sex Trafficking of Women and Girls
- **December 11th, 2018** – Laurie Wakschlag, PhD and Rachel Flynn, PhD
  - Developmental Science

12:00 PM – 1:00 PM
Prentice Women’s Hospital
3rd Floor Conference Room L South
Space is limited – Registry early to ensure a seat and light lunch
[www.womenshealth.northwestern.edu](http://www.womenshealth.northwestern.edu)
2018-2019 CRS Career and Professional Development

• Career Catalyst Series
• Other Resources

Stay Connected: Plan-It Purple, CRS website, Constant Contact Email List, Facebook, Twitter, and LinkedIn
Career Catalyst Series

The Career Catalyst Series is a monthly event that will prepare trainees for success with a mix of professional development workshops, networking, and outreach activities.

- **September 20, 2018** – **Postdoc Roadmap** (CRS Suite)
  - **Liz Stein**, Director of Graduate and Postdoctoral Training and Development

- **November 1, 2018** – **CRS Community Speed Networking Event** (Method Atrium)
  - Light refreshments will be provided.

- **February 15, 2019** – **Grant Writing Workshop** (CRS Suite)
  - Half-day event that will include how to prepare and submit a successful grant, biosketch & accessory documents as well as perspectives from alumni in grant management positions
  - Potential speakers: Stacey Tobin, Candace Tingen, Allison Kim, Joe Boes, Joe Wright, Galter Health Sciences Library

- **March 14, 2019** – **Publications & Consulting** (CRS Suite)
  - Potential speakers: Brendan Maher (Features Editor, Nature Publishing Group), and Sandeep Pamer, PhD (Navigant)

- **May 16, 2019** – **Small Businesses & Patents** (CRS Suite)
  - Potential speakers: TBD
Awards and Resources

- Constance Campbell Memorial Research and Trainee Travel Awards
- Marcia L. Storch, MD Scholarship Fund for Undergraduate Women
- Makowski Award for Outstanding MS-RSM Thesis
- CRS Career Hub
- Updated Website
Constance Campbell Memorial Research Awards & Trainee Travel Awards

- **Constance Campbell Memorial Research Awards**
  - Provides monetary awards for trainees for best poster and oral presentations
  - Awarded at the Reproductive Science and Medicine Summit and the ISRS meeting

- **Constance Campbell Memorial Trainee Travel Awards**
  - Provides funds for trainees to support travel to reproductive science and medicine meetings
  - Applications will be accepted twice per year and a submission site will be available on the CRS website.

Constance Campbell, PhD
- Post-doctoral fellowship with Professor Neena Schwartz (UIC)
- Assistant Professor (1974) and Associate Professor (1980) at NU
- Studied interactions between environment and behavior
- Helped launch the CRS-Mini Symposium (1980)
- Passed away (1981)
Constance Campbell Trainee Travel Awards

Applications now open for the Fall/Winter Cycle!

Apply Now on the CRS Website by Thursday, November 15th, 2018!

Decisions will be made and applicants will be notified in late November 2018. Winners will also receive a certificate at the CRS Holiday Lecture on December 13th, 2018!
Makowski Award for Outstanding MS-RSM Student

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 $1000 annually to honor the most outstanding MS-RSM student.

Edgar L. & Patricia M. Makowski Professor
Division of Reproductive Sciences
Associate Vice Chair of Research
Department of Obstetrics and Gynecology
University of Colorado School of Medicine

NU-CRS External Advisory Board Member
Marcia L. Storch, MD Scholarship Fund for Undergraduate Women

• The CRS has established a scholarship fund in the name of Dr. Marcia Storch.

• We invite applications from undergraduate women working in the laboratories of CRS faculty for funding to support their research with a budget of up to $400.

• Applications are accepted on a rolling basis. Please contact the CRS Executive Director with questions.

Dr. Marcia Storch, practiced gynecology in New York City, taught at several medical schools, and was widely regarded as a pioneer and innovator in women's health care.

Before her death from ovarian cancer in 1998, Dr. Storch expressed her desire to establish a scholarship fund through the Center for Reproductive Science in order to encourage undergraduate women to study the basic physiology and biochemistry of the ovary.
CRS Career Hub

• **Office hours with Dr. Beth Sefton** every Tuesday (11:00am - noon)
• Phone, video-conference, or in person meetings (CRS Collaborative Suite)
• Get help with:
  • CV
  • Abstracts
  • Manuscripts
  • Proposals
  • Presentations
  • Job search
  • Interview preparation
• Drop by or email e-sefton@northwestern.edu to schedule an appointment
New Resources Available on CRS Website!

- Education
  - Trainee Resources
    - Graduate Students
    - Postdoctoral Scientists
    - Clinical Fellows
  - CRS Community Resources
    - Outreach
    - Professional Societies and Organizations
    - Professional Development
    - Diversity Resources
    - Career Hub
2018-2019 Education

- Outreach
- Graduate Courses in Reproductive Science and Medicine
- MS-RSM

Stay Connected: Plan-It Purple, CRS website, Constant Contact Email List, Facebook, Twitter, and LinkedIn
Outreach

• Women’s Health Science Program
• Women’s Health Research Day
• March for Science
Graduate Courses in Reproductive Science and Medicine

• PhD students in the RSM Cluster have access to all CRS training opportunities, resources, and these unique courses:
  • **REPR_SCI 405**: Female Reproductive Physiology and Endocrinology (Fall, Chicago)
  • **REPR_SCI 407**: Male Reproductive Physiology and Endocrinology (Fall, Chicago)
  • **REPR_SCI 406**: Human Reproductive Development (Winter, Chicago)
  • **REPR_SCI 420**: Human Reproductive Health and Disease (Spring, Chicago)
  • **New this Spring 2019**: **REPR_SCI 415**: Reproductive Endocrinology and Fertility Management (Spring, Chicago)

Learn more about the RSM Cluster at: [http://www.biology.northwestern.edu/research/reproductive-science.html](http://www.biology.northwestern.edu/research/reproductive-science.html)
## Welcome Fall 2018 MS-RSM Students

<table>
<thead>
<tr>
<th>First Name</th>
<th>Last Name</th>
<th>Degree Track</th>
<th>Previous Institution</th>
<th>Major</th>
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<tbody>
<tr>
<td>Seth</td>
<td>Barishansky</td>
<td>NT</td>
<td>Yeshiva University (USA)</td>
<td>Biology</td>
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<tr>
<td>Emily</td>
<td>Hayes</td>
<td>T</td>
<td>University of Rochester (USA)</td>
<td>Biochemistry</td>
</tr>
<tr>
<td>DreAna</td>
<td>Heidenreich</td>
<td>NT</td>
<td>University of Dubuque (USA)</td>
<td>Biology</td>
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<tr>
<td>Amber</td>
<td>Kuhn</td>
<td>NT</td>
<td>Marshall University (USA)</td>
<td>Biotechnology</td>
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<tr>
<td>Anne</td>
<td>Lenzo</td>
<td>NT</td>
<td>Winston-Salem State University (USA)</td>
<td>Biology</td>
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<tr>
<td>Xingyi</td>
<td>Lyu</td>
<td>T</td>
<td>University of Washington (USA)</td>
<td>Biochemistry</td>
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<tr>
<td>Jamie</td>
<td>Mara</td>
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<td>Purdue University (USA)</td>
<td>Dietetics</td>
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<tr>
<td>Vanessa</td>
<td>Rosa</td>
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<td>College of New Rochelle (USA)</td>
<td>Biology</td>
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<tr>
<td>Nana</td>
<td>Sarpong</td>
<td>NT</td>
<td>University of Ghana Medical School (Ghana)</td>
<td>Medicine</td>
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<tr>
<td>Kristy</td>
<td>Tse</td>
<td>NT</td>
<td>University Of California-San Diego (USA)</td>
<td>Human Biology</td>
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CRS Open House
MS-RSM Faculty Networking Event and Poster Session

- Faculty interested in advising MS-RSM thesis projects are invited to **present a poster** on their current research at the CRS Open House!
- **Thursday, October 11th from 4:00pm – 6:00pm** in the CRS Suite.
- If a faculty member is unable to present but wishes to advise a student, please ask a lab member to present on behalf of the lab.
- Opportunities for faculty to take students out to dinner after the poster session are also available.
- All of CRS is invited to attend and learn about current research projects!

If you are interested in participating in the MS-RSM program as a Thesis Advisor, Committee Member, or Instructor, please contact Beth Sefton ([e-sefton@northwestern.edu](mailto:e-sefton@northwestern.edu)).
Master of Science
Reproductive Science and Medicine

A Degree Program Focusing on Human Reproductive Health

- Complete foundation and professional development courses
- Train with clinical, basic, and translational science leaders
  - Engage in the Center for Reproductive Science

Application deadline: March 30th, 2019

INQUIRIES:
Elizabeth Sefton, PhD
Director of Graduate Studies
Repro-masters@northwestern.edu
Be Involved

• Teaching and TAing
• Mentoring
• Trainee Organizing Committee (Summit and ISRS)
• Advisory Board
• Attend CRS programming and events
• Suggest ideas for invited speakers
• Promote the CRS mission
• Encourage new members to join
• Be active on social media
• Share your exciting news stories for the CRS News Stories section!
Help us stay visible, viable, and valuable

- Journal Covers
  - Please send Chelsea your Journal Covers for display in the CRS Collaborative Suite!

- 2019 CRS Calendar
  - Please send Chelsea your best scientific images with a 1 sentence description of the image and who created it to be considered for the 2019 CRS Calendar! Deadline **November 15th**
  - [chelsea.castleberry@northwestern.edu](mailto:chelsea.castleberry@northwestern.edu)
Thank you!

Thoughts? Questions? Comments? Feedback?