



## COURSE PROGRAMME

### **2944: Sex & Gender Perspectives in Cardiovascular Research**

Doctoral Programme: DEVREG – 1.0 ECTS

*Karolinska Institutet*

Monday 19<sup>th</sup> October – Friday 23<sup>rd</sup> October 2020

#### **Purpose of the course:**

*“Every cell has sex, and every person is gendered”*. This course encourages students to examine the validity and implications of this statement in the field of experimental and clinical cardiovascular research, in particular, in relation to their PhD/research projects. It will focus on what the current evidence and regulations suggest in respect to implementation of sex and gender perspectives in the field of experimental medicine, with further implementation in cardiovascular medicine and research.

#### **Intended Learning Outcomes:**

After completion of both online seminar series and online teaching modules, students are expected to be able:

- To account for sex and gender in biomedical research involving animals, cells, or tissues.
- To account for sex and gender when considering aspects of biomedical, particularly cardiovascular, research in humans.

#### **Important notes:**

- This years' course will be held virtually across multiple online conferencing applications, namely Zoom and Blue Jeans. Please note that different online platforms will be used on different days, see the course schedule for exact details.
- This years' course is being held in conjunction with the *“ACT Matching Events – Gender Dimension ERA Priority Group”* and seminars held on Tuesday and Thursday during the course will be hosted in conjunction with this event.
- During lectures and presentations, we kindly request that participants mute their microphones and turn off their cameras.
- Should you have any questions or comments, please wait write these down and wait for the allotted Q&A time after the presentations. During Q&A session, please use the “raise hand” function to indicate you have a question.

## COURSE SCHEDULE

**DAY 1: Monday 19<sup>th</sup> October**

**Platform: Zoom**

**Link:** <https://ki-se.zoom.us/j/61553693830?pwd=ZWg4Y2NBNUs2VGVUWWMvd25MeVpFdz09>

CET	EDT	
<b>14:20 – 14:50</b>	08:20 – 08:50	<b>Course Introduction</b> Karolina Kublickiene and Liam Ward
<b>14:50 – 15:00</b>	08:50 – 09:00	<b>Break</b>
<b>15:00 – 15:50</b>	09:00 – 09:50	<b>Biological Variables in Experimental Design: Sex Matters!</b> Professor Virginia M. Miller <i>Mayo Clinic, USA</i> Followed by Q&A session
<b>15:50 – 16:00</b>	09:50 – 10:00	<b>Break</b>
<b>16:00 – 16:45</b>	10:00 – 10:45	<b>TEDx Talk &amp; Group Task</b> <i>Why sex really matters</i> – David Page  <i>Sex/Gender Checklist for Pre-Clinical and Clinical Research</i>

**DAY 2: Tuesday 20<sup>th</sup> October – In conjugation with “ACT Matching Events”**

**Platform: Blue Jeans**

**Link:** <https://bluejeans.com/806482012/5204>

**NOTE: These sessions will be recorded by the organisers of ACT Matching Events. Recordings will be used exclusively for internal purposes to review such events. Attendance these sessions complies your agreement to the recordings. Please turn off your cameras on attendance should you wish not to be visibly recorded.**

CET	EDT	
<b>15:00 – 15:50</b>	09:00 – 09:50	<b>Introduction on the Gender Dimension (EU perspective)</b> Professor Sabine Oertelt-Prigione <i>Radboud UMC, the Netherlands</i>  Followed group work in break-out rooms followed by Q&A session - Three drivers / three barriers / three action-points
<b>15:50 – 16:00</b>	09:50 – 10:00	<b>Break</b>
<b>16:00 – 16:50</b>	10:00 – 10:50	<b>Sex &amp; Gender with Reflections from the Italian Society of Internal Medicine</b> Associate Professor Valeria Raparelli – Co-P.I. of GOING-FWD <i>Sapienza University, Italy</i>  The gender dimension in research film Followed by Q&A session and summary



**DAY 3: Wednesday 21st October**

**Platform: Zoom**

**Link: <https://ki-se.zoom.us/j/61233248573?pwd=U0R5UC85dW9pcjNXakVxOFIzanA5Zz09>**

CET	EDT	
<b>14:00 – 14:50</b>	08:00 – 08:50	<b>Cardiovascular Research and Gender</b> Professor Eva Swahn <i>Linköping University, Sweden</i> Followed by Q&A session
<b>14:50 – 15:00</b>	08:50 – 09:00	<b>Break</b>
<b>15:00 – 15:50</b>	09:00 – 09:50	<b>Sex Differences in Metabolic Syndrome</b> Marion Korach-Andre, PhD <i>Karolinska Institutet, Sweden</i> Followed by Q&A session
<b>15:50 – 16:00</b>	09:50 – 10:00	<b>Break</b>
<b>16:00 – 16:45</b>	10:00 – 10:45	<b>Short video &amp; group task</b> <i>Learning about Sex and Gender – CIHR</i>  The Gender Lens Tool – in your research

**DAY 4: Thursday 22<sup>nd</sup> October – In conjugation with “ACT Matching Events”**

**Platform: Blue Jeans**

**Link: <https://bluejeans.com/806482012/5204>**

**NOTE: These sessions will be recorded by the organisers of ACT Matching Events. Recordings will be used exclusively for internal purposes to review such events. Attendance these sessions complies your agreement to the recordings. Please turn off your cameras on attendance should you wish not to be visibly recorded.**

CET	EDT	
<b>15:00 – 15:50</b>	09:00 – 09:50	<b>Sex Differences in Alzheimer’s Disease: what we know and what we do</b> Associate Professor Ivan Nalvarte <i>Karolinska Institutet</i> Followed by KI: Centre for Gender Medicine Video and Q&A session
<b>15:50 – 16:00</b>	09:50 – 10:00	<b>Break</b>
<b>16:00 – 16:50</b>	10:00 – 10:50	<b>Learning from Gender Champions</b> – Elsevier Researcher’s Academy  <i>How to integrate sex, gender, and intersectional analysis into research – Prof. Londa Schiebinger (Stanford University) &amp; Prof. Cara Tannenbaum (Montreal University &amp; IGH-CIHR)</i> Followed with group work in break out rooms and summary - <b>Community of practice</b> action points to boost the facilitation of the Gender Dimension in research.

**DAY 5: Friday 23<sup>rd</sup> October**

**Platform: Zoom**

**Link:** <https://ki-se.zoom.us/j/63268414798?pwd=UmRyZDJHdGkydWp5WWdTb3c5K2R0dz09>

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**CET**                    **EDT**

<b>14:00 – 15:30</b>	08:00 – 09:30	<b>Round table discussion / Examination</b> <i>Elevator Pitch Presentation – 3 minutes</i> How am I going to implement the gender dimension into my research?
		<b>Course Conclusion</b> Karolina Kublickiene and Liam Ward

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#### **EXAMINATION ASSIGNMENT – ONLINE TRAINING MODULES**

- For those MSc & PhD students registered at Karolinska Institutet, or other PhD students wanting accreditation for the course.
- To be completed during the course period during free individual study time.
- Online course certificates must be submitted to course coordinators, **before Friday 30<sup>th</sup> October**, as a prerequisite to passing the course.

Online training modules developed by the Canadian Institutes of Health Research: Integrating Sex & Gender in Health Research.

Link: <https://cihr-irsc.gc.ca/e/49347.html>

These modules will require you to “Create a new account”, please follow instructions on the website when prompted to.

#### **Compulsory to be completed:**

**Course 1: Sex and Gender in Biomedical Research**

**Course 2: Sex and Gender in Primary Data Collection with Human Participants**

*Recommended, though not compulsory, for those with research interests in epidemiology:*

**Course 3: Sex and Gender in the Analysis of Secondary Data from Human Participants**

#### **Associate Links:**

[KI – Gendered Innovation Alliance](#)

[ACT](#)

[GOING-FWD Consortium](#)

## Selected publications for further reading:

### Virginia M. Miller – [PubMed](#)

- Vallabhajosyula S, Ponamgi SP, Shrivastava S, Sundaragiri PR, Miller VM. [Reporting of sex as a variable in cardiovascular studies using cultured cells: A systematic review](#). FASEB J. 2020 Jul;34(7):8778-8786.
- Miller VM. [Universality of sex differences in cardiovascular outcomes: where do we go from here?](#) Eur Heart J. 2020 May 1;41(17):1697-1699.

### Sabine Oertelt-Prigione - [PubMed](#)

- Maas AH, Oertelt-Prigione S. [The Coronavirus Disease 2019 Outbreak Highlights the Importance of Sex-sensitive Medicine](#). Eur Cardiol. 2020 Aug 24;15:e62.
- Oertelt-Prigione S, Mariman E. [The impact of sex differences on genomic research](#). Int J Biochem Cell Biol. 2020 Jul;124:105774.
- Oertelt-Prigione S, Dalibert L, Verdonk P, Stutz EZ, Klinge I. [Implementation Strategies for Gender-Sensitive Public Health Practice: A European Workshop](#). J Womens Health (Larchmt). 2017 Nov;26(11):1255-1261.

### Valeria Raparelli – [PubMed](#)

- Tadiri CP, Raparelli V, Abrahamowicz M, Kautzy-Willer A, Kublickiene K, Herrero MT, Norris CM, Pilote L; GOINGFWD Consortium. [Methods for Prospectively Incorporating Gender into Health Sciences Research](#). J Clin Epidemiol. 2020 Sep 24:S0895-4356(20)31104-5.
- Raparelli V, Romiti GF, Spugnardi V, Borgi M, Cangemi R, Basili S, Proietti M; [The Eva Collaborative Group. Gender-Related Determinants of Adherence to the Mediterranean Diet in Adults with Ischemic Heart Disease](#). Nutrients. 2020 Mar 13;12(3):759.
- Raparelli V, Proietti M, Lenzi A, Basili S; EVA Collaborators. [Sex and Gender Differences in Ischemic Heart Disease: Endocrine Vascular Disease Approach \(EVA\) Study Design](#). J Cardiovasc Transl Res. 2020 Feb;13(1):14-25.

### Eva Swahn – [PubMed](#)

- Sederholm Lawesson S, Isaksson RM, Thylén I, Ericsson M, Ångerud K, Swahn E; SymTime Study Group. [Gender differences in symptom presentation of ST-elevation myocardial infarction - An observational multicenter survey study](#). Int J Cardiol. 2018 Aug 1;264:7-11
- Lawesson SS, Alfredsson J, Fredrikson M, Swahn E. [Time trends in STEMI--improved treatment and outcome but still a gender gap: a prospective observational cohort study from the SWEDEHEART register](#). BMJ Open. 2012 Mar 27;2(2):e000726.

### Marion Karoch-Andre - [PubMed](#)

- Savva C, Korach-André M. [Estrogen Receptor beta \(ER \$\beta\$ \) Regulation of Lipid Homeostasis-Does Sex Matter?](#) Metabolites. 2020 Mar 20;10(3):116. doi: 10.3390/metabo10030116. PMID: 32244965; PMCID: PMC7143602.
- González-Granillo M, Helguero LA, Alves E, Archer A, Savva C, Pedrelli M, Ahmed O, Li X, Domingues MR, Parini P, Gustafsson JÅ, Korach-André M. [Sex-specific lipid molecular signatures in obesity-associated metabolic dysfunctions revealed by lipidomic characterization in ob/ob mouse](#). Biol Sex Differ. 2019 Feb 26;10(1):11.

### Ivan Nalvarte - [PubMed](#)

- Nalvarte I. [Sex Stratified Treatment of Neurological Disorders: Challenges and Perspectives](#). Brain Sci. 2020 Feb 14;10(2):103.
- Varshney M, Nalvarte I. [Genes, Gender, Environment, and Novel Functions of Estrogen Receptor Beta in the Susceptibility to Neurodevelopmental Disorders](#). Brain Sci. 2017 Feb 23;7(3):24.

### Londa Schiebinger ([PubMed](#)) & Cara Tannenbaum ([PubMed](#))

- Zou J, Schiebinger L. [AI can be sexist and racist - it's time to make it fair](#). Nature. 2018 Jul;559(7714):324-326.
- Schiebinger L, Klinge I. [Gendered Innovation in Health and Medicine](#). Adv Exp Med Biol. 2018;1065:643-654.
- Tannenbaum C, Ellis RP, Eyssel F, Zou J, Schiebinger L. [Sex and gender analysis improves science and engineering](#). Nature. 2019 Nov;575(7781):137-146.
- Tannenbaum C. [Gender-based analysis using existing public health datasets](#). Can J Public Health. 2020 Apr;111(2):151-154.