

# Edward Mullins

## EDUCATION

2009-2014 Imperial College, London  
2000-2005 Nottingham University Medical School  
1992-1999 St George's School, Harpenden

## QUALIFICATIONS

2020 CCT Obstetrics and Gynaecology  
2015 PhD Imperial College, London  
2013 MRCOG  
2005 BMBS (Honours) Nottingham University  
2003 BMedSci (2:1) Nottingham University

## POSTS

**October 2017-present NIHR Academic Clinical Lecturer, O&G**, Imperial College and Queen Charlotte's and Chelsea Hospital

**February 2020-present Consultant to Anthem Healthcare (USA) Digital Care Delivery team**

**February 2020-May 2020 Clinical Advisor to the Chief Medical Officer**, Professor Chris Whitty, UK Department of Health and Social Care, acute policy response to COVID-19 providing clinical advice on pregnancy and neonates

**October 2016- October 2017 ST6 O&G** Mr W Dennes, Queen Charlotte's and Chelsea Hospital

**October 2015-October 2016 ST5** Miss N Jackson, Hillingdon Hospital.

**October 2014-October 2015 Editor-in-Chief, Chief Medical Officer's annual report**, Professor Dame Sally Davies.

Scoping, commissioning, writing for and editing the CMO's annual report which in December 2015 focussed on women's health in England. I was based in the Department of Health in Whitehall. The CMO's annual report receives national professional and media attention and made evidence-based recommendations to stakeholders.

**October 2013-October 2014 ST4** Mr M Nawar, Northwick Park Hospital.

**October 2012-October 2013 ST3** Prof. Dame Lesley Regan, St Mary's Hospital, London.

**October 2009-September 2012 Clinical Research Fellow** Dr Sailesh Kumar, Queen Charlotte's and Chelsea Hospital and Imperial College London, 2<sup>nd</sup> supervisor Prof. Irene Roberts, Haematology. Thesis, '*Volumetric blood flow and the maternal and fetal inflammatory response in normal pregnancy and fetal growth restriction: An ultrasound, flow-cytometry and immunoassay study*'.

**October 2008-October 2009 ST2** Mr DK Edmonds, Miss S Paterson-Brown, Queen Charlotte's and Chelsea Hospital

**August 2007-September 2008 ST1** Mr K Duncan, Mr M Stafford, Chelsea and Westminster Hospital

**August 2006-July 2007 FY2** Mr D. Harriss, Mr A. Simm, Mr R. Hammond, Dr S Chan, Nottingham City Hospital

**August 2005-July 2006 FY1** Mr A. Gee, Dr M. Ghandi, Dr C. Day, Royal Devon and Exeter Hospital

## RESEARCH FUNDING AND ACTIVITY

**Jameel Community Imperial College COVID-19 Excellence Fund, June 2020, £147,000**, Community Seroprevalence of SARS-CoV-2 in NW London (COM-SARS-2): historical study using stored maternal booking serum samples, co-PI, Christl Donnelly, September 2020-February 2021, 11,000 routinely collected residual maternal booking serum samples from NW London for SARS-CoV-2 IgG/IgM from June 2020 back to December 2019. Pilot for national study.

**Innovate Imperial inaugural grant, April 2020, £83,727**, 'Contraception at delivery in NW London: equal access for all women,' co-PI with Charity Khoo. This project will deliver education and training to deliver reliable contraception to women immediately after delivering their baby.

**UKRI/NIHR COVID-19 rapid response call 2, March 2020 £253,257**, 'A global registry for women affected by COVID-19 in pregnancy,' co-PI with Christoph Lees, provide detailed clinical registry to understand natural history and guide treatment and prevention. Urgent Public Health research priority, to date recruited 1283 women from 152 sites worldwide.

**2020-2024 – UK and European co-ordinator**, Trial Management Group member, TRUFFLE 2 RCT, Optimum strategy to time delivery in late pre-term fetal growth restriction, CI Christoph Lees

**2020 –2021, PI ICHT**, GUARD study, Ursodeoxycholic acid vs Metformin for Gestational Diabetes, CI Catherine Williamson, Kings

**2020-present Imperial NIHR BRC CL grant £4000, PI**, 'Health in Pregnancy', feasibility study of app-based monitoring tool for health before, during and after pregnancy'. Commercial collaboration with Medopad. Recruitment complete, study completion August 2020, CI Christoph Lees

**2019-present ICHT Women and Children's divisional grant, £10,312, CI**, 'Determining the normal range for Intrapartum glycaemia in non-diabetic women'. Recruitment to commence August 2020.

**2019-present ICHT Women and Children's divisional grant, £36,058, Co-applicant** with C Lees, CONCEIVE 2; Pre-conception interventions to improve Blood Pressure, a feasibility RCT'. Recruitment to commence February 2020.

**2018-present, local investigator**, Guar gum to prevent recurrent GDM, recruitment completion March 2020

**2019-present, PI ICHT**, OPHELIA study, Observational study in Pregnancy Hyperglycaemia: Endocrine causes, Lipids, Insulin and Autoimmunity, CI Claire Meek, Cambridge

**2018 Imperial NIHR BRC PPI grant £1500, PI**, Preconception focus group which planned CONCEIVE 2 study, below.

**2017 Imperial College European Partners Fund, £5000, co-PI**, supported development TRUFFLE 2 RCT, NIHR HTA funded for £2.5m, CI Christoph Lees

## PUBLICATIONS

B Mylrea-Foley, A Bhide, **E Mullins**, J Thornton, N Marlow, T Stamalija, R Napolitano, C Lees, Building consensus: thresholds for delivery in the TRUFFLE 2 randomized intervention study, *Ultrasound Obstet Gynecol*, 2020 Jun 13  
N Mehta, O Mytton, **E Mullins**, T Fowler, C Falconer, O Murphy, C Langenberg, W Jayatunga, D Eddy, J Nguyen-Van-Tam SARS-CoV-2 (COVID-19): What Do We Know About Children? A Systematic Review *Clin Infect Dis*. 2020 May 11;ciaa556

**E Mullins**, D Evans, R M Viner, P O'Brien, E Morris, Coronavirus in Pregnancy and Delivery: Rapid Review, *Ultrasound Obstet Gynecol*. 2020 May;55(5):586-592.

**Mullins E**, Lees C Brocklehurst, Is continuous electronic fetal monitoring useful for all women in labour? *BMJ*. 2017 Dec 5;359:j5423.

Hanson, M, **Mullins E**, Modi N, Time for the UK to commit to tackling child obesity. *BMJ*. 2017 Feb 22;356:j762.

**Mullins E**, Murphy O, **Davies SC**, Pre-conception public health to address maternal obesity. *BJOG*. 2016 Jan;123(2):159-60.

Davies, S.C. "Annual Report of the Chief Medical Officer, 2014, The Health of the 51%: Women" London: Department of Health (2015) **Editor-in-Chief, Mullins E**

**Mullins E**, Agarwal N, Oliver R, Odejinma F, Significance of Perihepatic adhesions in women undergoing laparoscopic surgery for ectopic pregnancy, *Int J Gynaecol Obstet*. 2015 Jun 3.

Story L, Sankaran S, **Mullins E**, Tan S, Russell G, Kumar S, Kyle P. Survival of pregnancies with small for gestational age detected before 24 weeks gestation. *Eur J Obstet Gynecol Reprod Biol*. 2015 May;188:100-3.

Prior T, **Mullins E**, Bennett P, Kumar S, Prediction of fetal compromise in labor. *Obstet Gynecol*. 2014 Jun;123(6):1263-71.

Prior T, **Mullins E**, Bennett P, Kumar S, Are 1st-trimester  $\beta$ -human chorionic gonadotrophin and pregnancy-associated plasma protein A levels predictive of intrapartum fetal compromise in a selected normal population? *Aust N Z J Obstet Gynaecol*. 2014 Oct;54(5):418-23.

Prior T, **Mullins E**, Bennett P, Kumar S, The influence of parity on fetal haemodynamics and amniotic fluid volume at term. *Ultrasound Obstet Gynecol*. 2014 Dec;44(6):688-92.

Prior T, **Mullins E**, Bennett P, Kumar S, Umbilical venous flow rate in term fetuses: can variations in flow predict intrapartum compromise? *Am J Obstet Gynecol*. 2014 Jan;210(1):61.e1-8

Prior T, Wild M, **Mullins E**, Bennett P, Kumar S, Sex specific differences in fetal middle cerebral artery and umbilical venous Doppler, *PLoS One*. 2013;8(2):e56933.

**Mullins, E**, Prior, T, Roberts, I, Kumar, S, Changes in the fetal and neonatal cytokine profile in pregnancies complicated by fetal growth restriction, 2013 May;69(5):441-8. Dec 24. Review

Prior, T, **Mullins, E**, Bennett, P, Kumar, S, Prediction of intra-partum fetal compromise using the cerebro-umbilical ratio: a prospective observational study, *Am J Obstet Gynecol*. 2013 Feb;208(2):124.e1-6.

Saha E, **Mullins E**, Paramasivam G, Kumar S, Lakasing L: Perinatal outcomes of fetal echogenic bowel. *Prenat Diagn* 2012; 32: 758-64.

**Mullins E**, Prior T, Roberts I, Kumar S: Changes in the maternal cytokine profile in pregnancies complicated by fetal growth restriction. *Am J Reprod Immunol* 2012; 68: 1-17.

**Mullins E**, Kumar S: Older mothers do not confer greater perinatal risk to dichorionic diamniotic twins. *Acta Obstet Gynecol Scand* 2012; 91: 153-4.

**Mullins E**, Wales N, Domoney C: Incontinence associated with Childbirth. *General Practice Update*, August 2008, Elsevier.

**Mullins E**, Kumar S, Older mothers do not confer greater perinatal risk to dichorionic diamniotic twins. *Arch Dis Child Fetal Neonatal Ed* June 2011, Volume 96, Suppl 1

## EDITORIAL, AUTHORSHIP

**Guest Editor**, by invitation, Special Edition, Women's Health, *Anaesthesia*, March 2021

**Editor and contributor**, RCOG, 'Better for Women,' report, launched House of Lords, December 2019

**E Mullins**, L. Regan, 'Women's Health', *Kumar and Clark's Clinical Medicine*, 9<sup>th</sup> edition, revised chapter for 10<sup>th</sup> edition in press

**Editor-in-Chief, Chief Medical Officer's Annual Report (England)**, The Health of the 51%: Women, December 2015

**Chapter author**, B Leigh, **E Mullins**, L Regan, 'A human rights approach to women's health,' in Davies, S.C. "Annual Report of the Chief Medical Officer, 2014, The Health of the 51%: Women" London: Department of Health (2015)

**Chapter Author**, **E Mullins**, 'Basic Embryology', chapter in iBook, 'Reproductive Medicine', for Year 2 medical students at Lee Kong Chian School of Medicine (LKC Medicine)/Imperial College, Singapore.

## AWARDS, ORAL AND INVITED PRESENTATIONS

**Prizes** **E Mullins**, N Agarwal, J Odenjinme, How to interpret the presenting symptoms of ectopic pregnancy? The triad associated with major haemorrhage, **Prize - Best oral presentation at conference, BSGE silver jubilee meeting, June 4/5th 2015.**

T. Prior, **E. Mullins**, P. Bennett, S. Kumar Prediction of intra-partum fetal distress using the fetal cerebro-umbilical ratio, DOI: 10.1002/uog.11314, *Oral presentation, ISUOG 2012 Prize - Best oral presentation in session*

**E Mullins**, L Story, T Prior, Kumar, S, Intra-Uterine Growth Restriction and fetal circulation: It's not all going to their heads. *Oral presentation at Herbert Reiss Prize meeting, Royal Society of Medicine, 2012. (Herbert Reiss Prize for best oral presentation)*

**E Mullins**, Roberts I, Kumar, S, Maternal and Fetal Peripheral Blood Mononuclear Cells produce altered pro- and anti-inflammatory cytokines in Intra-Uterine Growth Restriction. *Oral presentation at 9<sup>th</sup> RCOG International Scientific meeting, Athens 2011 (Prize – Best oral presentation in session)*

**Oral presentations** **E Mullins**, Preventing neonatal hypoglycaemia: targets in intrapartum glycaemia, *CRN NW London Diabetes Research Symposium, February 2020 Invited*

R Scott, **E Mullins**, P Pantelidis, B Jones, J Terry, C Yu, A Dornhorst, S Robinson, R Agha-Jaffar, S Misra, A Waiting Game - Progression of Autoantibody Positive Gestational Diabetes to Type 1 Diabetes. *Oral presentation, Diabetes UK Professional Conference, March 2019*

**E Mullins**, Obstetrics for general physicians, Obstetric Medicine for GIM Physicians, *Imperial College, January 2019*

**E Mullins**, Violence against women and pregnancy, *British Society of Biopsychosocial Obstetrics and Gynaecology Annual Conference, September 2018 Invited*

**E Mullins**, The health consequences of violence against women, *Cumberland Lodge, Violence Against Women: A Determinant of Health Conference, 6-7<sup>th</sup> February, 2017 Invited*

B Karavadra, **E Mullins**, E Prosser-Snelling, E Morris, A mixed qualitative and quantitative analysis on the impact of endometriosis on women in the United Kingdom; a silent disease? *Oral presentation, RCOG Annual Congress, 20-22<sup>nd</sup> July, 2016*

**E Mullins**, CMO annual report and Immediate Post-Partum Contraception, *National Labour Ward Leads Meeting, 19<sup>th</sup> June, 2016, Invited*

**E Mullins**, 'Medical Complications in Pregnancy', *Obstetrics and Gynaecology study day, Royal Society of Medicine, 27<sup>th</sup> February, 2016, Invited*

**E Mullins**, Women's Health in 2015, *Speaker and chair of session at Public Health England's 'Gender in health,' round table meeting, 20<sup>th</sup> February 2015, Invited*

**E Mullins**, T Prior, K Skogstrand, I Roberts, S Kumar, Cord blood and post-delivery cytokines, chemokines and neurotrophins in infants affected by fetal growth restriction, *ISUOG 2012*

**E Mullins**, L Story, T Prior, S Kumar, Distribution of cardiac output and vessel diameters in growth restricted fetuses – Is the fetal brain really protected? *ISUOG 2012*

**E Mullins**, G Paramasivam, T Prior, S Kumar, B Jones, M Noori, R Wimalasundera, Dichorionic Tri-Amniotic triplets (DCTA): conservative and interventional management and outcomes, *Short oral presentation, ISUOG 2012*

**E Mullins**, Intra-Uterine Growth Restriction: Not a small problem. *Annual conference of the British Medical Ultrasound Society, London, 2011. Invited*

**E Mullins**, Story, S, Damodarum, M, Kumar, S, Fetal arteries show global vasodilation in Intra-Uterine Growth Restriction. *Oral presentation at 9<sup>th</sup> RCOG International Scientific meeting, Athens 2011*

**E Mullins**, Macrae, C, Kumar, S, The perinatal outcome of pregnancies complicated with very low first trimester PAPP-A levels. *Oral presentation at London Speciality School of Obstetrics and Gynaecology Conference, 2010*

## POLICY EXPERIENCE

**Clinical Advisor CMO (England), Professor Chris Witty, DHSC**, February 2020, acute policy response to COVID-19 outbreak. Prepared briefing, '*Coronavirus : Impact on Pregnancy,*' for CMO, DHSC and AoMRCs. Presented rapid reviews to SAGE. Supported setup up New and Emerging Respiratory Virus Threats Advisory Group (NERVTAG) therapeutics committee.

**Invited policy advisor to RCOG by Prof. Lesley Regan**, 2018-2019

**Member of Public Health England's (PHE), 'Reproductive Health consensus'**, 2016-2017

**Rapporteur** at, 'A Global Roadmap for Tackling Childhood Obesity Within and across countries,' St George's house Consultation, Windsor Castle, June 2-3<sup>rd</sup> 2016 in association with the RCPCH.

**Briefed Minister for Public Health PS(PH)**, on amendment to serious crime bill relating to restricting sex-selective abortion, CMO's annual report, menopausal health in the workplace

**Briefed Minister for Women, Equalities and Family justice** on menopausal health in the workplace

**Member of PHE, 'Women who have sex with women,' advisory group**, 2015.

**Member of PHE, 'Missed Opportunities in Pregnancy,' advisory group** on contraception pathways post-pregnancy, 2015.

**Invited speaker and chair of session, PHE 'Gender in health,'** round table meeting, 20<sup>th</sup> February, 2015

Attended monthly **Chief Medical Officer's Public Health meetings**, where regional directors of public health, leaders of PHE and invited speakers discuss current and emerging issues in public health 2015/2016

## TEACHING AND SUPERVISION

**Thesis Progression Committee member**, A Hurrell, PhD candidate, Placental growth factor-based repeat testing in suspected preterm pre-eclampsia, Kings College London

**Late stage reviewer**, 2019, M Gerval, MD candidate, Imperial College

**Supervisor** -8 BSc students (2018,19, 20), Imperial College Reproductive Sciences course. Developed a YouTube channel for pregnancy information, PPI into preconception health and diabetes, achieving a 1st and 2:1s.

-2 MRes (2019-present, obesity and nutrition) students (2019) in related projects;

'*The use of a fibre supplement to reduce risk of recurrent GDM in pregnancy,*' (completed, August 2019-78% for project and 1st)

'*The subjective and objective evaluation of diet in women with previous and recurrent GDM,*' (ongoing)

**Lectures** Diabetes in Pregnancy, Obesity in Pregnancy, PPI and Pre-conception health, Imperial College Reproductive Sciences BSc, 2017, 2018 and 2019.

**Education** Member, development group for revised syllabus for Imperial College Reproductive Sciences BSc

## REVIEWER

NIHR HTA

MRC CRTF

Lancet, BJOG, BMC Pregnancy and Childbirth, Ultrasound in Obstetrics and Gynaecology, Canadian Medical Journal

## POSTER PRESENTATIONS, PUBLISHED ABSTRACTS

**E Mullins**, R Delgado, P Carnduff, A Dornhorst, Gestational diabetes and type-2 diabetes in women in North West London, *accepted, Diabetes UK Professional Conference, March 2020*

AJ Shonfeld, **E Mullins**, S Malhotra, Maternal positioning during caesarean section – wedge or tilt? *Obstetric Anaesthetists' Association conference, 2013 (Winner, best poster in caesarean section category)*

G Paramasivam, **E Mullins**, T Prior, R Wimalasundera, S Kumar: Perinatal outcomes following radiofrequency ablation in monochorionic pregnancies. *ISUOG 2012*

S Sankaran, **E Mullins**, L Story, S Kumar, PM Kyle: Outcome of pregnancies with severe IUGR detected by ultrasound scan at or before 24 weeks. *British Maternal and Fetal Medicine Society 15<sup>th</sup> Annual Conference, Glasgow, 2012.*

**E Mullins**, MS Damodaram, L Story, T Prior, S Kumar, Fetal circulatory redistribution in normal and intra-uterine growth restriction pregnancies by volume blood flow, *BMFMS 2012*

**E Mullins**, L Story, T Prior, S Kumar, Fetal renal artery volume blood flow is altered in early-onset intra-uterine growth restriction and has a non-linear relationship with AFI, *BMFMS 2012*

T Prior, **E Mullins**, P Bennett, S Kumar, Pre-labour fetal cerebro-umbilical ratio is predictive of intra-partum fetal distress, *BMFMS 2012*

T Prior, M Wild, **E Mullins**, P Bennett, S Kumar, Emergency caesarean section for fetal distress in labour is associated with smaller babies than spontaneous vaginal delivery, *BMFMS 2012*

**E Mullins**, L Story, M Damadoram, T Prior, S Kumar, IUGR and blood flow redistribution. *Annual Academic Meeting RCOG 2011 (Blair Bell research meeting)*

T Prior, **E Mullins**, P Bennett, S Kumar, Prediction of intra-partum fetal compromise using the cerebro-umbilical ratio. *Annual Academic Meeting RCOG 2011 (Blair Bell research meeting) (Prize- Best poster)*

**E Mullins**, S Kumar, Does Assisted Reproductive Therapy (ART) increase the risk of neonatal unit admission or mortality for dichorionic diamniotic twins? *Perinatal Medicine 2011*

G Paramasivam, **E Mullins**, R Wimalasundera, S Kumar, Fetal suprarenal masses: case series from a tertiary referral centre. *Perinatal Medicine 2011*

**E Mullins**, G Paramasivam, S Kumar, Absent end diastolic flow: Progression and perinatal outcome at a tertiary referral centre. *Perinatal Medicine 2011*

E Saha, G Paramasivam, **E Mullins**, S Kumar, L Lakasing, Perinatal outcomes of fetal echogenic bowel. *Perinatal Medicine 2011*

**E Mullins**, S Kumar, Inflammatory Bowel Disease: did maternal methylprednisolone and gestational diabetes mask IUGR? *London Speciality School Obstetrics and Gynaecology conference, 2011*

**E Mullins**, A McKewan, D James, Investigating the effect of restricting fetal karyotyping in looking for chromosomal abnormalities. *British Maternal and Fetal Medicine Society (BMFMS) conference, 2005*

## **UNIVERSITY OF NOTTINGHAM**

**Distinction (by viva) in Obstetrics and Gynaecology, University of Nottingham, 2004**

**E Mullins**, Investigating the effects of folate deficiency and ketosis on limb bud development in chick micromass cell culture. *B Med Sci thesis, University of Nottingham, 2003.*

## **CAREER GOALS**

I will develop accessible interventions for women to optimise their health before and after pregnancy, translating mechanistic research into societal interventions to be evaluated at scale. The broad aim is to prevent pregnancy complications (gestational diabetes, fetal growth restriction and pre-term delivery) and improve mother/child long-term cardiovascular and metabolic health.

## **REFEREES**

**Professor Christoph Lees**, Imperial College, Queen Charlotte's and Chelsea Hospital, London, [c.lees@imperial.ac.uk](mailto:c.lees@imperial.ac.uk)

**Professor Dame Lesley Regan**, Imperial College, past President RCOG, [l.regan@imperial.ac.uk](mailto:l.regan@imperial.ac.uk)

**Professor Dame Sally Davies**, former Chief Medical Officer, England, Master of Trinity College Cambridge  
[sally.davies@trin.cam.ac.uk](mailto:sally.davies@trin.cam.ac.uk)