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Toward the elimination of bias in Pediatric Research

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Complete List of Authors:	Bearer, Cynthia ; Pediatrics Agostoni, Carlo ; Dept of Pediatrics; Anand, K.J.S.; Stanford University School of Medicine, Pediatrics Ambalavanan, Namasivayam; University of Alabama at Birmingham, Pediatrics Bhandari, Vineet ; St. Christopher's Hospital for Children, Neonatology Bliss, Joseph ; Brown University, Pediatrics Bloomfield, Frank ; University of Auckland, Liggins Institute Bonifacio, Sonia ; Stanford University School of Medicine, Neonatal and Developmental Medicine Buhimschi, Irina A. ; Nationwide Childrens Hospital, Center for Perinatal Research; The Reserach Institute at Nationwide Children's Hospital, Cilio, Maria Roberta; University of California, San Francisco, Department of Neurology Coppes, Max; University of Nevada School of Medicine, Pediatrics; Renown Health, Renown Children's Hospital Czinn, Steven; University of Maryland School of Medicine, Pediatrics EL-Khuffash , Afif ; The Rotunda Hospital, Neonatology; The Royal College of Surgeons in Ireland, The Rotunda Hospital Embleton, Nicholas ; Newcastle Hospitals NHS Foundation Trust, Ward 35 Neonatal Unit Felderhoff-Mueser, Ursula ; Dpt. of Pediatrics I, University Hospital Essen, University of Duisburg-Essen Ferriero, Donna; Weill Institute for Neurosciences Florin, Todd; Cincinnati Children's Hospital Medical Center, Pediatrics - Pediatric Emergency Medicine Fuentes-Afflick, Elena; San Fransisco General Hospital, Department of Pediatrics Gardner, William Gospe, Sidney ; Neurology Gunn, Alistair; University of Auckland, Dept of Physiology Gressens, Pierre ; Hopital Robert Debre, INSERM E 9935 Giussani, Dino ; Physiology Development & Neuroscience Haiden, Nadja; Med Univ Vienna, Department of Clinical Pharmacology Hauptman, Marissa; Children's Hospital Boston, Kim, Kwang ; Peds Infect Dis Klebanoff, Mark ; Nationwide Children's Hospital, Center for Perinatal Research Lachman, Peter; International Society for Quality in Health Care, Lanphear, Bruce; Simon Fraser University

	Ozen, Seza ; Hacettepe Univeristy School of Medicine, Pediatrics Roehr, Charles; John Radcliffe Hospital, Newborn Care Roland, Damian; University of Leicester Rosenblum, Norman ; Pediatrics Schwarz, Margaret; Indiana University School of Medicine, Pediatrics Staiano, Annamaria ; University of Naples, Department of Pediatrics Stroustrup, Annemarie; Icahn School of Medicine at Mount Sinai Friedman Brain Institute, Pediatrics; Icahn School of Medicine at Mount Sinai, Environmental Medicine and Public Health Valente, Enza Maria ; University of Salerno , Department of Medicine and Surgery Wilson-Costello, Deanne; UH Rainbow Babies and Children's Hospital Division of Pediatrics, Wynn, James ; University of Florida College of Medicine, Molloy, Eleanor ; Trinity College, the university of Dublin, Paediatrics and Child Health
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AUTHORS:

Cynthia Bearer, Carlo Agostoni, Kanwaljeet J. S. Anand, Namasivayam Ambalavanan, Vineet Bhandari, Joseph M. Bliss, Frank Bloomfield, Sonia L. Bonifacio, Irina Buhimschi, Maria Roberta Cilio, Max Coppes, Steven J. Czinn, Afif EL-Khuffash, Nicholas Embleton, Ursula Felderhoff-Müser, Donna M. Ferriero, Todd Florin, Elena Fuentes-Afflick, William Gardner, Sidney M. Gospe, Jr., Alistair Gunn, Pierre Gressens, Dino Giussani, Nadja Haiden, Marissa Hauptman, Kwang Sik Kim, Mark Klebanoff, Peter Lachman, Bruce Lanphear, Seza Ozen, Charles Roehr, Damian Roland, Norman Rosenblum, Margaret Schwarz, Annamaria Staiano, Annemarie Stroustrup, Enza Maria Valente, Dee Wilson-Costello, James Wynn, Eleanor Molloy

Cynthia Bearer

Pediatrics, University of Maryland, Baltimore, MD

Carlo Agostoni

Dept of Pediatrics, IRCCS Ospedale Maggiore, Policlinico. University of Milan, Milan, Italy

Kanwaljeet J. S. Anand

Stanford University School of Medicine, Stanford,

California

Namasivayam Ambalavanan

University of Alabama at Birmingham, Birmingham, Alabama

Vineet Bhandari

St. Christopher's Hospital for Children, Department of Neonatology, Philadelphia, Pennsylvania

Joseph M. Bliss

Brown University, Women & Infants Hospital, Providence, RI

Frank Bloomfield,

University of Auckland, Liggins Institute, Auckland, New Zealand

Sonia L. Bonifacio

Stanford University School of Medicine, Neonatal and Developmental Medicine, NICU, Palo Alto, CA

Irina Buhimschi

Nationwide Childrens Hospital, Center for Perinatal Research, Columbus, OH

Maria Roberta Cilio

University of California, San Francisco, Department of Neurology, San Francisco, CA

Max Coppes

University of Nevada School of Medicine, Pediatrics; UNSOM – Pediatrics; Reno NV

Renown Health, Renown Children's Hospital, Reno NV

Steven J. Czinn

University of Maryland School of Medicine, Baltimore MD

Afif EL-Khuffash

The Rotunda Hospital, Neonatology; The Royal College of Surgeons in Ireland

Dublin, Ireland

Nicholas Embleton

Newcastle Hospitals NHS Foundation Trust; Royal Victoria Infirmary, Newcastle upon Tyne, United Kingdom of Great Britain and Northern Ireland

Ursula Felderhoff-Müser

Dpt. of Pediatrics I, University Hospital Essen, University of Duisburg-Essen, Essen, Germany

Donna M. Ferriero

Weill Institute for Neurosciences, San Francisco, CA

Todd Florin

Cincinnati Children's Hospital Medical Center, Pediatrics - Pediatric Emergency Medicine, Cincinnati OH

Elena Fuentes-Afflick

San Francisco General Hospital, Department of Pediatrics; University of California, San Francisco CA

William Gardner

CHEO Research Institute, Ottawa, Canada

Sidney M. Gospe, Jr.

Seattle Children's Hospital, Neurology, Seattle Washington

Alistair Gunn

University of Auckland, Dept of Physiology, Auckland, New Zealand

Pierre Gressens

Hopital Robert Debre, Paris France

Dino Guissani

Physiology Development & Neuroscience, University of Cambridge, Cambridge, United Kingdom of Great Britain and Northern Ireland

Nadja Haiden

Med Univ Vienna, Department of Clinical Pharmacology, Vienna, Austria

Marissa Hauptman

Children's Hospital Boston, General Pediatrics, Boston MA

Kwang Sik Kim

Peds Infect Dis, Baltimore MD

Mark Klebanoff,

Nationwide Children's Hospital, Center for Perinatal Research, Columbus OH

Peter Lachman

International Society for Quality in Health Care, Dublin, Ireland

Bruce Lanphear

Simon Fraser University, Burnaby, British Columbia, Canada

Seza Ozen

Hacettepe Univeristy School of Medicine, Pediatrics, Ankara, Turkey

Charles Roehr

John Radcliffe Hospital, Newborn Care, Oxfordshire, United Kingdom of Great Britain and Northern Ireland

Damian Roland

College of Life Sciences, University of Leicester, Leicester, England

Norman Rosenblum

Sickkids Research Institute, Ontario, Canada

Margaret Schwarz

Indiana University School of Medicine, Pediatrics, South Bend, IN

Annamaria Staiano,

University of Naples, Department of Pediatrics, Naples, Italy

Annemarie Stroustrup

Icahn School of Medicine at Mount Sinai Friedman Brain Institute, Pediatrics, New York NY

Enza Maria Valente

University of Salerno , Department of Medicine and Surgery, Baronissi, Italy

Dee Wilson-Costello

UH Rainbow Babies and Children's Hospital Division of Pediatrics, Cleveland OH

James Wynn

University of Florida College of Medicine, Gainesville, FL

Eleanor Molloy

Trinity College, the University of Dublin, Paediatrics and Child Health, Trinity Academic Centre, Tallaght Hospital, Dublin, Ireland

Corresponding Author: Cynthia Bearer: cbearer@som.umaryland.edu

There is increasing evidence that unconscious bias can affect real-world decision-making processes in publication just as in many other fields(1). In response, the editorial board of Pediatric Research is working to investigate and reduce the bias in the publication acceptance rates in order to preserve the integrity of the peer review process and publication. As news items have suggested that gender bias is a major problem in academia(2), we reviewed papers submitted between 1 November 2017 and 9 August 2018 to *Pediatric Research*. Encouragingly we found that the acceptance rates of manuscripts were not significantly different between corresponding authors who were male or female. However, we incidentally uncovered a higher rejection rate in the manuscripts where the corresponding author had a name that could not be identified as either male or female and did not have a picture on their website so that we could identify their gender(3). It is important to point out that we do not know the reason for this, but its identification is the first step to further exploration, including assessing whether unconscious bias may play a role.

Diversity, including gender diversity leads to better science and may contribute to the “innovation dividend”(4). Many institutions are tackling unconscious bias through training. UK and Irish

universities have to fulfill specific requirements under the Athena SWAN (Scientific Women's Academic Network) Charter, a formalized agreement that acknowledges and rewards good practices in higher education and research institutions to improve ethnic, racial and gender equality: representation, progression and success for all(2,5). Universities and medical institutions worldwide have encouraged unconscious bias training including both the areas of equality and diversity. Some courses are available on line (https://www.tcd.ie/equality/training/lead-online-training/; http://kirwaninstitute.osu.edu/implicit-bias-training/; https://www.youtube.com/watch?v=v01SxXui9XQ&t=62s&app=desktop; https://www.aamc.org/members/leadership/catalog/178420/unconscious_bias.html) making compliance relatively easy.

In a subsequent correspondence to our editorial, Jagsi et al(6) pointed out that the medical academy still has a long way to go in eliminating bias in publication rates. *Pediatric Research* agrees with this conclusion and would like to describe the efforts being taken to eliminate bias. We feel it is important to assess a more complete picture of potential gender bias by having essential data. Our actions are as follows:

First, the managing editor is collecting gender information of the first, last and corresponding authors, as well as authors applying for and receiving our early career investigator publication award. Using this data in the next few years, we will re-examine gender bias in acceptance rates at *Pediatric Research* for first and senior authors and early career investigators separately. This information will only be seen by the managing editor and is not revealed to the editors or reviewers as it is for internal use only.

Second, we are encouraging current members of the editorial board to participate in an unconscious bias course. All new members of the editorial board will be required to take an online unconscious bias course as will our editorial apprentices.

Third, we are analyzing the reasons for rejection of manuscripts. Rejection can occur as Reject without Review (rejected before peer review), Reject (reviewers found a fatal flaw in the paper) or Reject and Resubmit (Reject and resubmit is used when the reviewers feel that revisions will take longer than the normal time for a resubmission but are enthusiastic about the manuscript). While we are gathering data to determine if papers that are novel and have merit, are being rejected with repairable flaws, this analysis will also allow us to determine whether unconsciously, gender plays a role in any of the 'rejection' categories we have.

Many articles that are rejected come from low or very low resource countries. In some cases, these may be more appropriately handled by a "country advisor", someone from the country of origin that could assist in developing the manuscript to a publishable form(7). We currently refer papers with merit but need attention to a Springer-Nature English editing resource to deal with language issues for manuscripts we wish to publish. *Pediatric Research* will identify first or last authors from accepted manuscripts from these nations in our new feature on Global Pediatric Research Community. They will be featured each month in a commentary and invited to join a resource to other authors in their countries who wish to publish in *Pediatric Research*.

However, many manuscripts will not be acceptable to *Pediatric Research*. There are many reasons for rejection. Some do not meet our rigorous scientific or ethical standards and many are simply beyond the scope of the topics we cover. In an effort to assist these latter manuscripts still to be published, we are developing a transfer desk with Springer-Nature, a formal mechanism to re-route these manuscripts to journals more suitable for their scope, either content-wise or articles that do not have a global impact.

In sum, *Pediatric Research* is combating bias, including unconscious bias, on multiple levels. Stay tuned for updates!

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