

FOR IMMEDIATE RELEASE

The Borne Foundation awards £1 million to leading universities working with genome centres to advance our understanding of the origins of labour and preterm birth

London 18 October 2021: Premature birth affects 15 million babies across the world and 60,000 babies are born preterm in the UK every year. It is the leading cause of childhood mortality in the world today, and many babies born preterm are disadvantaged by chronic illness or disability. Yet pregnancy is one of the least explored aspects of human biology and research remains largely uncoordinated and underfunded.

In 2020, Borne's Founder, Professor Mark Johnson, consulted broadly with clinical and scientific experts around the world on what is holding back the advancement of preterm birth research. The group identified a strategic opportunity to facilitate the systematic and open access study of the biological interactions across different cells and tissues of women as they transitioned into labour. This strategic initiative – Borne's Uterine Mapping Project or BUMP - should foster scientific collaboration at an unprecedented scale to advance our understanding of labour, and identify new interventions to delay or prevent preterm labour.

Julian Mylchreest, Chairman of Borne, said, "We announced a research grant call in early 2021 inviting leading research institutions across the United Kingdom to put forward proposals to deliver a proof of concept study of Borne's Uterine Mapping Project – a project that will look to map the uterus and create a cell atlas that can facilitate a step change in our knowledge of the mechanisms of preterm labour and new approaches for its prediction and prevention. We were delighted by the response and are very pleased to be funding two research groups led by Imperial College and Kings College London respectively, and who in turn are collaborating with a number of other clinical and biomedical research groups on the project."

Professor Phillip Bennett, Director of the Institute of Reproductive and Developmental Biology at Imperial College London said, "On behalf of my collaborators at Cambridge University, the Wellcome Sanger Institute, the European Bioinformatics Institute and University College London, we are delighted to have been awarded the funding to design and validate a ground-breaking methodology to develop a cell atlas and document the regulatory networks onto which the pathology of preterm labour can be mapped. Our study brings together world leading experts in systems and cellular biology, multi-omics, data integration and preterm birth to study multiple potential regulatory systems, cell-cell interactions and target tissues in carefully characterised subjects to understand how these factors interact regionally and temporally as the uterus prepares for labour."

Professor Rachel Tribe, Professor of Maternal and Perinatal Science in the School of Life Course Sciences at King's College London said, "My colleagues at King's College London, Newcastle University, Imperial College, Chelsea and Westminster Hospital and our associated NIHR Biomedical Research Centres and patient groups are thrilled to receive this funding from Borne. It will enable us to build new biological foundations through the application of novel high throughput molecular techniques to disentangle the mechanisms underlying preterm birth. Our collaborative effort will provide vital data that ultimately will enable us to map the uterus and determine where each pregnant woman lies on the transition from no labour to established labour."

The funding of these awards are made possible by the generosity of Borne's supporters including lead

funder, ICAP Charity Day, Howden Insurance Brokers' Health & Care Division, the Big Give Champion, EQ Foundation and so many others who wish to remain unnamed.

Professor Mark Johnson, Founder of Borne, said, "Childbirth is the inevitable maturation event at the end of pregnancy, and we do not know why labour is sometimes triggered prematurely, often with devastating lifelong consequences on the baby and its family. Research into preterm birth is underfunded and under-coordinated, and we are excited to be taking the first steps towards making our vision of an open access cell atlas of the uterus – what we call BUMP – a reality. This award to two groups of eminent scientists and their inter-disciplinary collaborators will encourage more talent into this area of need and accelerate the discovery into new treatments and clinical care guidelines. In anticipation of the feasibility work being the success we expect, we have already established and received support from a wide network of national and international scientists who will engage in collaboration with this effort at the end of the feasibility phase."

Ends

NOTE TO EDITORS

About premature birth

Premature birth is the leading cause of infant death and disability worldwide. Every year, 15 million children around the world are born prematurely and over 1 million die. In the UK, preterm birth affects more than 1 in 13 babies, nearly 60,000 every year.

About Borne

Borne was founded in 2013 to find solutions to preterm birth, the leading cause of infant mortality and childhood disability. Through research, we find interventions and treatments that can be translated into clinical solutions with global application. By addressing prematurity, we make a vital difference in reducing death and disability in childbirth and creating lifelong health for mothers and babies. Our vision is a world in which a child's first day on earth would not have to be their hardest. Through our pioneering research, we can make that vision a reality.

Borne is supported by Patrons Will Greenwood MBE and Dame Darcey Bussell, and a proactive community of influencers including Sophie Ellis-Bextor, Jason Fox, Francesco Molinari, Erin O'Connor MBE, Alistair Petrie and Greg Rusedski. Registered charity no. 1167073

To find out more about prematurity and Borne's work, visit www.borne.org.uk

About Borne's Uterine Mapping Project (BUMP)

BUMP involves the systematic study of the biological interactions across different cells and tissues in the maternal reproductive system as a woman transitions to labour. The study requires samples collected from participating maternity hospitals with the infrastructure to process the specimens collected and isolate cells of interest in readiness for analysis by bioinformaticians. The wealth of data generated at the cellular level from this unique resource will power the work of renowned preterm birth experts and their teams who will be able to extend the scope and context of their work to accelerate the advancement of knowledge and discovery in ways that are simply not possible without collaboration.

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