**2018 ASM Abstract Submission form**

**All Raine Study researchers** are invited to submit an abstract to present their research findings at the Raine Study Annual Scientific Meeting [8 minute oral presentation followed by 2 mins of questions from the floor].

**Early career researchers and PhD students** are encouraged to present on behalf of their Special Interest Groups. The Raine Medical Research Foundation have kindly donated **two prizes of $750 each** **for the best presentations** by students and early career researchers.

Please complete this form and return to the Raine Study, attention: Aggie Bouckley

At raineadmin-SPH@uwa.edu.au **by Friday 19th October 2018**.

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| **Researcher Bio (2-3 sentences – will be included on the final program)** |
| Will McIntosh is a PhD student at the University of Western Australia. He is particularly interested in research examining the origins of neurocognitive disorders. His main area of study is Clinical Neuropsychology and this provides opportunity for him to explore the complex interplay between the developing physical brain and cognition/behaviour, with a particular focus on Autism Spectrum Disorders.  |
| **Title:** *Title of presentation* |
| Fetal head circumference growth trajectory is associated with postnatal expressive and receptive language outcomes: A prospective, longitudinal cohort study. |
| **Speaker:** *Title, name, position, institution, address, telephone, email* |
| Mr Will McIntosh, PhD/Mpsych(ClinNeuro) Candidate, School of Psychological Science, University of Western Australia/Telethon Kids Institute, 08 6488 3274, Will.McIntosh@research.uwa.edu.au |
| **Special Interest Group:** |
| **Psychological SIG** |
| **Co-investigators:**  |
| Mr Will McIntosh, Will.McIntosh@research.uwa.edu.au, 08 6488 3274, PhD/MPsych(ClinNeuro) Candidate, School of Psychological Science, University of Western Australia, Crawley, Western AustraliaProf Murray Maybery, Murray.Maybery@uwa.edu.au , 08 6488 3255, School of Psychological Science, University of Western AustraliaDr Patrick Dunlop, Patrick.Dunlop@uwa.edu.au , 08 6488 7614, School of Psychological Science, University of Western AustraliaProf John Newnham, John.Newnham@uwa.edu.au , 08 6458 1331, Division of Obstetrics and Gynaecology, University of Western AustraliaProf Jeffrey Keelan, Jeffrey.Keelan@uwa.edu.au ,08 6458 1880, Division of Obstetrics and Gynaecology, University of Western AustraliaProf Andrew Whitehouse, Andrew.Whitehouse@telethonkids.org.au, 0425564465, Telethon Kids Institute |
| **Abstract:** *Approximately 600 words* |
|  OBJECTIVE:Language development is delayed in a minority of children, and the delay may be related to the very early stages of brain development. The current study sought to determine if a slowed prenatal head growth trajectory across critical windows of fetal neurodevelopment is associated with weaker expressive and receptive language outcomes at age 10. METHODS:Prenatal head circumference (HC), as a reliable and valid proxy measure of brain volume, was collected during gestation between three to five times (mean = 4.29) at 18, 24, 28, 34, and 38 weeks in 729 unselected pregnant women from Perth, Western Australia. Offspring expressive and receptive language outcomes at age 10 years were measured using the Clinical Evaluation of Language Fundamentals – IV. RESULTS:A slope-as-predictor multi-level equation model, which controlled for carefully selected sociodemographic and obstetric variables, was applied to each of three language variables. HC growth trajectory (i.e. HC-slope) was positively associated with overall language ability, (β HC-slope = 7.93, p = .02), expressive language skills (β HC-slope = 7.64, p = .02), and receptive language skills (β HC-slope = 7.09, p = .05) at age 10.CONCLUSIONS:Slowed prenatal head growth trajectory is significantly associated with weaker expressive and receptive language outcomes in middle childhood. These findings provide further evidence that prenatal neurodevelopment is a key area of future investigation of the origins of developmental difficulties. |

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| X | By placing an ‘X’ in this box the lead investigator certifies that all investigators listed above have read and agree to the contents of this form. |

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| **Corresponding author:** | **Date:** |
| Prof Andrew Whitehouse, Andrew.Whitehouse@telethonkids.org.au, 0425564465, Telethon Kids Institute | 16/10/18 |