**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)** |
| Louis is a junior doctor currently working at the Royal Victorian Eye and Ear Hospital in Melbourne. His recently completed Masters of Medicine Treatise explores the relationships between sunlight and ocular health. Next year he is due to return to Western Australia to work with Lions Outback Vision. |
| **Title:** *Title of presentation* |
| Pterygium: Prevalence and Associations in Western Australian Adults  |
| **Speaker:** *Title, name, position, institution, address, telephone, email* |
| Dr Louis Stevenson, Masters Student, Lions Eye Institute, 2 Verdun St Nedlands WA 6009, 0409 677 035, louis.stevenson@utas.edu.au |
| **Special Interest Group:** |
| **Senses SIG** |
| **Co-investigators:**  |
| Mr Gareth Lingham, Dr Seyhan Yazar, Prof David A Mackey |
| **Abstract:** *Approximately 600 words* |
| **Background**To describe the prevalence of pterygium and its associations in middle-aged adults in Perth, Western Australia.**Methods**A total of 1049 adults participated in the Gen1 Raine Study cohort, a cross-sectional study of parents (Gen1). Fifty-five participants were excluded due to incomplete data, leaving 994 in the analysis cohort. Colour photographs were taken of each eye to determine the presence or absence of pterygium, defined as a wing-shaped, fibrovascular, conjunctival growth extending across the limbus to involve the cornea. Participants also underwent conjunctival ultraviolet autofluorescence photography, which has been validated as a biomarker of sun exposure, non-cycloplegic autorefraction and completed a questionnaire on past ocular history and sun exposure. Associations with pterygium were determined using ordinal logistic regression analysis.**Results**The median age of the cohort was 56.7 years (SD=5.7) and 571 (57.4%) were female.The lifetime prevalence of pterygium was 8.4% (n=83). Twenty-four (2.4%) participants had previously undergone pterygium surgery and 8 (0.8%) had recurrent pterygia. Pterygium was more common in males (n=40, 9.5%) than females (n=27, 4.7%). The median total area of conjunctival autofluorescence with ultraviolet photography in those with pterygia was significantly greater than those without (36.98mm2 vs 20.68mm­2, p-value = <0.001). Pterygium prevalence was not found to be significantly associated with age (p-value=0.75) or time spent outdoors (p-value=0.46) **Conclusion**We found the prevalence of pterygium in urban Western Australia to be comparable to that quoted in other Australian studies. Pterygium was strongly associated with increased conjunctival ultraviolet autofluorescence extent, consistent with its well-established association with ultraviolet radiation. However, there was no effect of age or time spent outdoors on pterygium prevalence. This may reflect the narrow age range of the cohort and the difficulty assessing historical sun exposure with questionnaires. |

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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:** |
| Louis Stevenson | 19/10/2018 |