EXHIBIT AA

LIVERPOOL HOSPITAL

NSW GOVERNMENT Health
South Western Sydney Local Health District

SYDNEY SOUTH WEST GENETICS SERVICE

Clinical Geneticists
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26th November 2018

SUMMARY OF PREVIOUS INVOLVEMENT BY DR ALISON COLLEY
Information from - FOLBIGG GENETICS FILE 1564

In 1991 Mr Craig and Mrs Kathleen FOLBIGG were referred to the Newcastle and Northern NSW Genetics Service (now referred to as Hunter Genetics) by general practitioner Dr Chris Marley. Mr and Mrs Folbigg's two sons, Caleb and Patrick had died, aged 19 days and 8 months respectively, both with a diagnosis of SIDS. The concern was whether the boys had a genetic condition that caused or predisposed to their demise, the risk of recurrence in another child and whether there were options to mitigate such an event recurring.

I met Craig and Kathleen in the genetics clinic on 12th November 1991, for an initial discussion to obtain personal and family history information, draw a pedigree and get their consent to obtain doctors letters and documents, including post mortem reports, to assist me in providing them with information and counselling. I wrote to Professor Bridget Wilcken on 4th December 1991 to enlist her expert advice and received a reply dated 10th December 1991.

I met Craig and Kathleen a second time in the genetics clinic on 18th February 1992 for a consultation and wrote them a summary letter dated 27th February 1992 and also on that day wrote a follow up letter to Professor Wilcken with copies to the other doctors involved with the family. At this appointment Kathleen informed me she was pregnant.

On 30th October 1992 I documented in the genetics file that baby Sarah had been born at John Hunter Hospital on 14th October, was seen by Dr Gus Cooper, respiratory specialist, a sleep monitor was arranged and urine sample for metabolic screen was sent to Professor Bridget Wilcken at The Oliver Latham Laboratory in Sydney.

I wrote to Craig and Kathleen on 6th October 1993 after I returned to work after a period of leave to learn that Sarah had died on 30th August 1993 in similar circumstances to her two brothers. I had discussed the event and the subsequent investigations that had been arranged with my colleague Dr Matt Edwards. I offered my condolences and an appointment with me for a further discussion should they want to meet.

I met with Craig and Kathleen in the genetics clinic on 5th November 1993; Craig's sister Carol and her husband Robert were present also. I had discussed the situation with Professor John Christodoulou, metabolic specialist at Westmead Children's Hospital to ensure there wasn't any further metabolic investigations indicted. I wrote a letter to Craig and Kathleen dated 16th November 1993 summarising our discussion on 5th November.

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I left the Newcastle and Northern NSW Genetics Service in early 1996 and had no further involvement or contact with the family. I learnt from the media that Craig and Kathleen had a fourth child, Laura , who died at 20 months also SIDS.

MEDICAL GENETIC ADVANCES

There has been a fundamental change in genetic testing since 2000, especially in the last five years with the development of robust genomic technology. Genomic interrogation, either by whole exome sequencing (WES) or whole genome sequencing (WGS) is the hypothesis-free study of the DNA; a known or presumed diagnosis as a starting point is not needed, but the DNA sequences are studied and variants interrogated against the known human healthy genome and the clinical features of the patient(s). Variants of unknown significance (VOUS) may need further clarification by in family (parental samples) segregation or functional studies. However, having DNA samples from four siblings with a similar phenotype - normal growth and development, no dysmorphic features, well general health and sudden death in infancy - will decrease the number of VOUS.

The whole exome refers to all the DNA content that is involved in coding for proteins (exons). The whole genome refers to the non-coding elements (introns) in the genome in addition to the exome, as well as the mitochondrial DNA. Increasingly deep intronic variants have been found to cause splice- site changes that lead to the disruption of the correct reading of the code and thus synthesis of a normal protein. There also may be regulatory elements that are not captured within the exome.

The laboratory technique of WES in fact only captures ~85% of the exome and is thus not a perfect technology. The whole genome platform ensures all exomes are fully captured and interrogated, and WGS captures all classes of genetic variation in one test. It has been consistently shown to be more efficient than WES in detecting mutations and is very useful when a specific clinical diagnosis is not achievable. Unexplained infant death can be studied by doing a molecular autopsy by WES or WGS. To capture the mitochondrial genome as well as the most complete nuclear genome, a WGS approach is needed. Variants would be considered if found in genes coding for proteins involved in cardiac arrhythmia, immunodeficiency, respiratory and central nervous system functions, including central hypoventilation, as well as inborn errors of metabolism/metabolic pathways.

RECOMMENDATIONS

1 A discussion of the utility and best strategy for performing genomic studies with a multidisciplinary team of specialists including clinical geneticists and genomicists, anatomical pathologist and molecular pathologists

1 Involve a NSW Health pathologist in molecular genetics, National Pathology Accreditation Advisory Council (NPAAC) accredited, to report the genomic study results and interpretation from a NATA accredited molecular genetics laboratory to issue diagnostic (not research) reports.

2 Consider the samples available from each child, the ability and method to extract DNA from these samples and whether it is possible to have DNA from the parents as in-family control to test variants that require segregation analysis.

3 Variant analysis by team of clinical geneticist and genetic pathologist. Only report pathogenic or likely pathogenic variants (class 4-5); VOUS will not allow diagnosis or exclusion of a genetic condition as a diagnosis.

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