

Report by:

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I have always found that participating at the IMFAR in previous years to be enormously rewarding; however I found that participating at this year's meeting in London, England was of particular importance. This was because the overall scope of the meeting was designed for researchers to not only consider one's work in the context of their specific field but also how our findings in different fields can and should be integrated because such integration will be vital to our understanding of autism spectrum disorders (ASDs). It is this context of the need for a multidisciplinary approach that made this IMFAR meeting especially important to me and I am appreciative of the opportunity to attend this year's meeting because of the Autism Ontario Travel Bursary.

This year's IMFAR meeting included many different aspects of autism research. Studies were presented on aspects of communication, language and development. There were neuroscience presentations of brain structure and function in individuals with autism, genetic findings was reported as well as sessions dedicated to intervention, services and treatment; all of which were informative. For instance, the 'Sibling Studies' session presented findings from researchers who assessed infant siblings of children with an ASD in order to identify earlier indicators of risk to susceptibility. Wan et al. compared the interactions between mothers and infants during play in 30 high-risk families and 28

typically developing families and found no differences between groups in behaviours during play. However, Chawarska et al. looked at joint attention in eighteen high-risk and eleven low-risk 3-month olds and found that infants from the high-risk cohort did not attend to the person unlike infants from the low-risk cohort. These studies reflect the ongoing work in identifying measures that can be used for earlier identification of individuals at risk for ASDs.

As informative as I found these sessions detailing current research in autism, it was the overall scope and direction of the IMFAR meeting that I found most useful. As a Trainee with the Autism SPectrum Interdisciplinary REsearch (ASPIRE) Training Network, my PhD research emphasized a multidisciplinary strategy in the investigation of genes involved in a brain pathway for susceptibility to ASDs. Thus, my oral presentation at IMFAR of one of my gene findings was presented in a broader neuroscience context of how changes to this gene could have an affect on different brain regions which could contribute to the behaviours or impairments seen in individuals with autism. However, discussions and presentations at IMFAR showed how this integration of multiple disciplines needs to be extended even further. Professor Francesca Happé, a Keynote Speaker, spoke of her clinical work with twins and found that the genetic contributions to characteristics of autism are mostly

independent. Based on this finding, a geneticist (such as me) should examine genes related to a given trait in autism (i.e. the presence of stereotypes) rather than autism as a whole. An entire Symposium addressed the need to better link genes with brain imaging findings as exemplified by presentations by Professors Murphy and Plomin with the same recommendation of a 'bottom-up' approach as described by Professor Happé. Furthermore, as important as it is to know new directions in our research, it is equally important for the development of methods and techniques to facilitate this research. Professor Brammer described new methods such as independent component analysis and support vector machine to aid in the integration of genetic and brain imaging findings while a spirited Roundtable session discussed the use of current diagnostic tools in autism research. Although there were no conclusions drawn, the discussions were very powerful reminders of the importance of challenging one-another's and one's own approaches to diagnosis of these complex disorders.

I left the IMFAR meeting with the feeling that the sessions presented at the conference were invaluable. Although I was applying a multidisciplinary approach in my research, I found I could strengthen my genetic studies by focusing on certain features of ASDs and for the continued necessity for greater integration of my findings such as incorporating brain imaging work with my neuroscience understanding. This need for greater integration illustrates another vital aspect of IMFAR and that is the opportunity to network. No one person can undertake the level of integration required for continued research in autism and attending IMFAR allowed me to make several contacts with other researchers, students and potential collaborators. It is my opinion that opportunities such as IMFAR to meet and discuss the direction and scope of autism research are vital for the professional development of new researchers such as me and funding provided by organisations such as Autism Ontario will be critical to fulfilling our goal of understanding autism and better supporting individuals with ASDs and their families.