



HIGHLIGHTS OF THE YEAR

2016 was The Danish National Research Foundation's Center for Music in the Brain (MIB)'s first full year - a year of building up in terms of personnel, collaborations, projects, administrative procedures and music-specific infrastructure. To support the core research in the four strands of the centre, Perception, led by Lauren Stewart: Action, led by Peter Vuust: Emotion, led by Morten Kringelbach and Learning, led by Elvira Brattico, MIB started up one associate professor, one assistant professor, one postdoc, two PhD students, 1 research assistant and two half-time technicians.

A constant influx of international guest professors and graduate and postgraduate students from abroad has been aiding the MIB research greatly. Supported by Aarhus University Research Foundation (AUFF) and the Lundbeck foundation, Prof Mikko Sams from Aalto University and Prof Risto Näätänen both visited MIB for three months, giving exciting lectures, writing papers and initializing a number of research collaborations with MIB researchers. Dr Mari Tervaniemi from Helsinki University was visiting professor at MIB with the agreement to visit regularly to follow the longitudinal and developmental studies as scientific advisor for the duration of the funding period.

MIB furthermore hosted a number of prominent guest speakers and collaborators, such as Jean- Claude Dreher, Predrag Petrovic, Lauri Parkkonen, Stefan Kölsch and Virginia Penhune. During the fall of 2016, Bjørn Petersen arranged MIB's first web-streamed course in experimental musicology attracting almost 30 Master's and PhD students from Aarhus University (AU), the Royal Academy of Music and abroad.

Translating the MIB research into clinical applications is an important goal for MIB. This line of research, coordinated by assoc prof Line Gebauer, was able to attract considerable external funding. The Tryg Foundation, Aage og Ejnar Danielsens Fond, Folkesundhed i Midten, and Fonden til Lægevidenskabens Fremme generously funded the PhD of Mette Kaasgaard, who will be starting January 2017, on singing training of patients suffering from chronic obstructive pulmonary disease. This project was granted 1.7 million DKK in 2016. MIB received further funding from FKK, FSS, and Neurelec S.A.S. (totalling 2.5 million DKK) for projects on music in relation to autism/ADHD, sleep, and cochlear implant users. We were furthermore involved in a number of externally funded up-starting PhDs from Denmark and abroad. We received cofounding (1/3) of four PhD stipends in 2016 from the Graduate School of Health, assurance for one fully financed mobility stipend at Health, co-financing of one PhD student from the Graduate School at Arts, as well as a number of smaller grants for travel and conferences from the Lundbeck Foundation and FENS.

A scientific highlight in December 2016 was the publication of papers in two consecutive issues of Scientific Reports both building on original MIB paradigms. New developments of these paradigms, the Musical Multi-feature Paradigm and the dual tapping paradigm, are currently pursued by PhD students from different MIB strands as well as researchers in Finland and Germany. Also worth mentioning is Gustavo Deco and Morten Kringelbach's work on brain connectivity and meta-stability, published in Trends in Neuroscience, which forms the basis of several upcoming MIB papers. Importantly, most of the MIB papers in 2016 are co-authored by researchers from more than one MIB strand and includes international collaborators. This is in line with MIB's ambition of being a truly crossdisciplinary, international centre with a strong internal coherence between the different strands.

The societal and educational relevance of the research remains fundamentally important to MIB. Together with ASTRA and Dansk Naturvidenskabsfestival we initiated and concluded data collection and preliminary analyses from more than 30,000 school children reporting listening habits, musical activities and performing musical ear training tests and working memory tests - some of these before and after an app-based musical training program. These data will allow us to determine whether there is a causal effect of musical training on working memory, which until now has been a generally held belief among music educators, but remains an open question. This study is part of MIB's growing interest in studying development in children, which is also evident in the initiated longitudinal studies of MIB's learning strand which uses brain scanning to investigate the influence of long term intensive musical training on children's development in other cognitive areas.