京都大学若手人材海外派遣事業　ジョン万プログラム
研究者派遣プログラム

英文報告書

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１．渡航者　（日本語）			
氏　　名	野村　理朗	採択年度	平成 25 年度
部　　局	教育学研究科	電　話	
職　　名	准教授	メール	
研究課題名	Psychological research on the interplay of cultural and genetic influences on cognitive function		
海外渡航期間	平成 25 年 7 月 4 日～　平成 25 年 9 月 29 日		
渡航先 （英語表記）	国名： United States of America 大学等研究機関名： North Western University 研究室名等：　Affective and Cultural Neuroscience laboratory 受入研究者名： Joan Chiao		

２．渡航の報告　（英文）

渡航先の研究環境、研究者との交流、研究発表の状況等、渡航中の滞在経験について英語(500～1000語)で記述して下さい。受入研究者と撮影した写真や研究発表で用いた図等について、可能な範囲で別添として提出して下さい。ページ数については増加してもかまいません。

この報告は、ジョン万プログラムの成果として、京都大学ホームページ（英文）などに掲載されることがあります。

As senior visiting scholar, thanks to the Jhon Mung Program, I visited the Social, Affective and Cultural Neuroscience laboratory (Proffesor Chiao' who is one of the top psychologist in the field of Cultural Neuroscience), department of psychology at Northwestern University from July 4th to September 29th, 2013 for a collaborative project "Psychological Research on the Interplay of Cultural and Genetic Influences on Cognitive Function ".

I gave a introduction to my research laboratory in Kyoto University and with Proffesor Chiao, research assistant Jessica Powers, Emily Karpinski, Vivian Wang and graduate student, Narun Pornpattananangkul, I worked on current research progress examining genetic factors of social cognition including empathy, altruistic behavior and impulsivity.

My research showing that specific genetic polymorphisms are associated with the those cognition and behavior in contexts of reward and punishment are groundbreaking and suggest that genes play an important role on cognitive processes in affective contexts. As developments in brain functional neuroimaging studies have established important physiological links between genetic polymorphisms and robust differences in information processing within distinct brain regions and circuits linked to social cognition. My research combined such approaches which is useful for gaining a better

understanding of how genes, culture, and psychosocial factors dynamically interact with one another.

A new hypothesis of gene-culture interaction I proposed addresses this mechanism by showing the following: (1) the behavioral regulation of S allele carriers of Serotonin transporter gene polymorphism is optimized under aversive conditions, which may help them to adapt to collectivistic cultures; and (2) such self-regulatory responses underlied by the prefrontal cortex are modulated by cultural interdependent self-construal and psychosocial factors, all of which are geared toward modulating fear and social pain, and thus may lower the risk for emotional disorders. In addition, we discussed a number of possible directions for our collaboration as well as designed a cross-cultural component.

Based on this, by doing pilot on participants with double translated task instruction, we have already analized the data and modulated the task condition so that we confirmed compatibility of the task which will be conducted each Japanesse Americans and Caucasian American genotyped participants after IRB approval. Since I retunded to Japan, we have continously had discussion on email ad meetings on Skype so that we are confident to be able to precisely cary out the project both in Japan and the USA. Furthermore we will submit our research result to top Journals of our research fields (Psychology and Neuroscience) as well as international confrerences and meetings.

One of my great experiences at NU was the opportunity to communicate with fuculty members od NU and researchers from many countries. I also had a great chance to meet and have adiscussion with Proffesor Jean Decety at University of Chicago, a president of Soceity of Social Neuroscience for collaborating on cross-cultural study on Emotion. Through having a wide range of these academic discussions with them, I believe that my stay at Northwestern can contribute to enhancing relations among international researchers in psychology and social neuroscience while also developing a new research field.