Dear CIBM Advisory Boards,

I am writing the letter to support my previous Ph.D student, Dr. Shicheng Guo to be considered by the Computation and Informatics in Biology and Medicine (CIBM) training program in UW-Madison. I have been his Ph.D supervisor during 2010 to 2015, I am proud to say that Mr. Guo is one of my best students I have ever taught.

Dr. Guo conducted large number of genetic and epigenetic epidemiology research in my lab, especially on DNA methylation biomarker for cancer and other complex diseases. He built the first DNA methylation detection platform in my lab and conducted serials of DNA methylation biomarker screening on lung cancer and liver cancers. He successfully completed his Ph.D training with the thesis: Cancer Biomarker Research Based on Genome-wide DNA methylation Profile: Diagnosis and Prognosis (2015). In the thesis, he applied different methylation assay including Illumina methylation array (methylation 450K), MSD-SNuPET (Methylation Status Determined Single Nucleotide Primer Extension Technique), methylCap-Seq (MBD-Seq) to identify differential methylation signals in human cancers and then apply different machine learning method to build the prediction models to evaluate the biomarker performance in cancer diagnosis and prognosis. All the relevant works have been published as the first author or co-first author in Clinical Epigenetics, Cancer Medicine, Frontiers in Genetics. Except human cancer, Dr. Guo finished the first CD4+ cell DNA methylation profiles in Rheumatoid Arthritis patient from Chinese Han Population, which provided the evidence to the role epigenetics variants on rheumatoid arthritis (Modern Rheumatology, 2017). Dr. Guo conducted the further research on this field and extend his research into cell-free DNA methylation to detect the cancer-DNA origin based on tissue-specific DNA methylation signals when he working as Postdoc in University of California, San Diego and the work has been published on Nature Genetics (2017).

Dr. Guo came to visit me last month when he was invited to give a speech in Shanghai Annual Rheumatology Research Meeting (September, 2018) and we talked about the genetic and epigenetic interaction research in autoimmune disease and Phenome Wide Association Studies based on epigenetic factors (PheWAS). Both of them are quite interesting and will be important for the basic research for these complex diseases. His present work will have strong collaboration opportunity on population genetics and epidemiology since I am charging one of largest cohorts (Taizhou Cohort) in China and now focusing on phenome research.

I strongly support him to be considered in the application to CIBM postdoctoral fellowship position in University of Wisconsin-Madison which would provide him more trainings on bioinformatics and computational biology and also will provide great benefit for his further independent academic research. Please don’t hesitate to email me If you have any question. I’d like to share more information’s about Dr. Guo.

Sincerely Yours,

Li Jin, Ph. D

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