Personal Statement

I am a board-certified anatomic pathologist since 2004. After my residency, I went to France to pursue my fellowship in hematopathology and my doctoral thesis under the supervision of Professor Philippe Gaulard, a well-known hematopathologist with expertise in NK- and T-cell lymphoma. My previous work focused on the gene expression profiling and genomic study in cytotoxic NK- and T-cell lymphomas, with emphasis on nasal NK/T-cell lymphoma and hepatosplenic T-cell lymphoma. The frozen tissues were subject to Affymetrix U133 2.0 array and array comparative genomic hybridization to uncover the transcriptomic and genomic abnormalities. Among the dysregulated genes and/or signaling pathways, platelet-derived growth factor, its receptor, and Jak-Stat pathway were the most upregulated in lymphoma tissues. We validated our *in silico* rsults using immunohistochemistry and quantitative RT-PCR. The results of *in vitro* functional studies using tumor-derived cell lines confirmed our results in primary tumor tissues and we also found that imatinib mesylate, a tyrosine kinase inhibitor, was able to inhibit the growth of tumor cell lines. Recent publications by other groups found recurrent Jak3 mutation in nasal NK-/T-cell lymphoma reflected our study that Jak-Stat pathway is an important oncogenic pathway in the pathogenesis of nasal NK-/T-cell lymphoma.

After coming back to Taiwan, I conducted three research projects as a principal investigator. The first one was to study cytogenetic abnormalities in diffuse large B-cell lymphoma and gastric MALT lymphoma, using the technique of fluorescence *in situ* hybridization (FISH) and chromogenic *in situ* hybridization (CISH). The second one was to study the genomic abnormalities of esophageal squamous cell carcinoma in order to predict their response to neoadjuvant chemo-radiotherapy. The last was to continue my project of thesis - to establish an *in vivo* xenograft mouse model of nasal NK/T-cell lymphoma and to evaluate the effect of imatinib mesylate in xenograft mice.

As an anatomic pathologist in a medical center, I regularly attend the tumor boards of hematologic malignancies (since 2010), colorectal cancer (since 2010) and skin cancers (since 2014). In those combined meetings, we discuss every patient bearing the diagnoses of the above types of cancer to achieve the optimal therapeutic regimens for each of them.

With the scientific training in doctoral thesis and the above research projects, I have technical expertise in immunohistochemistry, *in situ* hybridization, *in vitro* functional studies and *in vivo* animal experiments