

**NUS Graduate School for Integrative Sciences and Engineering  
Research Project Write-up**

**Title of Project :**           **Membranes for purification and separation of pharmaceutical synthesis**

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Pharmaceutical syntheses are often taken place in organic solvents through multiple steps of synthesis, multi-step separations and purifications have to be conducted in order to facilitate the reactions as well as to concentrate or separate small molecular weight (Mw) pharmaceuticals and intermediates. We will carry out a fundamental research to study membrane science and develop membrane technologies to separate pharmaceutical products in organic solvents. Two approaches will be examined; one is to develop nano-filtration membranes to separate low Mw pharmaceuticals; the other is to develop pervaporation membranes to recycle organic solvents used in pharmaceutical syntheses.