

## **Thermal analysis of interaction of epidermal lipids V**

Petra Kaloušová, degree work , June 2009

### **Abstract**

Natural function of human skin is to protect the body from adverse influences of the surrounding. In 1950's and 70's it was discovered, that the skin barrier is situated in stratum corneum and is determined by lipids in intercellular space of that layer. Transdermal application of medicaments has many advantages compared to peroral one. On the other hand stratum corneum is a certain barrier for penetration of the medicaments. Thus we have focused on this lipid layer and its interaction with water. We have used samples prepared in vitro consisting of cholesterol, pseudoceramid and modulators of transdermal penetration. We have tried to hydrate the samples and tracked their characteristics and interactions by differential scanning calorimetry. At the same time we have evaluated the individual groups of drugs and proper experimental conditions for that particular measurement.