Abstract This Graduation Theses objective is the study of rheologic and adhesion properties of branched oligoesters and acyclovir release from these systems. At the theoretic part there is introduced a basic survey of the bioadhesion and used adhesive materials and their possibilities of the exploitation. There is also the survey of bioadhesive dosage forms registrated in the Czech Republic. And further more there is an apportionment of the bioadhesion for the specific and nonspecific bioadhesion with a special focus on lectins. At the practical part the adhesion and the dynamic viscosity of the oligoesters of lactic and glycolic acid branched with various concentration of dipentaerythritol (0,5D, 1D, 2D, 3D, 5D, 8D) and linear PLGA were measured. Carriers were plasticized using 10% of triethylcitrate. The highest adhesion power was found out by oligoesters 5D and 8D. The dynamic viscosity was the highest by oligoesters 3D and PLGA. The release of acyclovir was studied by oligoesters 0,5D, 1D a 2D. The most fast acyclovir realize was measured regarding to oligoester 0,5 D, 48 hours. The acyclovir realize from oligoester 1D was 10 days and from oligoester 2D 21 days. Keywords: bioadhesion, bioadhesive materials, lectins, acyclovir release, viscosity