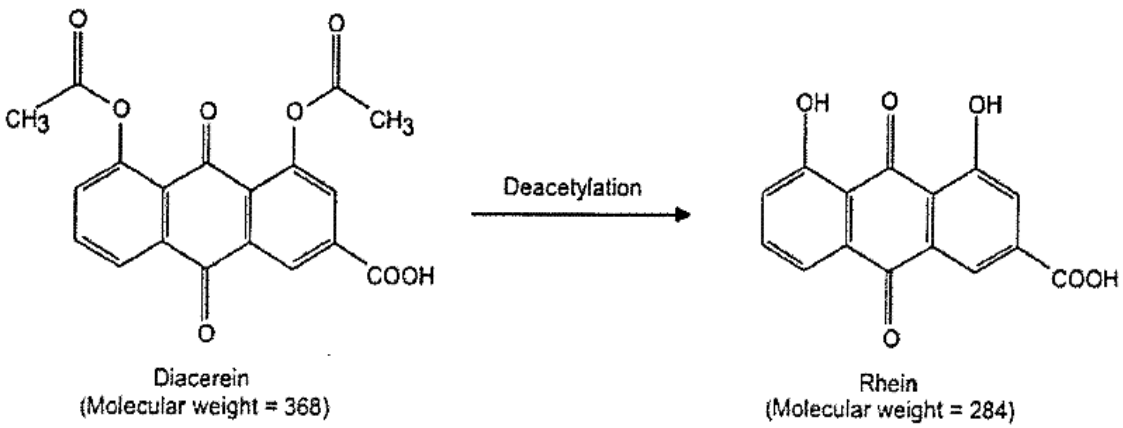

Figure 5: Diacerein as a pro-drug of rhein **(**Nicolas et al., 1998)

A thorough review on the pharmacokinetics of diacerein was published in 1998 **(**Nicolas et al., 1998**)**. This author compiled the principal pharmacokinetic results on diacerein (50 mg twice daily) as follows:

- Diacerein is entirely converted into rhein before reaching the systemic circulation.
- Rhein itself is either eliminated by the renal route (20%) or conjugated in the liver to rhein glucuronide (60%) and rhein sulphate (20%); these metabolites are mainly eliminated by the kidney.
- The pharmacokinetics characteristics of diacerein are about the same in young healthy volunteers and elderly people with normal renal function, both after a single dose (50 mg) or repeated doses (25 to 75 mg twice daily).
- Rhein kinetics after single oral doses of diacerein is linear in the range 50 mg to 200 mg.
- However, rhein kinetics are time-dependent, since the non-renal clearance decreases with repeated doses. This results in a moderate increase in maximum plasma concentration, area under the plasma concentration-time curve and elimination half-life.