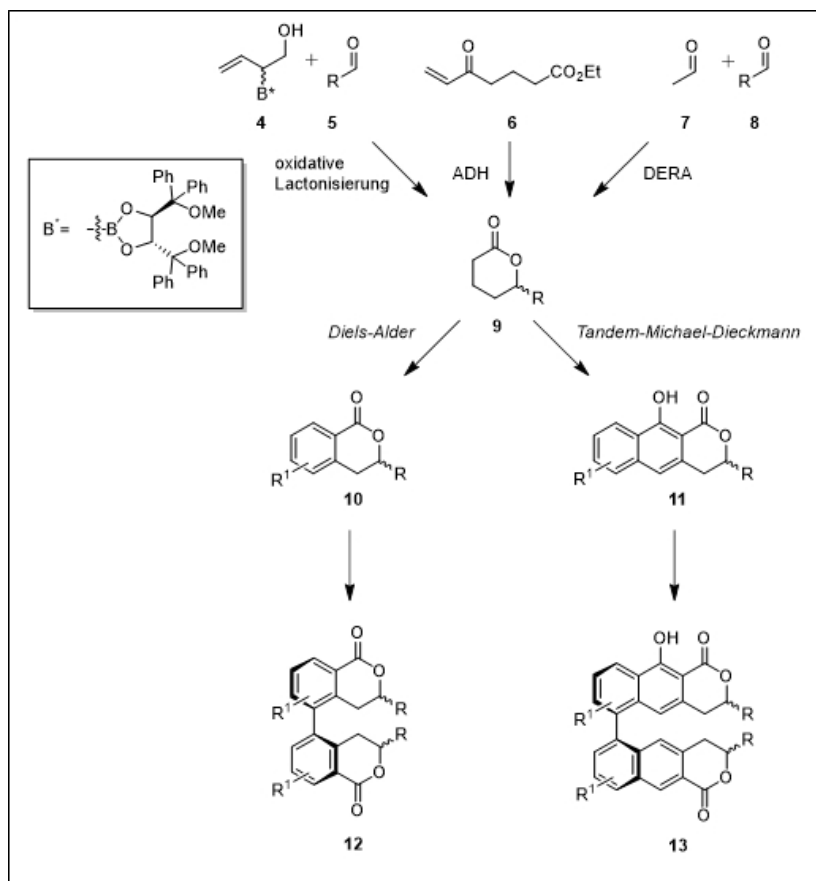


## Chemoenzymatic synthesis of natural products and derivatives with a biaryl moiety



Cancer is one of the most common diseases and causes of death in the western industrial nations. The number of incidences increases every year, wherefore the pharmaceutical research is focusing on new agents. Today, the increasing multi drug resistance (MDR) of cells towards a multitude of pharmaceuticals is presenting itself as a further major problem, causing difficulties in the treatment of diseases with pharmaceuticals. This work is focusing on the development of new biologically active components against multi drug resistant carcinomas, based on the structure of iso-coumarines and naphthopyran-2-on derivatives.

We will try to synthesise various unknown substituted iso-coumarines and naphthopyran-2-on derivatives and expect them to exhibit biological activity. In literature, there are syntheses described for the core structure of these compounds. In contrast to the known syntheses, our procedure is combining enzymatic and chemical steps, which is environmentally friendly and saves resources, which makes it more sustainable. Furthermore the suggested syntheses for both derivatives are shorter than all of the known procedures.

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