

## **Abstract**

Since the beginning of the 70's there has been an enormous technological progress in the field of genetic engineering. One of the most important questions from the economist's point of view in this context is the optimal composition of property rights for these genetic inventions. This thesis adopts the western patent system as a given property right arrangement and searches for its optimal structure. In this context the question arises, whether patent protection of genetic inventions is sensible from a national economic welfare point of view and how the existing system has to be modified.

The existing models, which scrutinise the economic influences of patents, usually emphasise the innovation function which patents have and try to optimise the trade-off between the R & D incentives and monopoly costs. However the current situation of genetic technology recommends underlining the information function of patents and the distribution of know-how. Decisive for this perspective is that innovations in the field of genetic engineering accrue sequentially so that technological advance and improvement cumulate gradually.

Under these circumstances patents are, because of their information function, inevitably necessary in order to guarantee the revelation of basic knowledge and to prevent disclosure as an alternative strategy. At the same time patents are detrimental, because they forbid the use of knowledge to others and thus they prevent further advance. In a theoretical analysis this problem of optimising the trade-off between the availability of knowledge and the permission to make use of this knowledge must be solved in the best possible way.