

ElexoPharm GmbH

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My Personal Background

- Graduated in Economics in 1998
- Postgraduate Studies in European Law and Economics
- In 2002 started to build up the Patent Marketing Agency at Saarland University
- Participation in 50 IP deals (7 with university start-ups)
- In 2005 Co-Founder of ElexoPharm together with Prof. Rolf Hartmann



- In 2002 the German Employee Invention Act was changed
- Establishment of regional publicly funded patent marketing agencies
- Independent companies with a commercial purpose
- Responsible for the evaluation and commercialisation of university IP
- In 2009 still partly funded
- Mostly big agencies acting for several universities
- In Saarland one small agency closely connected to the university



- Decisions are mostly taken on an „opportunistic“ basis
- No decision matrix exists for the choice of the commercialisation strategy
- Licences are in general preferred to start-ups
- Licences normally generate faster earnings for the university

- BUT: Start-ups can be the more sustainable way of commercialisation



- 1. Innovation covering only a niche market**
- 2. Innovative ideas in a very early phase**
- 3. New technology platforms**



1. „Small“ innovations covering only a niche market

- Market not big enough for existing players
- Sometimes no broad IP coverage needed
- Start-up could be managed by inventors
- Success depends very much on motivation and engagement of inventor
- Low bis medium financial potential



2. New technology platforms

- Technologies which can be licenced easiliy
- Licencees often cover only a part of the different applications
- Start-up can do further development and then sell licences in different application areas
- Good development strategy and appropriate funding play a key role
- Need outside management and expertise
- Very high financial potential



3. Innovations in a very early phase

- Too early for existing big players
- Often high risk projects
- Usually typical case for VC funding
- Start-ups can bridge the development gap between academia and industry
- Intermediate concerning cultural differences between universities and e.g. „big pharma“
- High financial potential and high likelihood of failure



- **ElexoPharm** was founded in 2005 as a Spin-Off of Saarland University
- Ten employees
- Four fully equipped laboratories in a Science Park located on the university campus
- Access to all necessary analytical instruments (LC-MS/MS, NMR etc.)
- In 2007 ElexoPharm was awarded the “KfW-Unternehmerpreis GründerChampion” in Berlin
- Saarland University considers itself as an “Entrepreneurial University” with about 200 new start-ups in the last 15 years

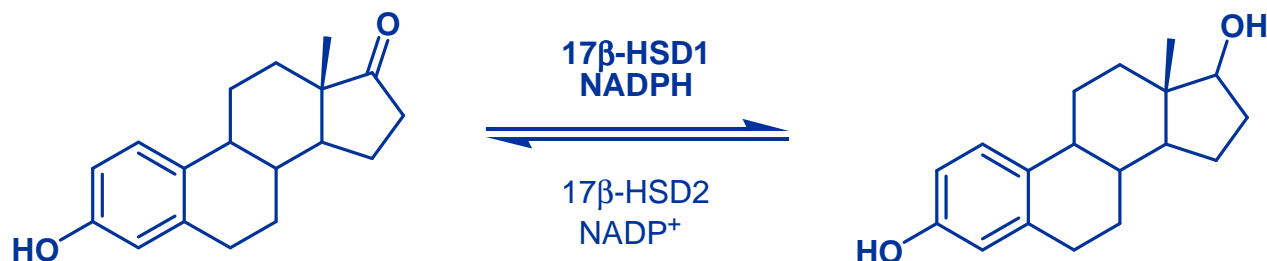


ElexoPharm

- offers **MedChem Services**
- is involved in own research projects in the field of lead compound discovery
 - based on university IP, which was taken over by ElexoPharm
 - in the preclinical phase
 - currently on three different targets (CYP11B2, 17 β HSD1, CYP17)

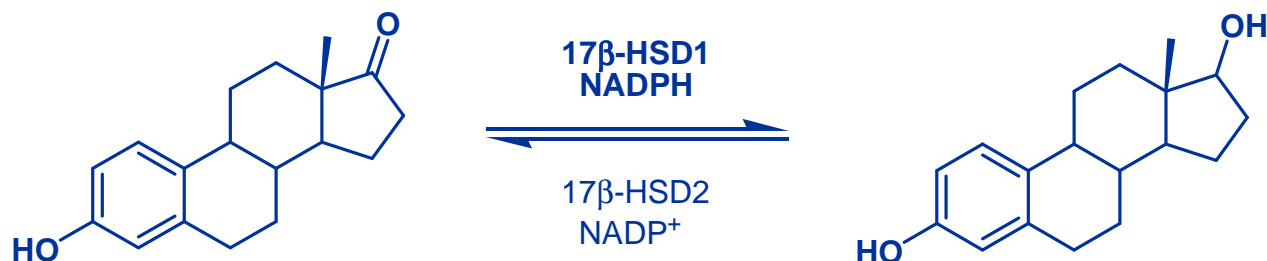


Success Story: 17 β -HSD1 project



- Target:** novel, only few inhibitors described, no preclinical and clinical data available from competitors
- Indication:** Estrogen dependent diseases like breast cancer
- Hit identification:** successful by virtual screening and using endogenous ligand
- Lead discovery:** Successful, highly active toward 17 β HSD1 highly selective toward 17 β HSD2, ER α , ER β (factors 100 – 10.000), highly selective toward six hepatic CYP enzymes, permeable in CaCo2 test, stable toward hepatic microsomes

Success Story: 17 β -HSD1 project



Lead optimisation:

successful, in the rat: orally available,
bioavailability high, plasma half-life reasonable

Compounds synthesised:

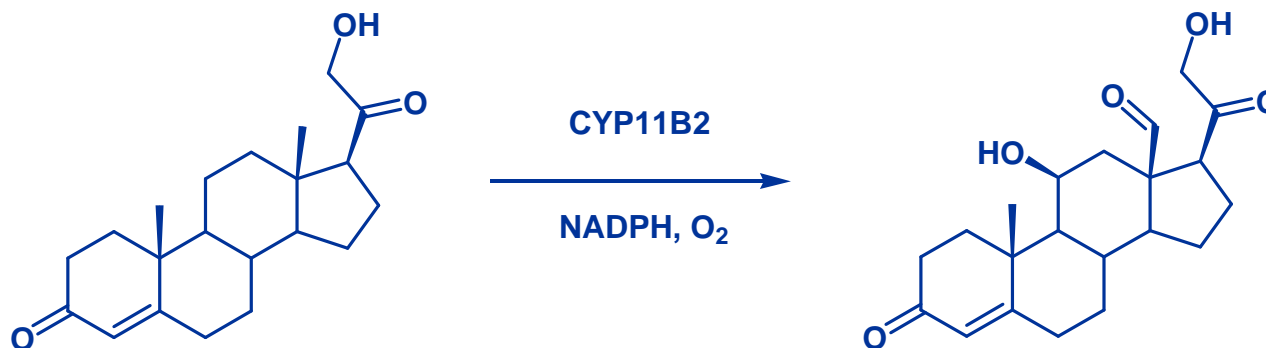
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Present status:

further preclinical evaluation of two compounds
from different classes



Success Story: CYP11B2 project



Target: Aldosterone synthase (CYP11B2), novel, identified by us

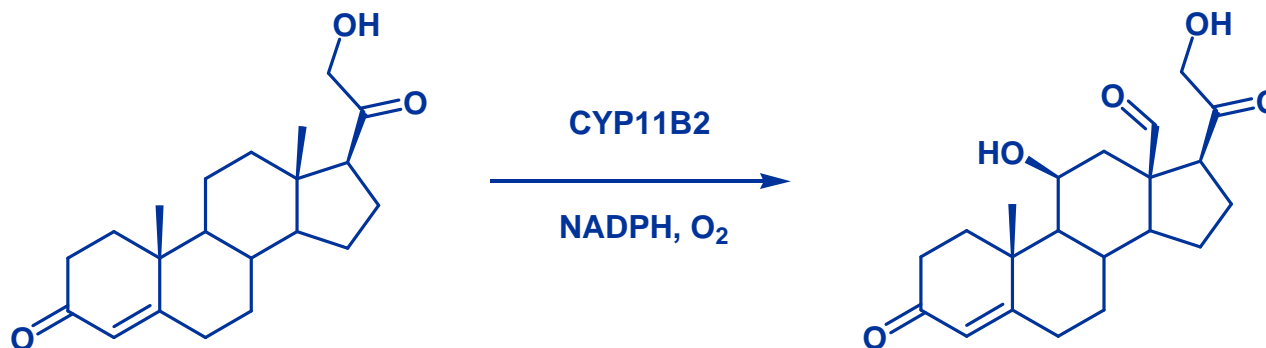
Indication: Myocardial fibrosis and congestive heart failure

Hit identification: successful by using directed compound library and HT assay

Lead discovery: successful, compounds highly active toward CYP11B2, highly selective toward CYP11B1, CYP17, CYP19 and the most important six hepatic CYPs (selectivity factors >1000), permeable through CaCo2, stable toward hepatic microsomes



Success Story: CYP11B2 project



Lead optimisation:

successful, orally available,
bioavailability high, plasma half life reasonable

Compounds synthesised:

appr. 350

Present status:

proof of concept in vivo
one compound in further preclinical evaluation,
additionally two different lead compounds from
other classes being presently optimised



- Tech transfer offices can be an obstacle with regards to the foundation of start-up companies based on university IP
- A clear decision matrix is needed in order to decide in which cases a start-up makes sense as way of IP commercialisation
- In some cases start-ups can be the only possible way of commercialisation
- Universities need expertise in the foundation of start-ups in order to exploit „plattform technologies“
- As to ElexoPharm: Without Saarland University's entrepreneurial spirit and help ElexoPharm would probably not have been founded



Thank you for your attention!

