

## **Session 3: The Impact of Patenting and Licensing Practices on Research**

### **IP Strategies for the Helmholtz Life Science Centers**

from an IP management perspective

Christian A. Stein  
Ascenion GmbH, Munich Germany

#### **ABSTRACT**

The dissemination of knowledge and information is a key issue in publicly financed research. The protection of the intellectual property (IP) of public scientific institutions and the commercial exploitation of IP and know how receives increasing attention. This is reflected by European and national programmes that fund activities in the field of technology transfer and also in the number and size of technology transfer offices at universities and public research organizations all over Germany.

At present there seems no concerted policy in Germany on the protection of life science IP (in particular, of genomes, nucleic acids and proteins), that considers the needs of life science research institutions, a right for public access and the access of scientists to research tools. Some institutions, however, are eager to define at least in house rules for the handling of IP rights in the genomic and proteomic sectors. As the pharmaceutical industry is only willing to develop drugs that are based on substantiated intellectual property, it is not only advisable but also the duty of research institutes to patent their respective inventions. Whether it is necessary and right to patent everything patentable is an entirely different matter and must be judged in the context of strategic and ethical implications, and, last but not least, on economic grounds.

The strengthening of professional conduct in IP asset management needs to address a number of points concerning questions of law (e.g., grace period, research exemptions), and of economics (e.g., inter-institutional IP strategies and handling of reach through patents).

A further point not directly related to the above is that the need for universally used material transfer agreements (MTAs) for public research institutions is as apparent as the denial with which most institutions treat this question. While probably the majority of publicly funded research organizations has started to introduce MTAs when sending out materials, these are hardly ever followed up. This is made particularly difficult, because the agreements are not even consistent within one organization. An MTA with basically identical conditions between academic institutions that can be signed without further ado would be a great simplification for scientists and administration alike.

## Summary of Presentation

### Ascenion GmbH – the realization of a modern IP Asset Management concept

In 2001 four Helmholtz centres, the DKFZ (German Cancer Research Center), the GBF (German Research Centre for Biotechnology), the GSF (National Research Center for Environment and Health) and the MDC (Max-Delbrück-Centrum Berlin-Buch) established a non-profit Life Science Foundation for the promotion of science and research. The purpose of the foundation is the concentration of the intellectual property (IP) management and the professional commercial exploitation of research results of those institutions. Ascenion was founded in Munich in August 2001 as a hundred percent subsidiary of the Life Science Foundation.

In Munich a team of technology managers and analysts is working on the commercial exploitation of new results and technologies developed at the four institutes. On site at the research centres, Ascenion's technology scouts secure an efficient and direct communication on all IP related matters to scientists and administration.

Ascenion is a Intellectual Property Asset Management company and offers all services related to acquisition, evaluation and commercial exploitation of scientific results and know how. This is realized in a close collaboration with the four research institutions. Ascenion's activities include the identification of new technologies and methods, coaching of inventors at the centres, economic and legal valuation of ideas, inventions and IP. Further the company understands IP as an asset that needs continuous management from its cradle (the idea) to its grave (expiration of last patent right) to achieve a fair and reasonable return on investment.

The access to the ideas and inventions of altogether about 4000 scientists supports Ascenion's ambition to become a "One Stop Shop" in Germany for technology hunters of the national and international life science industry. The activities of the new company will help to create new sources of income for its clients.

Profits from successful commercial exploitation are shared between the individual scientist(s) / inventor(s), the research team or institute, the particular Helmholtz Centre, where the invention was created, and Ascenion at a fixed rate. Intentions are that inventors participate with a 30% share in the gross revenues from any invention successfully commercialised.

## Public Research IPR Technology Transfer policies past, present and future

Recent trends in German technology transfer policies, in particular the political will of the Federal Ministry for Research and Education and the Federal Ministry for Economics, concentrate very much on a rather profit-center-oriented approach to transporting academic wisdom into industrial application. In the last few years it became apparent that Germany missed out in the last 15 years on a world wide scale and in the last 5 years on a European scale to systematically exploit the economic value of public research results and inventions created at academic institutions.

### *Catching up*

A nationwide effort starting from about 1995/96 led to an impressive impulse in particular in the creation of spin offs and high tech start ups. Traditional technology transfer - the patent and licensing business - could not keep up with the steep pace of the venture capital and public sources driven start up hype. Academic institutions watched their scientists building companies built on patented inventions that were - apart from personal initiative - only made possible through public funding.

### *ArbNErfG §42/1*

In the late nineties (1996) the idea of the Bayh-Dole Act from 1980 started to take root in Germany. Academic institutions should be able to exclusively license their intellectual property to supplement their funding. Obviously the US situation could not be transferred 1:1 into the German technology transfer landscape. German academic research has, or better had until now, §42/1 ArbNErfG, the University fellows or professor's privilege, which allows so-called free inventions, where a professor and certain other academic staff generally do not have to report nor offer their inventions to their employers and which allows them to make money from their inventions under their own steam. In principle a good idea, so it leaves out that intellectual performance is not only dependant on a brilliant mind and hard work but also on the academic environment, good staff, the right equipment, the right working conditions and so on; and those latter elements are generally publicly funded. From 7 February §42/1 changes substantially, putting universities in a more dominant position connected to more responsibility.

### *Is the development in technology transfer suddenly to fast?*

Until then Universities and a number of other public research institutions could rarely claim rights to inventions made in their institutions. On another note, there were and are not sufficient sources to build patent portfolios in most academic institutions, particularly universities. Most universities might just afford an initial patent application, but there is hardly anywhere a budget for more. A third point of equal importance is that it might be nice to claim patents for the institution, but then what? The licensing business is neither trivial, nor easy to understand, nor easy to undertake. Even very successful US institutions hardly finance more than a few percent of their total budget from licensing

and equity business and some US experts claim that the technology transfer offices cost more than they can earn. And the road to black figures for a technology transfer organisation is a long, windy and bumpy one that needs patience, persistence and means – and then still leads sometimes into a *cul de sac*. This does not mean that these offices are not worth every penny. The important economic impact of the work of technology transfer offices has long been recognized overseas and in a number of European countries.

### *The new technology transfer initiative ...*

There are now technology transfer initiatives all over the country and the number of technology transfer offices is growing so fast that is next to impossible to find enough sufficiently qualified staff to fill the new posts. To cut a long story short:, technology transfer business is everywhere and particularly in Germany at the best of times a difficult one. The long needed initiative of this government will certainly help to speed up that process.

### *... and potential problems*

But it often happens in those turbulent times that other less pressing issues though not less important ones are loosing out. Some of those are:

- There is a need to think about where we want to go, what IPR strategies we want to choose, what the aim of technology transfer from public research into industry should be
  - o Should technology transfer be all for example be all about commercial exploitation and maximum profit,
- Can the mechanisms of the 'unleashed struggle' of economic powers regulate the direction of our basic research in Germany
- Is it economically reasonable for a grant donor to leave a University to license out e.g. a major important research tool exclusively to a company and in consequence to increase the direct costs for re







## The Impact of Patenting and Licensing on Research

### IP Strategies for the Helmholtz Life Science Centers

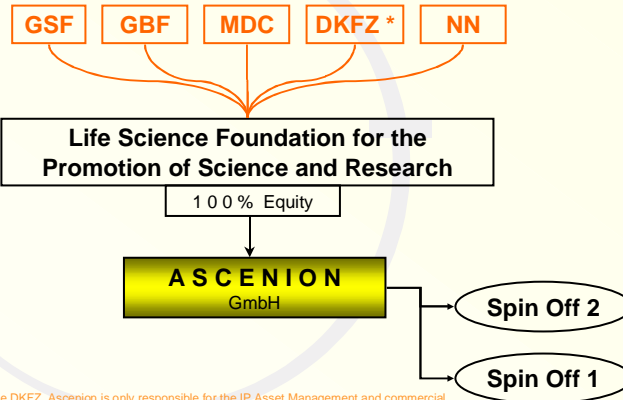
Christian A. Stein  
 Ingolstädter Landstraße 1  
 85764 Neuherberg / München  
 Tel +49-89-318814-0  
 fax +49-89-318814-20  
 mail stein@ascenion.de  
 URL http://www.ascenion.de

Ein Unternehmen der Life Science-Stiftung zur Förderung von Wissenschaft und Forschung

OECD WS GeneR: Inventions IP & Licensing, 24.01.02



## The Structure



Ein Unternehmen der Life Science-Stiftung zur Förderung von Wissenschaft und Forschung

\* For the DKFZ, Ascenion is only responsible for the IP Asset Management and commercial exploitation of results and inventions from the German Genome Research Net (DGFN)

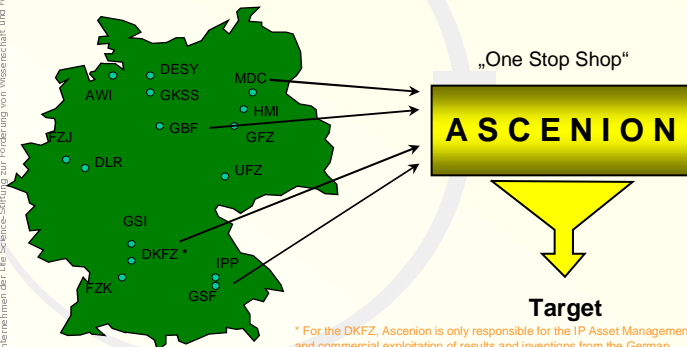
OECD WS GeneR: Inventions IP & Licensing, 24.01.02



## The Foundation Model

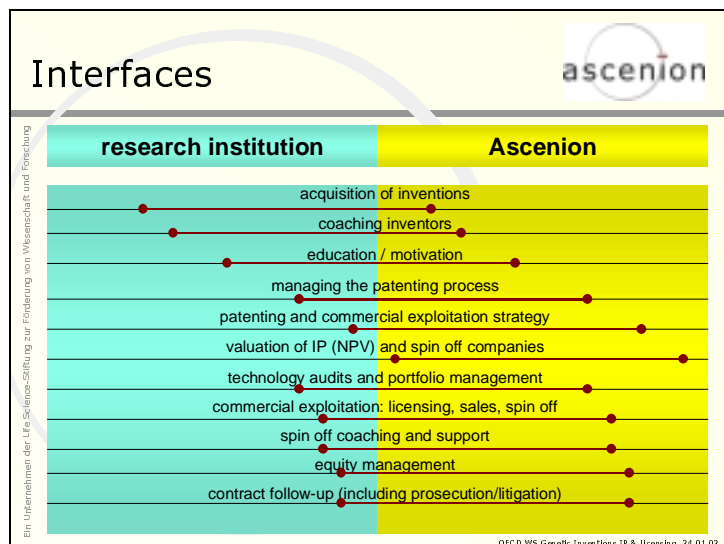
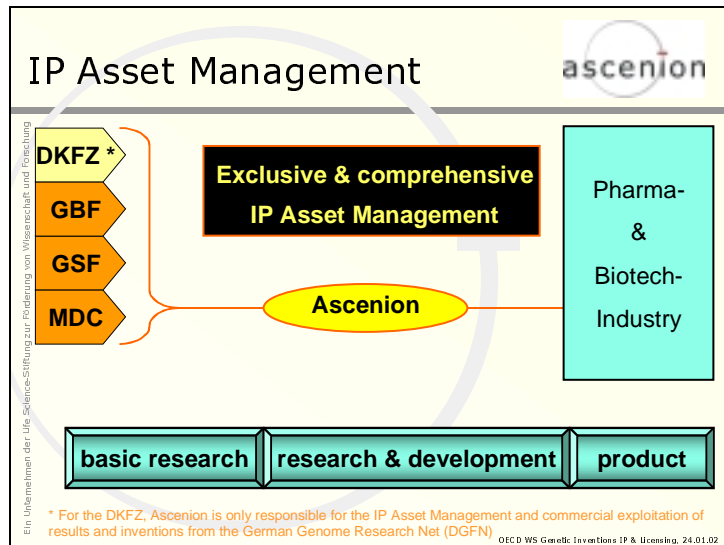
Central and exclusive commercial exploitation of results and inventions from Helmholtz Life Science research institutions


Ein Unternehmen der Life Science-Stiftung zur Förderung von Wissenschaft und Forschung



\* For the DKFZ, Ascenion is only responsible for the IP Asset Management and commercial exploitation of results and inventions from the German Genome Research Net (DGFN)

OECD WS GeneR: Inventions IP & Licensing, 24.01.02



- ## IP policies past, present, future
- 
- From patent administration to IP asset management**
- ✓ **Catching up 10 years**
  - ✓ **Bayh-Dole Act (1989)**
  - ✓ **ArbNErfG §42/1**
  - ✓ **Lack of structures, funding and sources**
  - ✓ **The myth of the golden mountain (or how to get rich through licensing revenues in seven days)**
  - ✓ **New technology transfer instruments (PVA, patent funds, NGFN, DHGP ...)**
- Ein Unternehmen der Life Science-Stiftung zur Förderung von Wissenschaft und Forschung
- OECD WS GeneB: Inventions IP & Licensing, 24.01.02

## Quo vadis technology transfer ?



Ein Unternehmen der Life Science-Stiftung zur Förderung von Wissenschaft und Forschung

- ✓ **Technology transfer and profit maximisation**
- ✓ **The impact of industry on academic research**
- ✓ **Research tools for all**

OECD WS GeneE: Inventions IP & Licensing, 24.01.02

## Regulation and self regulation



Ein Unternehmen der Life Science-Stiftung zur Förderung von Wissenschaft und Forschung

- ✓ **New inventions through new technologies**
- ✓ **codes of conduct**
  - **patenting strategies**
  - **licensing strategies**
  - **transparency in industry interests**
- ✓ **regulation mechanisms through economic forces and limits thereof**

OECD WS GeneE: Inventions IP & Licensing, 24.01.02

## Aspects of IP Law and Policy



Ein Unternehmen der Life Science-Stiftung zur Förderung von Wissenschaft und Forschung

- ✓ **Protection of substances for genes/proteins**
- ✓ **A US grace period for Europe**
- ✓ **Research exemptions**
- ✓ **...**

OECD WS GeneE: Inventions IP & Licensing, 24.01.02

## Material Transfer Agreements



Ein Unternehmen der Life-Science-Stiftung zur Förderung von Wissenschaft und Forschung

### Why do we need MTAs ?

- ✓ **Liability protection**
- ✓ **Publishing**
- ✓ **Revenues from future IP**

### The need for a unified non-commercial MTA

- ✓ **Transparency / easy handling**
- ✓ **Follow up**
- ✓ **Reciprocal conditions**

OECD WS GmbH: Inventions IP & Licensing, 24.01.02



Ein Unternehmen der Life-Science-Stiftung zur Förderung von Wissenschaft und Forschung

ascenion GmbH  
Ingolstädter Landstraße 1  
85764 München / Neuherberg; Germany

phone +49(0)89-3188 14-0  
fax +49(0)89-3188 14-20  
email [info@ascenion.de](mailto:info@ascenion.de)  
URL [www.ascenion.de](http://www.ascenion.de)

Director Dr. Christian A. Stein  
Technology Manager Dr. Peter Ruile  
Analyst Dr. Anja Zimmermann  
Team Assistents Michaela Klaunig / Heidi Böck

OECD WS GmbH: Inventions IP & Licensing, 24.01.02