

How Inven2 work with securing IPR; strategies and challenges in the field of oncology



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From Science to Business

Oslo Cancer Cluster
Breakfast seminar
18 June 2014

Kirsten Stangebye and Mohammed Amarzguioui

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"FROM SCIENCE TO BUSINESS"

Inven2 is the Technology Transfer Office (TTO) for the University of Oslo and Oslo University Hospital

HELSE SØR-ØST 1658

 Oslo universitetssykehus	1201
Sunnaas sykehus	18
Akershus universitetssykehus	95
Sykehuset innlandet	50
Sørlandet sykehus	49
Sykehuset Vestfold	40
Sykehuset østfold	25
Sykehuset Telemark	20
Vestre Viken	42
Sykehusapotekene	4
Andre	134

UiO : Universitetet i Oslo 4543

Matematisk-naturvitenskapelig fakultet	1288
Medisinsk fakultet	1162
Odontologisk fakultet	195
Humanistisk fakultet	621
Utdanningsvitenskapelig fakultet	220
Samfunnsvitenskapelig fakultet	534
Teologisk fakultet	39
Juridisk fakultet	235
Sentre og museum	249

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"FROM SCIENCE TO BUSINESS"

Inven2's mission is to bring research and innovation out to the society by commercialisation

We do this by....

- Identifying and developing research results with *commercial potential*
- *Licensing* technology and *establishing new companies*
- Negotiating, finalizing and managing *industry collaboration agreements*

Inven2 patent filing strategy



40-45 applications
pr year

20-25 applications
pr year

5-8 applications
pr year

Updated
priority
application(s)?

New filings/
withdraw the
application?

0

12 mnd

18 mnd

30/31 mnd

Priority
application

Publication of a
paper, poster

PCT
application

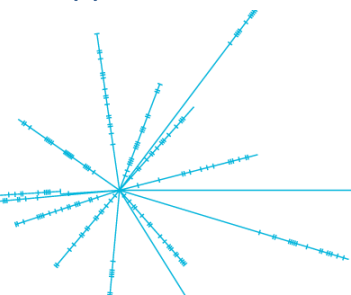
Publication of
application

National
filings

US

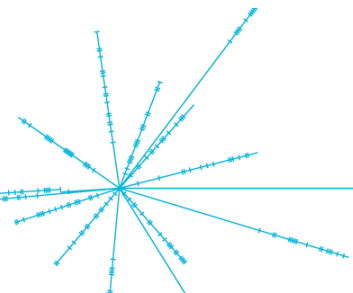
EPO

JP



Inven2s patent filing strategy - continued

- When to file?
 - Publishing, support/enablement of the invention, time to the market, financing
- File low cost priority applications, put more resources into the PCT applications
- Considering top-up applications in the priority year
- Coverage of patent cost by national phase (licensing partner, FORNY)



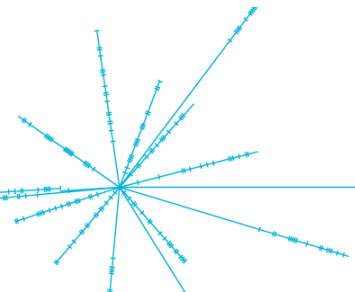
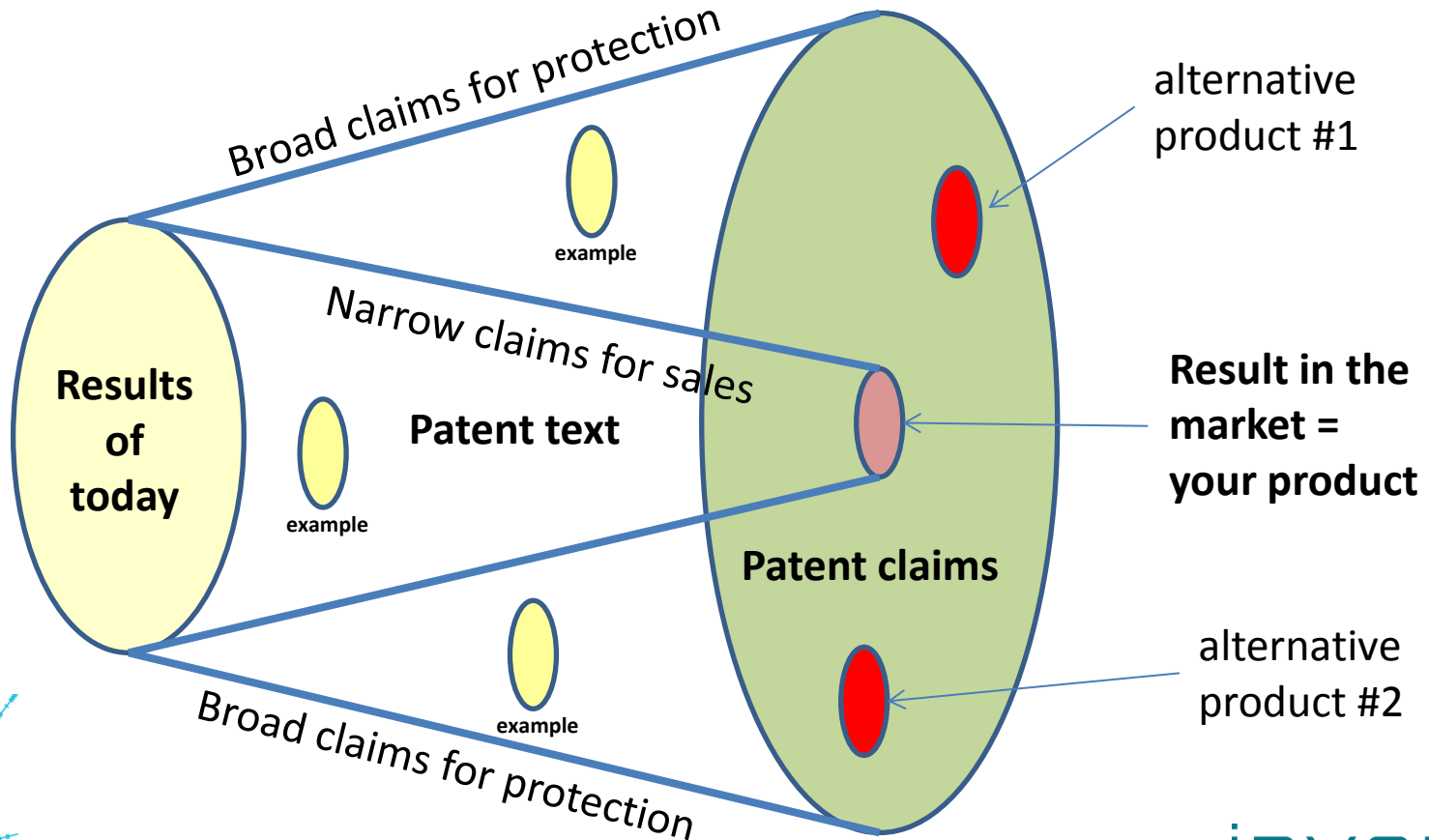
Patents are broad and narrow at the same time

What is my product going to be? (Narrow specification).

What may competing products look like? (Broad specification).

A good patent shall protect against competition, not just copying.

Patents need a good, detailed description and practical examples.



Publishing or Patenting? Yes please, both ...



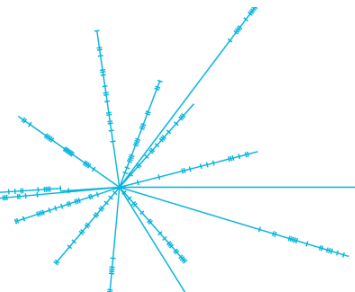
Patentability requires novelty

An invention must not be publicly disclosed (published) before seeking patent protection

Do not submit a manuscript for publication without contacting Inven2 first, if there is any chance that it describes a patentable invention!

Not all research results need patent protection for commercialization.

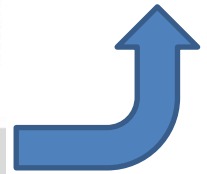
Inven2 wants to know your expertise and field of research in any case.



Inven2's stage-gate process

Technologies
DOFI

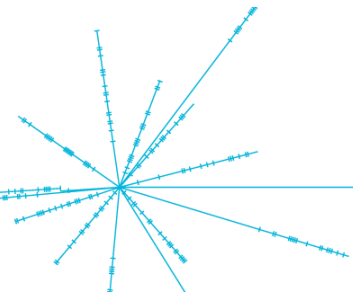
Opportunities



Evaluation for
project start

Commercial focus on
development

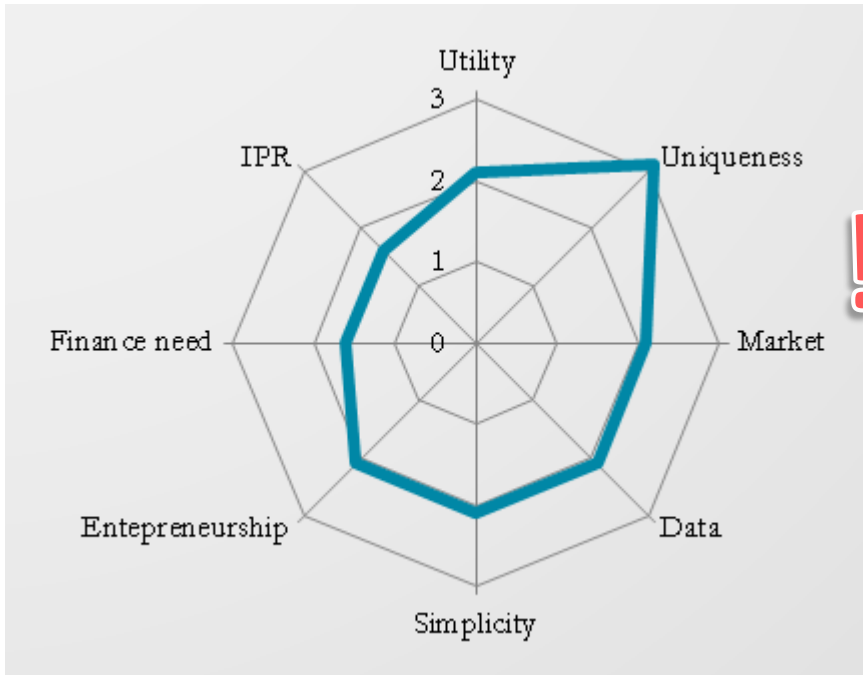
Partnering with licencees
or investors in Start Ups



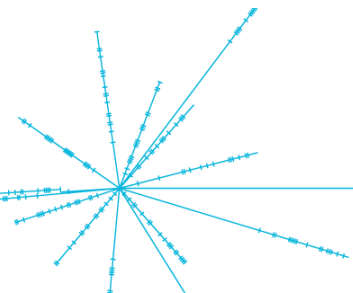
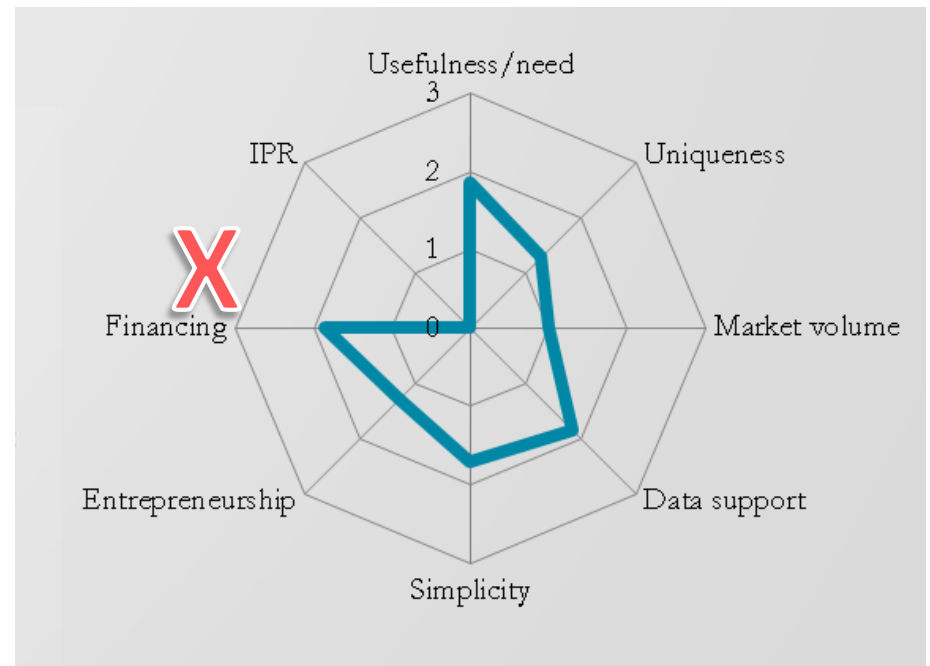
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Evaluation is focused on commercial potential

Example of first evaluation of an idea that became realized in less than 2 years
(Detection of 5-hydroxymethylcytosine)



Idea that was rejected because we found a patent that covered it (it was not novel)
(Filter for cleaning HPLC equipment)

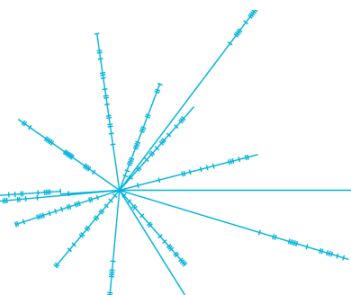


Case study 1 – biomarkers

- Gene expression based biomarker panel for prognosis of colorectal cancer (stage II, stage III)
- At provisional filing, the signature had been extensively documented in three independent cohorts (well defined scope of invention)
- Development before PCT deadline focused on further enablement and developing fallback positions (patenting-oriented)
- Post-PCT development focused on definition of product and testing parameters (more commercialization-oriented)
- Post-ISR written opinion & before national phase deadline: review opinion; re-evaluate claims structure; extensive patentability & FTO analysis
- Suitable funding was secured for each development stage.

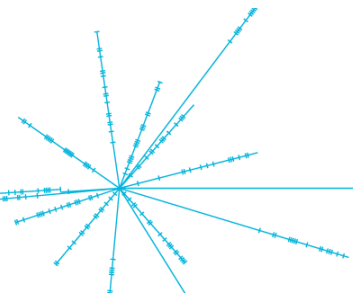
Case study 2 – small molecule drug

- Small molecule drugs targeting a pathway dysregulated in multiple cancers
- At first provisional filing, the library screening had been performed, hits identified, and some chemical derivatization performed on hit, defining a high-level structure family
- Further chemical derivatization identified structures of particular interest which necessitated filing of a new provisional application ahead of the publication of the first provisional application
- For both provisional applications, the time to PCT was focused on patenting-critical developments (enablement, scope)
- Before national phase deadline: extensive patentability & FTO analysis

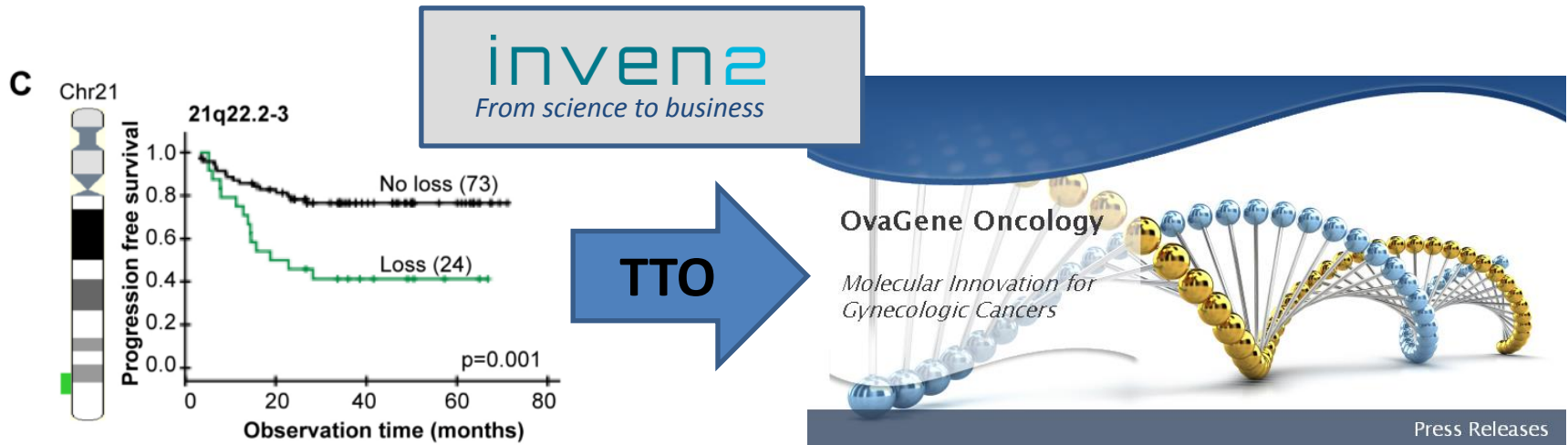


Summary – take away message:

- Contact Inven2 as soon as possible; we can advise on appropriate documentation needed before filing
- The more documentation before filing of the priority application, the better. This must to be balanced against the need for academic publication.
- Public posters and oral presentations may block patenting.
- Keep us informed of all public disclosures until the patent application has been published. We may need to file follow-up applications.
- **Patenting is a means to an end, not an end in itself!** Patenting strategy should always be tied to commercialization strategy/plans.



Sometimes we succeed also after publishing (US patent law has a 1 year «grace period»)



Gene Dosage, Expression, and Ontology Analysis Identifies Driver Genes in the Carcinogenesis and Chemoradioresistance of Cervical Cancer

Malin Lando, Marit Holden, Linn C. Bergersen, Debbie
H. Svendsrud, Trond Stokke, Kolbein Sundfør, Ingrid
K. Glad, Gunnar B. Kristensen, **Heidi Lyng**

The technology, licensed from ***Inven2*** (Oslo, Norway), is a proprietary method to determine chemoradiation resistance in cervical cancer. ***The licensed technology allows OvaGene*** to test cervical cancer patients for chemoradiation resistance prior to the initiation of therapy.