Demystifying IP: How to Capture, Assess and Protect Innovation in Collaborative Projects

KTP 2025
50 Years of Innovation and Partnership

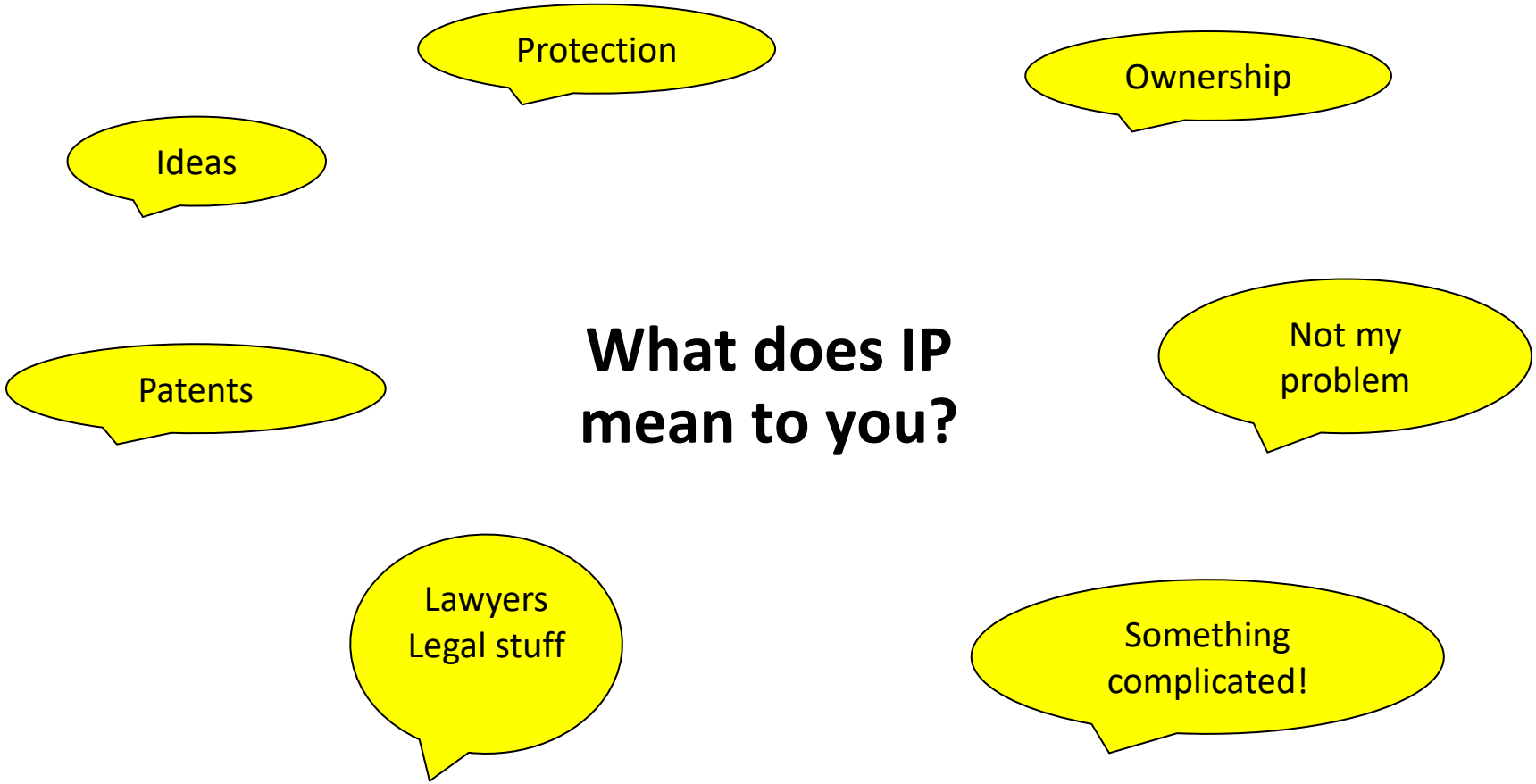
MANCHESTER 1824
The University of Manchester

Freddy Guemeni
Head of IP Services
European Patent Attorney
IAM Strategy 300

“For 20 years, I thought my job was as a basic scientist. Publish papers and throw them over the wall for someone else to apply. I now realise that there is no one on the other side of the wall. Just a huge pile of papers that we’ve all thrown over.”

Prof. Duncan Watts, U Penn

What does IP mean to you?


Protection
Ownership
Ideas
Patents
What does IP mean to you?
Not my problem
Lawyers
Legal stuff
Something complicated!

Innovation = New Technology

* Technology
  * Product or process
  * Incremental or disruptive

Innovation = New Business Model

* Business Model

Innovation = New Meaning

The value of intangibles

Poll - Most Valuable Automotive Company

* Which company do you think is currently the most valuable automotive company?

* Options:
  * 🚗 Ford 
  * 🚗 Tesla 
  * 🚗 Toyota 
  * 🚗 Volkswagen 
  * 🚗 Mercedes-Benz 

Poll - Most Valuable Automotive Company

* Which company do you think is currently the most valuable automotive company?

* Options:
  * 🚙 Ford 
  * 🚙 Tesla 
  * 🚙 Toyota 
  * 🚙 Volkswagen 
  * 🚙 Mercedes-Benz 

Manufacturer	Cars Sold (2024)	Annual Revenue (2024)	Market Cap (2025)
Toyota	~10.3 million	~$310 billion	~$260 billion
Volkswagen Group	~9.2 million	~$300 billion	~$85 billion
General Motors	~5.9 million	~$170 billion	~$50 billion
Hyundai-Kia	~6.8 million	~$150 billion	~$45 billion
Ford	~4.2 million	~$160 billion	~$55 billion
Honda	~4.0 million	~$120 billion	~$50 billion
Tesla	~1.8 million	~$95 billion	~$600 billion
BMW Group	~2.3 million	~$160 billion	~$75 billion
Mercedes-Benz	~2.1 million	~$150 billion	~$85 billion
Stellantis	~5.8 million	~$190 billion	~$65 billion
Nissan	~3.4 million	~$75 billion	~$18 billion
BYD	~3.0 million	~$90 billion	~$85 billion
Tata Motors (incl. Jaguar Land Rover)	~1.2 million	~$45 billion	~$32 billion
Subaru	~0.9 million	~$30 billion	~$12 billion
Suzuki	~2.7 million	~$40 billion	~$18 billion

Poll – Dutch Success Stories
Which company is more valuable?

Booking.com

Poll - Who said “Patent are for the weak” and supported the movement “Delete all IP laws”

Options:

* Jeff Bezos
* Elon Musk
* Richard Branson
* Mark Zuckerberg

Poll - Who said “Patent are for the weak” and supported the movement “Delete all IP laws”

Options:

* Jeff Bezos
* Elon Musk
* Richard Branson
* Mark Zuckerberg

Poll - Tangible vs Intangible Assets

* In today's knowledge economy, what do you think the ratio is?

Options:

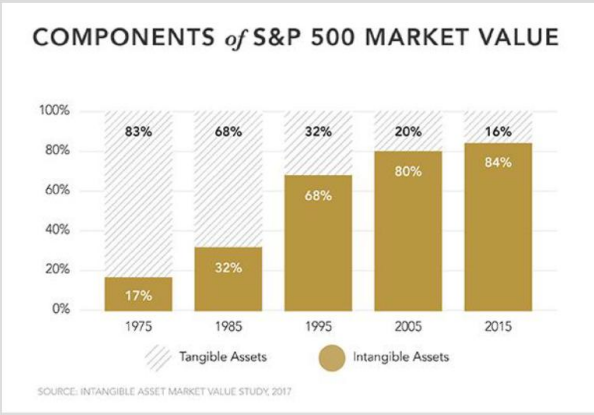
* 80% Tangible / 20% Intangible
* 50% Tangible / 50% Intangible
* 20% Tangible / 80% Intangible
* 5% Tangible / 95% Intangible

Poll - Tangible vs Intangible Assets

* In today's knowledge economy, what do you think the ratio is?

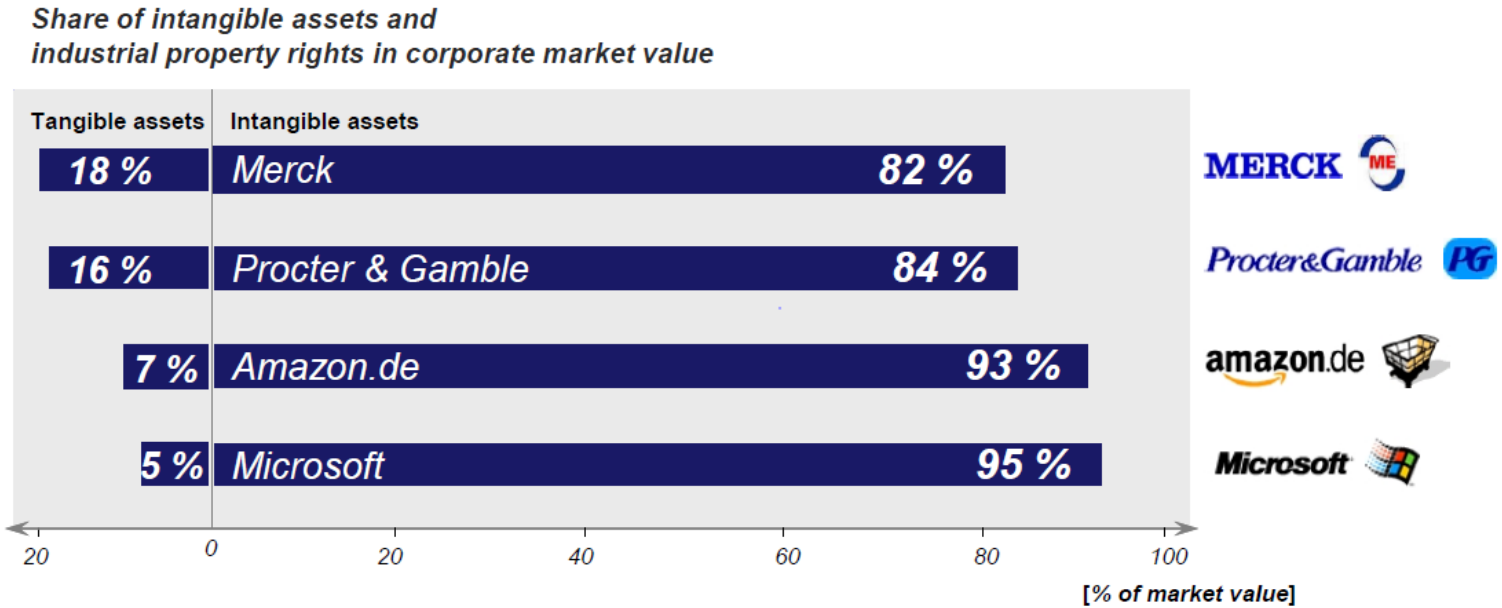
Options:

* 80% Tangible / 20% Intangible
* 50% Tangible / 50% Intangible
* 20% Tangible / 80% Intangible
* 5% Tangible / 95% Intangible



* Source: Ocean Tomo

Poll - Tangible vs Intangible Assets



Source: Anson, W., les Nouvelles, September 1999, p. 133

Case Study: Tesla - Value from Intangibles

* Tesla’s value = software, data, brand, ecosystem.
* Key Lesson: IP strategy creates intangible value that markets reward.

Intangible Value = High Valuation

* Brand Value vs Enterprise Value.
* Example: Apple – Brand worth $489B.
* Knowledge-driven economy rewards intangibles like IP, including brand, and data.
* Apple followed the profitability by becoming an even more intangible-based company → How?

Case Study – Apple's IP Strategy

<u>1997: Apple's crisis – $1 billion loss</u>

* Steve Jobs appointed as CEO
* Design-driven strategy with iMac, iBook
* Needed new revenue sources

<u>2001: iTunes and iPod Disruption of the Music Industry</u>

* Elegant, simple, and user-friendly products
* Recognising the internet's role in music distribution
* Securing music rights from 5 major labels
* Economic impact: High-margin digital music sales

High intangibility

PHILIPS

Why IP Matters for Innovation

Company	% Intangible Business	Profit Margins	Valuation Multiple
Dolby	90%+ licensing IP	~50% gross margin	~8x revenue
Qualcomm	Heavy on patents & licensing	~60% gross margin	~5-6x revenue
Apple	Blend (brand + software + hardware)	~45% gross margin	~7x revenue
Toyota	Physical products (cars)	~15% gross margin	~1x revenue

Innovation creates value – but value needs protection.

IP turns knowledge into tradable assets.

Intangible businesses command higher margins.

As business models evolve, IP strategy must follow.

Recap

* In a knowledge economy, Importance of intangibles, depart from product focus, productivity come from becoming more and more intangible

* Out of 10 biggest companies in the world, 9 are digital platforms (the other one is Aramco).

* Look at the profit per employee gap between Siemens (EUR27k) and Google ($546k) in 2024

Rank	Name	Market Cap	Price	Today	Pri
1	NVIDIA NVDA	$4.636 T	$190.42	2.24%	
↑1 2	Microsoft MSFT	$3.966 T	$533.65	1.92%	
↓1 3	Apple AAPL	$3.941 T	$265.57	1.05%	
4	Alphabet (Google) GOOG	$3.208 T	$265.64	1.97%	
5	Amazon AMZN	$2.419 T	$226.87	1.19%	
6	Meta Platforms (Facebook) META	$1.892 T	$753.40	2.04%	
7	Broadcom AVGO	$1.687 T	$357.25	0.88%	
8	Saudi Aramco 2222.SR	$1.671 T	$6.88	0.23%	
9	TSMC TSM	$1.534 T	$295.92	0.33%	
10	Tesla TSLA	$1.484 T	$446.42	2.93%	

IP is NOT Just Patents

* IP is broader than patents.
* Filing patents without strategy = expensive paperwork.

What is IP?

Intellectual Property & Commercialisation

- Intellectual property arise from creations of the mind

- Give rise to property rights

- Territorial right

- A monopoly right to STOP others…

Commercialisation in a University setting involves capturing the innovations through the identification of what may constitute Intellectual Property (IP) and protecting it using Intellectual Property Rights (IPRs).

Intellectual Property protection

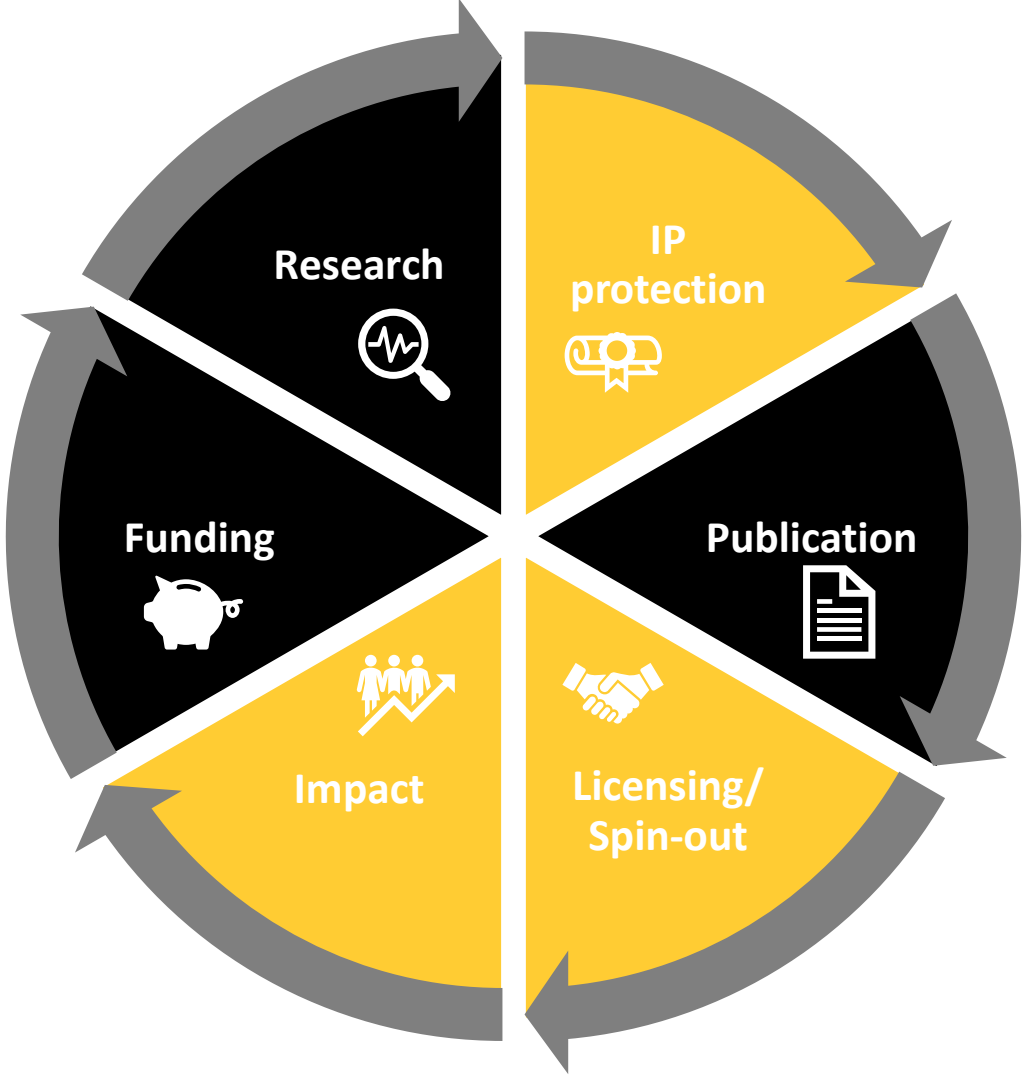
- Demonstrates quality
- Helps level the playing field with the key industry players
- Incentive for a commercial partner to invest time, effort and money

- Generates Intangible Assets:
  - Attract funding and generate collaboration opportunities
  - Business tool to encourage new product development.
  - Give the owner monopoly over the invention
  - Secure a market share thanks to monopoly rights
  - Can be transferred or sold separately

Innovation Without IP?

* No protection = easy copying.
* No ownership = difficult investment.
* With IP = scalable competitive advantage.

Why IP protection is a booster not a blocker



Intellectual Property
What does it mean for you?

Creator/inventor

Anyone who makes an “inventive or original contribution”

Not necessarily person who carries out work

May not be identical to authors of a paper

Must get it right according to patent law

Intellectual Property
Who owns it?

Any invention made during employment is normally property of the employer

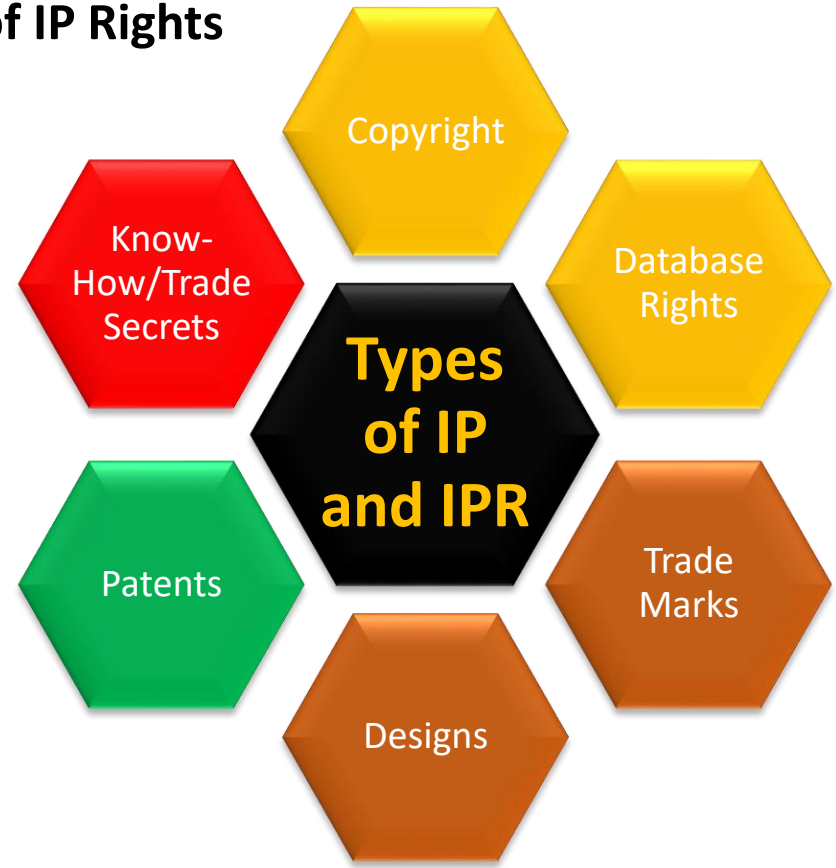
Student inventors – see the University IP policy

Research Funders or Sponsors (e.g. charities, companies) may have rights

Important to determine ownership promptly

Types of IP Rights

Types of IP Rights



- Vulnerable and limited rights to protect
- Automatic Protection – no registration required
- IP Rights can be registered
- Must be registered to acquire IP protection

Trade Marks


MARMITE
YEAST EXTRACT


nutella
FERRERO
Hazelnut Spread with Skim Milk & Cocoa


CHERRY
DARK 85%
RAISIN & HAZELNUT
GREEN & BLACK'S
ORGANIC

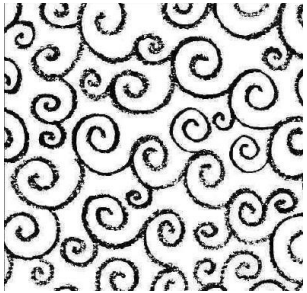

head & shoulders
anti-dandruff shampoo
cool menthol
170 ml

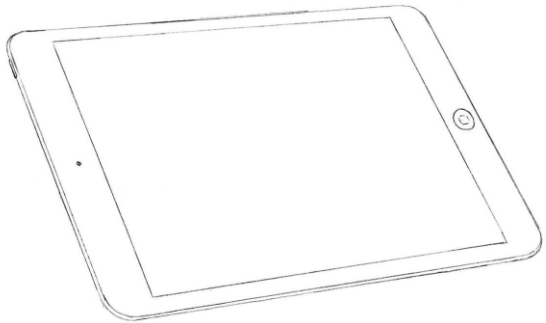

HOMESTYLE
SOME PULP
Tropicana
PURE PREMIUM
100% PURE & NATURAL
FLORIDA ORANGE JUICE
1.75L
NEVER FROM CONCENTRATE

Copyright

- Automatic, no registration needed
- It arises automatically once the knowledge or idea has been expressed in permanent form.
- Protects
  - Original literary, dramatic, musical, artistic works
  - Audio and video recordings, broadcasts
  - Web pages, blogs
- Creator is owner unless work produced as part of employment
- Offers protection only against copying, not use of ideas – Da Vinci Code
- Include moral rights and economic rights
- Term of copyright is complicated and depends on the type of work, date and the country, e.g. UK for a literary work, it is life of creator + 70 years

Designs





Patents

(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) EP 1 285 667 A2

(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
26.02.2003 Bulletin 2003/09

(51) Int Cl.[7]: **A61K 47/10**, A61K 47/22, A61K 31/165

(21) Application number: **02023125.4**

(22) Date of filing: **18.11.1997**

(84) Designated Contracting States:
AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
Designated Extension States:
AL LT LV RO SI

(62) Document number(s) of the earlier application(s) in accordance with Art. 76 EPC:
97600009.1 / 0 916 347

(71) Applicant: **Uni-Pharma Kleon Tsetis Pharmaceutical Laboratories S.A.**
145 64 Kifissia (GR)

(72) Inventor: **Tsetis, Julia**
145 61 Kifissia (GR)

Remarks:
This application was filed on 10 - 10 - 2002 as a divisional application to the application mentioned under INID code 62.

(54) **Pharmaceutical injectable solution of paracetamol and combinations of paracetamol with other active substances**

(57) These solutions comprise as active Ingredient or ingredients Paracetamol and combinations of Paracetamol with the spasmolytic HYOSCINE-N-BUTYL-BROMIDE and the analgesic CODEINE PHOSPHATE where the solvent in all cases consists of Ethanol, bis-distilled and sterilized Water and GLYCEROL FORMAL or Benzyllic Alcohol, Water and GLYCEROL FORMAL in the ratio of 10, 40 κα 50% by volume.

The solution is also comprised of LIDOCAINE as local anaesthetic and DISODIUM EDETATE , SODIUM METABISULFITE, SODIUM DIBASIC PHOSPHATE, NIPAGIN A and NIPASOL M, excipients assuring solutions stability and maintenance of pH in the desired limits of 5,0 - 6,5.

Patents

- Protect <u>inventions</u> for:

  Products, but also

  Processes i.e. methods of making products, and

  Applications i.e. uses of products

  Use cases

- Not everything is patentable
  Different rules for different regions

- Must be **novel** and not obvious

Patents

- Invention must be new. Any single non-confidential disclosure made anywhere which is sufficiently detailed to impart an understanding of the invention will invalidate a subsequently filed patent application

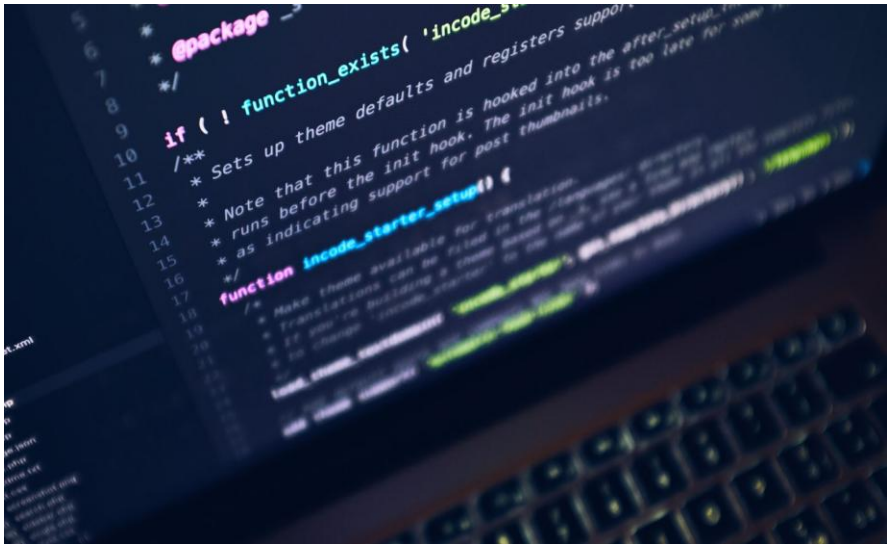
- Examples
  - Published literature e.g. Academic papers (yours and others')
  - PhD Thesis
  - Other patents
  - Websites and blogs
  - Poster and oral presentations
  - Discussion with academics outside your institution
  - Conversation in a pub!

Importance of Confidentiality


Seretide 250
Accuhaler
ALLEN & HANBURYS
Seretide™ 250
Accuhaler™
250 micrograms fluticasone propionate
50 micrograms salmeterol
60 blisters
J105731

Software

- Software code is protected by copyright
- Possible to patent software provided that the application of the software has a "technical effect e.g.
  - Software for increasing the resolution of a MRI may be patentable
  - Software for proofreading a text may not be patentable because it does not produce any “technical effect”
- Patenting it is not the be all and end all especially where software is concerned.
- Know what freedoms (or lack of) the license entitles you to even in the case of open-source software.



Know How / Trade Secrets

- Valuable information (knowledge/skill) which gives a competitive advantage not known to the public
- Compositions, methods, processes…
- No registration needed, no formal protection
- Depends on controlling access, confidentiality agreements and reasonable steps taken to keep it secret
- Confidentiality agreements / Employment contract terms / Restricted access policies
- May be material – e.g. monoclonal antibody cell line, ‘knock-out’ mouse
- May be very valuable – e.g. Coca-Cola® recipe, clinical trials data, manual, clinical questionnaire, clients’ list

Negative Know-how and Trade Secrets

* Value of Negative Know-how: The competitive advantage of knowing what does not work
* Example: Its role in preventing licensees from repeating failed experiments

Collaborative Research Projects & IP

Background IP

- IP created prior to or outside of entering into a particular contract/project
- Intellectual property or know-how existing at the time the agreement was entered into or work started

Foreground IP

- Results or outcomes of a research project that can be viewed as IP
- Arising IP i.e. Intellectual property or know-how created in the performance of the agreement/project
- May be **severable or non-severable** (linked to a Background IP and cannot be used without it)

Access rights

Standard terms:

- Each party will retain ownership of its background IP.
- Access rights - each party grants the other party a licence to its background IP during the project duration for the purpose of delivering the project.
- Foreground IP or Arising IP will be owned by the party that create it.
- Access rights
  - NERF licence during the project duration
  - After the project, on a case by case basis. Licence on fair and reasonable terms to be agreed.

Other provisions:

- Assignment of IP
- An exclusive or non-exclusive licence in one or more fields or territories
- An option to obtain a licence or assignment
- A reservation of rights for the university to conduct research and teaching

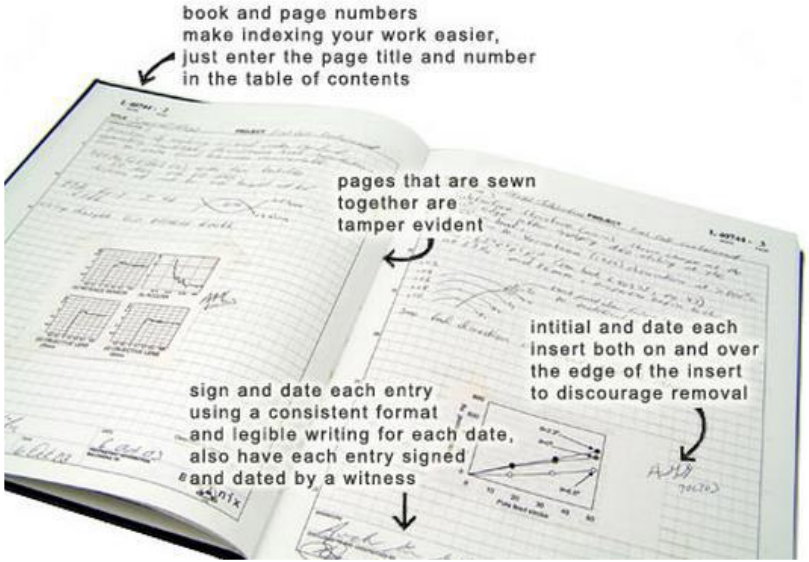
IP Register

Good practice

- Records project-related IPs and status (protected and unprotected background and foreground)
- Dynamic document to be created before the project start and to be updated throughout the project duration
- Clarifies ownership and access rights

Lab books & Criticality of records

- Page number;
- Date;
- Title and purpose;
- Protocol;
- Results;
- Discussion and Conclusion



Could someone else, with equivalent technical experience, use your notebook to repeat your work and obtain the same results?

Could you come back 6 months later, read your notes and make sense of them?

Roche v Stanford Trade Secret Case

* Roche alleged trade secret misuse by Stanford/Foresight.

* August 2025: settlement and licensing deal.

* From litigation to licensing - clarity creates collaboration.

FORESIGHT
DIAGNOSTICS

Lessons for KTP Collaborations

* Define background IP early.
* Lambert model 6: business owns foreground, university retains rights.
* Maintain an IP register and lab notebooks.
* Protect confidential know-how.

Maintain confidentiality

- Until IP strategy defined
- Until appropriate IP protection is in place
- NDAs → Necessary but limited benefits

Means → technical effect (function) → **benefits/advantages**

Benefits/advantages → **Solve the customer problem**

Customer problem solved → **Value Proposition**

<u>Features:</u>

Product: means, components, device, apparatus, system

Process: at least one step

Application: use of X to do Y

Practical Takeaways

* Use patent information
* Capture IP early
* Define ownership clearly
* Use CDAs/NDAs and IP registers
* Review before publishing
* Without IP, there’s no impact

Closing message

IP is not legal red tape.

It’s the bridge between knowledge and impact.