

# Intellectual Property Management and commercialization of innovative biobased products

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Pisarna za prenos znanja/Knowledge  
Transfer Office



*Intellectual property – refers to the creations of the mind, such as inventions...*

**IP includes patents for inventions, trademarks, industrial design, copyright for literary work, film...**

**Enables people to earn recognition or financial benefit from what they invent or create**

**IP is protected by law**

**essential business asset in the knowledge economy**

**standards for public benefit by means of licensed trade marks**

# Patent



- Creation of human Intellect
- Patent is a negative right
- Intangible property
- Exclusive rights given by the Govt.
- Comes with limitations and exceptions
- Both **product** and **process** patents are allowed
- Time-bound (20 years)
- **Territorial**

- A legal title which grants the holder **exclusive right** to **prevent others** from making, using or offering for sale, selling or importing a product that infringes his patent without his authorisation, in **countries** for which the patent was granted for a limited time (up to **20 years**).
- In return, the holder **has to disclose the invention** to the public.

# A patent protects inventions

- Novelty
- Inventive step  
non obvious to a skilled person in the art!
- Industrial application
- Sufficiency of disclosure
- Clarity of claims



## Can be patented

- Process and method
- Machine or apparatus
- Article of manufacture
- Active chemical compounds,  
mechanical solutions, physical mixtures
- Improvements of any of the above

## Cannot be patented

- Ideas
- Laws of Nature
- Scientific principles, mathematical rules,  
methods of treatment, diagnostics and surgery  
in the human or animal body  
Causing serious prejudice to the environment  
Discovery of a living being  
Discovery of a non living thing occurring in nature

TTO

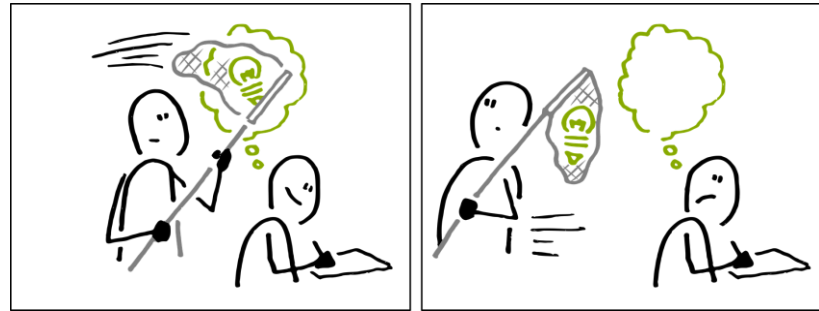


**DO NOT  
PUBLISH  
YET!**



# SET an IP Strategy

- Identify IP assets
- Develop plan of protection
- Monitor changes in the law
- Watch key competitors







DO YOUR SEARCH!

to determine whether or not  
to spend further time and money  
on an idea!

# Stand on the shoulders of giants... Search GOOGLE Scholar

- **Patent databases:**

[ESPACENET](#)

[PATENTSCOPE](#)

[EP REGISTER](#)

[SIPO-DS](#) Database of Slovenian patents, models, trademarks

[Google Patents](#)

[Patent Lens](#)

- **Patent classifications**

[International patent classification– IPC](#)

[Cooperation patent classification – CPC](#)

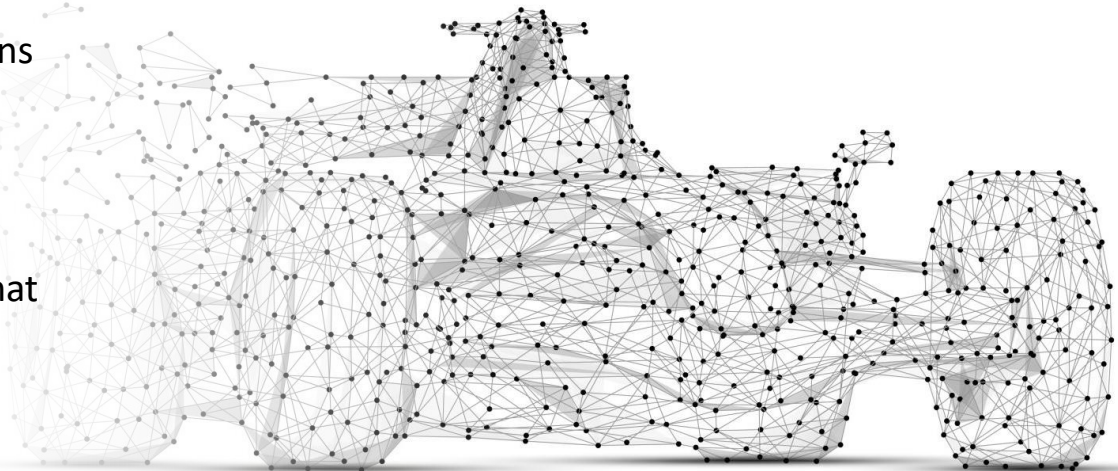
[IPCCAT - Categorization Assistant in the International Patent Classification](#)

# The importance of inventions and innovation

Henry Ford revolutionized automobile production with the assembly line.

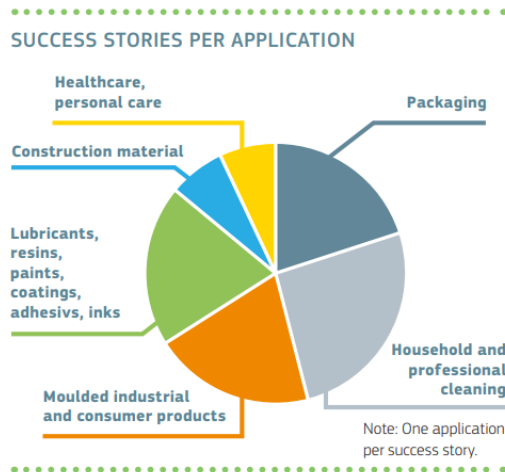
This made it possible for millions of Americans to afford cars.

- Other important inventions such as the telegraph were important to businesses because they filled a need that other inventions of the day could not.



# Patents-a powerful commercial tool searching for sustainability

The bio-based sector is among the key players in the European bio-based economy



Bio-based 1,4-Butanediol (bio-BDO)

BioFoam®

Carboxyline® CMI

Desmodur® eco

Lipex®

Rilsan®

Paptic® bags

# Trade secrets

- Information known only to a narrow circle of people (they are undisclosed, unpublished, „secret“)



- Way of protection of trade secrets:
  - **Non-disclosure agreements - NDA**
- Unlimited protection period until they are disclosed to the public.

# SEARCH for partners!



Medical technology  
Functional food

Current state of technology  
laboratory tested/preclinical

#### Intellectual Property

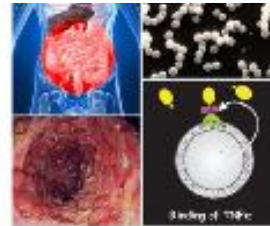
US 8,754,198 B2  
EP2521737 (B1)

#### Publication

Int Immunopharmacol., 2017, 43,  
219-226.  
Appl Environ Microbiol., 2010,  
76, 6928-6932.

#### Developed by

University of Ljubljana, Faculty of  
Pharmacy



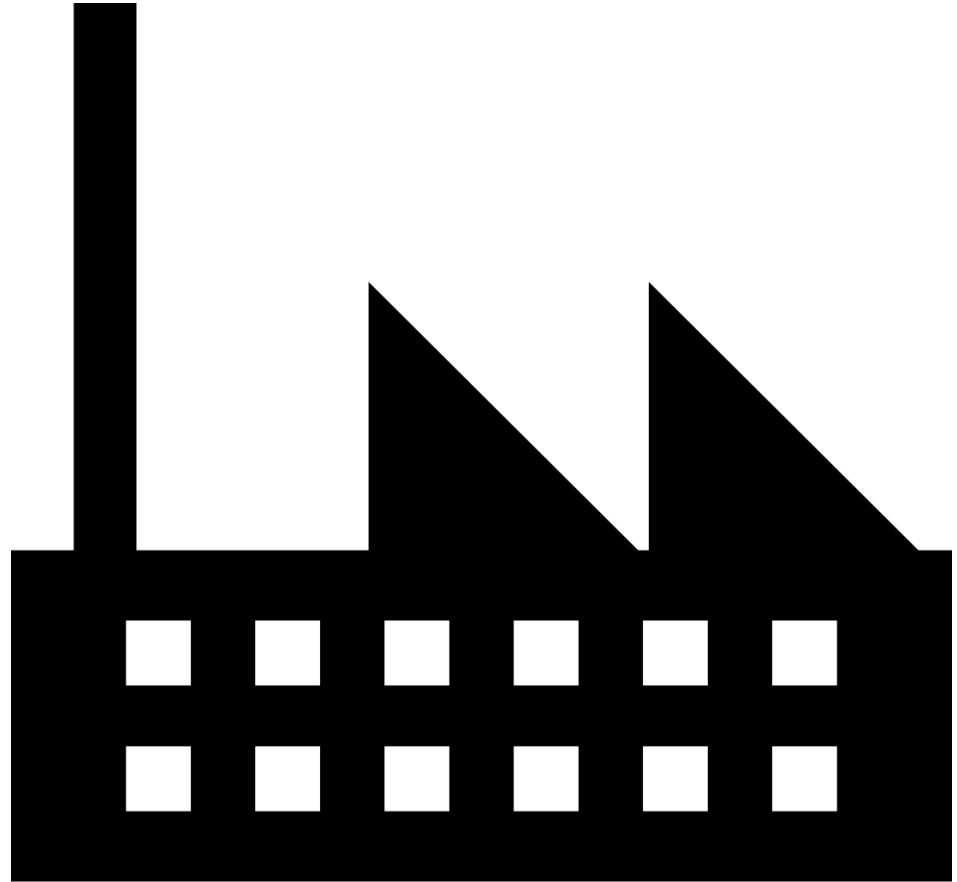
#### Background

Inflammatory bowel disease (IBD) refers to a group of gastrointestinal disorders characterized by chronic, relapsing inflammatory disorders of the gastrointestinal tract. Crohn's disease and ulcerative colitis are the two main subtypes of IBD.

#### Description of the Invention

The present invention represents a general platform for the delivery of protein-based substances on the surface of lactobacteria to the gastrointestinal tract. The invention specifically describes modified lactic

U CAN  
establish a  
private  
company!

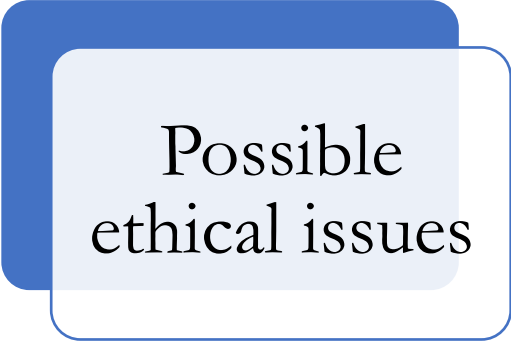




# Patentibility of inventions in Life Sciences fields



Diversity



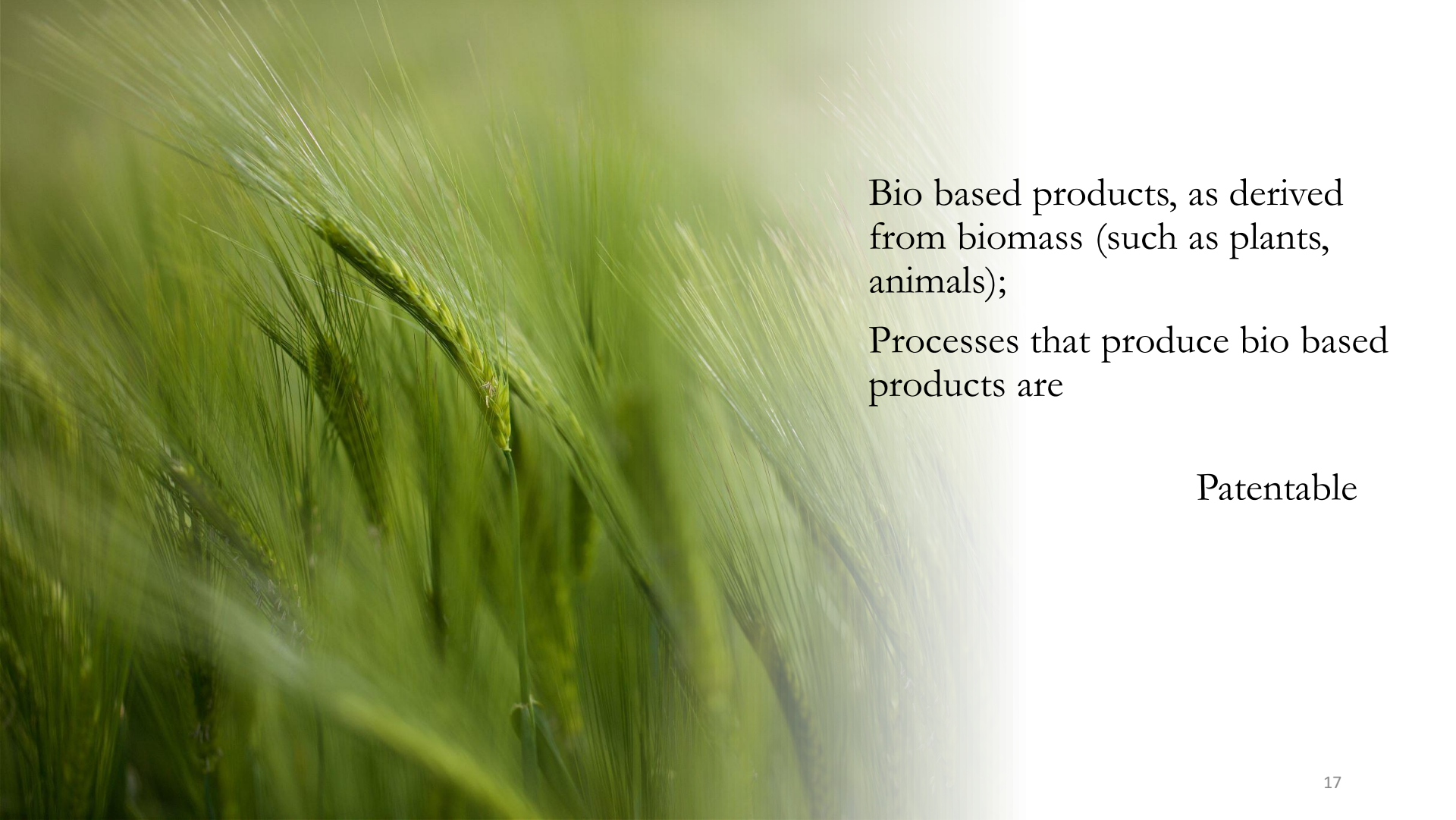
Possible  
ethical issues



Plasticity

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Bio based products, as derived from biomass (such as plants, animals);

Processes that produce bio based products are

Patentable



# Can plants be patented ? YES

- If the technical feasibility of the invention is not confined to a particular plant variety.

*Rule 27(b) EPC*

*Also*

- Microbiological or other technical process, or a product obtained by means of such a process other than a plant variety.

*Rule 27(c) EPC*

Example:

- Not allowable: A plant variety such as durum wheat type wh222 deposited at a seed depository.
- Allowable: A transgenic plant and its seeds containing an exogenous bacterial gene encoding Bt toxin.



In 1930, the United States began granting patents on plants and in 1931, the first plant patent was issued to **Henry Bosenberg** for a climbing, ever-blooming rose by the **USPTO (Patent No. PP00001 dated 18<sup>th</sup> August 1931)**. Under patent law, the inventor of a plant is the person who first appreciates the distinctive qualities of the plant and reproduces it asexually.



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# Genetic resources

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Genetic resources are not intellectual property

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-not creations of the human mind and thus cannot be directly protected as intellectual property.

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However, *inventions based on or developed using genetic resources* (associated with traditional knowledge or not) may be patentable or protected by plant breeders' rights.

# Traditional knowledge complex; generally not allowed

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- EP-B-0 436 257 - “Neem” (insecticide) patent :  
Revoked in opposition in 2001- Lack of novelty  
Appealed by proprietor  
Revocation confirmed (T416/01)





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*Operacijo delno financira Evropska unija iz Evropskega sklada za regionalni razvoj ter ministrstvo za izobraževanje, znanost in šport.*



REPUBLIKA SLOVENIJA  
MINISTRSTVO ZA IZOBRAŽEVANJE,  
ZNANOST IN ŠPORT



EVROPSKA UNIJA  
EVROPSKI SKLAD ZA  
REGIONALNI RAZVOJ