

# CHARTING FUTURE DIRECTIONS



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# Goals

- Current situation on IP rights in R&D community in Slovakia
- How to improve of awareness of IP?
- Education
  - University education
  - Courses, workshops
  - Projects, grants
- Policy issue
- Conclusion

# Current situation on IP rights in R&D community in Slovakia

- In previous lecture of my colleague the situation at the Comenius University was described. Most of the facts can be applied generally on research community in Slovakia
- Best situation - there is tradition of patenting in chemistry – relatively well developed chemical industry - processes in synthesis
- Less in pharma
- Many employees of IPO including the presidents are originally graduated in chemistry

# Current situation on IP rights in Life Sciences

- Completely different situation is in Life Sciences
- There is no tradition of patenting
- Almost zero of awareness of IP
- Science is not Industry (Name of our Patent Office)
- The structure of patents from Slovak authors – the chemistry has much higher in comparison with life sciences and biotechnology

# How to improve of awareness of IP?

- **University Education**
- **Courses, workshops**
- **Projects, grants**
- **Biotech Industry**
- **Technology Transfer as a source for Universities and Research Institutes**

# Relevant Universities

- Comenius University in Bratislava
- Slovak University of Technology in Brat.
- University of Agriculture in Nitra
- P. J. Šafárik University in Košice
- University of Veterinary Medicine in Košice



SLOVAK ACADEMY OF SCIENCES

- 21 Institutes in Life Sciences

## Ministry of Agriculture Research Institutes

- Research Institute for Animal Production      **Nitra**
- Food Research Institute      **Bratislava**
- Research Institute of Veterinary Medicine      **Košice**
- Research Institute of Plant Production      **Piešťany**

# Biotech Industry

- Large Companies
  - Biotika, Fermas
- Medium Companies
  - Imuna Pharm Holding, AZOTER
- Small Companies
  - Danubeclone, DNAtest, Slovgen, Fytofarm

# Successful story of patenting



US005387676A

**United States Patent** [19]

[11] **Patent Number:** **5,387,676**

**Zavada et al.**

[45] **Date of Patent:** **Feb. 7, 1995**

[54] **MN GENE AND PROTEIN**

[75] Inventors: **Jan Zavada; Silvia Pastorekova; Jaromir Pastorek**, all of Bratislava, Czechoslovakia

[73] Assignee: **Ciba Corning Diagnostics Corp.**, Medfield, Mass.

[21] Appl. No.: **964,589**

[22] Filed: **Oct. 21, 1992**

tected in Two Cell Lines Derived from Human Tumours", *J. Gen. Virol.*, 24: 327-337 (1974).  
Zavada and Zavadova, "An unusual transmissible agent—MaTu", *Arch. Virol.*, 118: 189-197 (1991).  
Zavada et al., "VSV Pseudotype Produced in Cell Line derived from Human Mammary Carcinoma", *Nature New Biology*, 240: 124-125 (Nov. 22, 1972).  
Zavada et al., "Tumorigenicity-Related Expression of MaTu Proteins in HeLa x Fibroblast Hybrids", Abstract presented at the XIX Meeting of the European

US006294372B1

(12) **United States Patent**

(10) **Patent No.:** **US 6,294,372 B1**

**Burian et al.**

(45) **Date of Patent:** **Sep. 25, 2001**

(54) **REPLICATION GENES AND GENE PRODUCTS FROM SMALL CRYPTIC PLASMIDS AND METHODS FOR CONSTRUCTING CONTROLLED-REPLICATION PLASMID VECTORS**

(75) Inventors: **Jan Burian**, Vancouver; **William W. Kay**, Victoria, both of (CA)

(73) Assignee: **University of Victoria Innovation & Dev. Corp.**, British Columbia (CA)

## OTHER PUBLICATIONS

Garcia de viedma et al. *J. Molecular Biol.* 247:211-223, 1995.\*

Burian et al., *Plasmid* 37(1):2-14 (1997).\*

Freifelder, *Molecular Biology: A Comprehensive Introduction to Prokaryotes and Eukaryotes*, Jones and Bartlett Publishers, Inc., Boston, 1983, pp. 797-799.\*

George et al., "Current methods in sequence comparison and analysis," in *Macromolecular Sequencing and Synthesis, Selected methods and Applications*, 1988, D.H. Schlesinger (ed.), Alan R. Liss, Inc. New York NY, pp. 127-149.\*

# Biotech Patents from Industry

- Biotika a.s. more as 20
- Fermas Ltd. owned by Degusa A.G. protected by EPO patents
- Azoter Ltd.- patented strains

# Policy making in IP

- **Knowledge based economy**
  - Vice-premier for knowledge based economy Dr. Caplovic was former vice-president of SAS
- **Challenge – there is phase for new programs in financing R&D and visions for 10-15 years**
- **Building of National Center for Innovations**
  - Rectors and directors – must realize the sources from tech, transfer much more important income
- **Support to SMEs in biotechnology**

# Conclusion

- It is necessary to increase awareness in IP among scientific community
- It is necessary to improve education
- We need increase support for IP from decision makers, to use governmental and EU structural funds

## Future:

-R&D is assymmetrically distributed

-Absence in Banska Bystrica – in spite the activities in education on IP

WIPO activity qat Universities – on voluntary bases  
There should be professional full time position...

Most of patents attorneys are in Bratislava – they can help under other programs...

Thank you for your  
attention