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Jarosław Dastych

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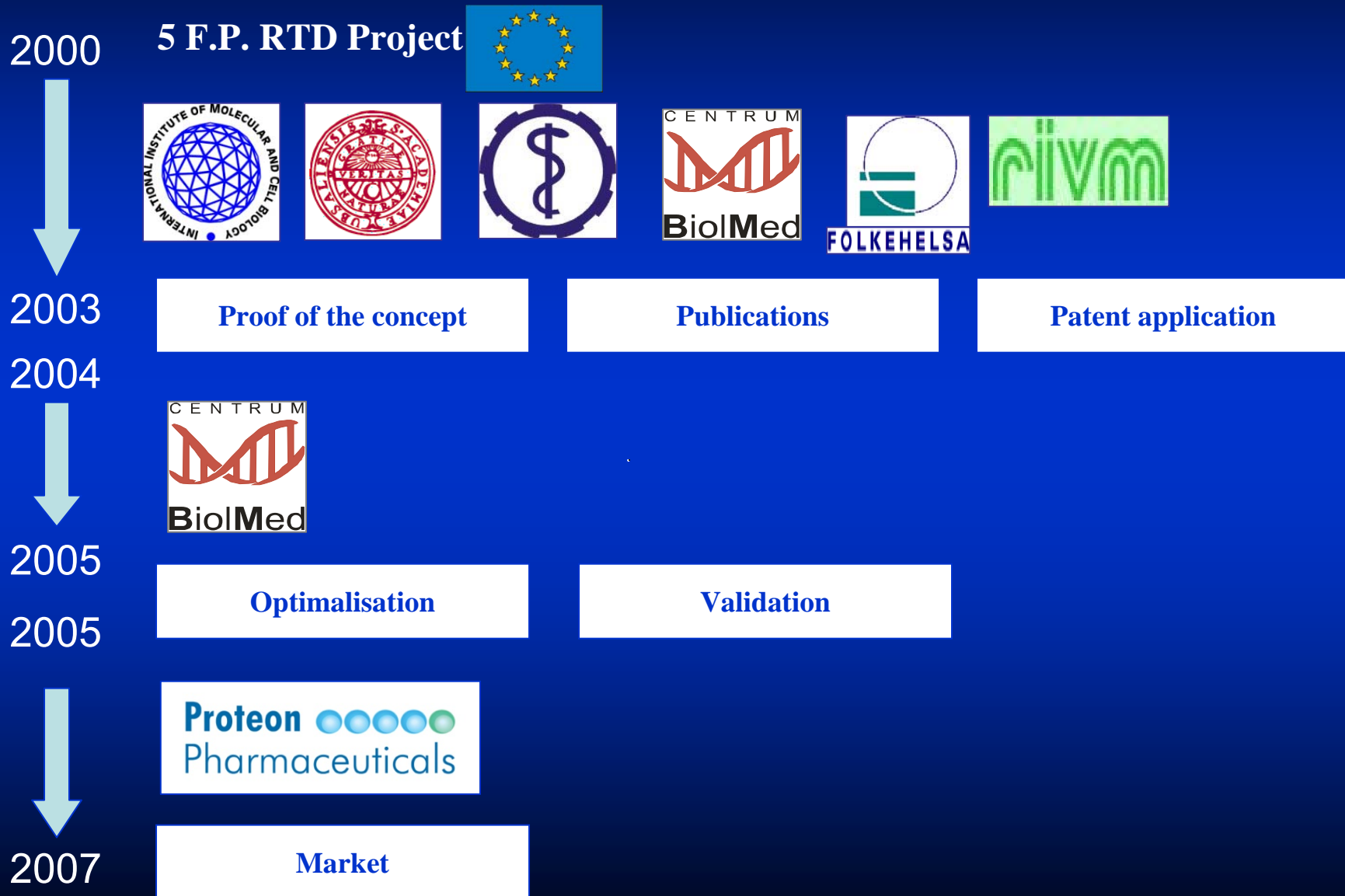
jdastych@proteonpharma.com

Science

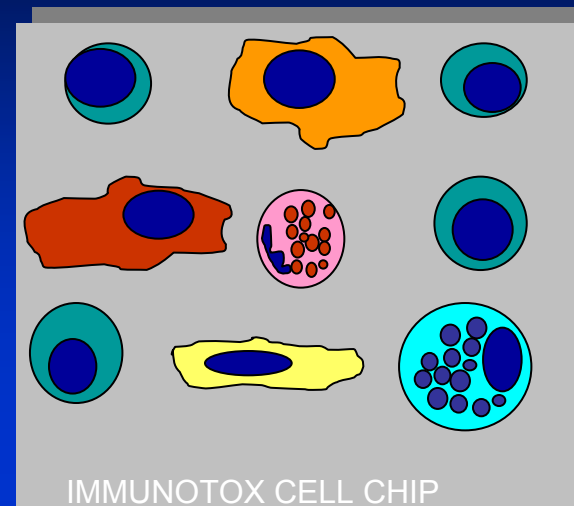
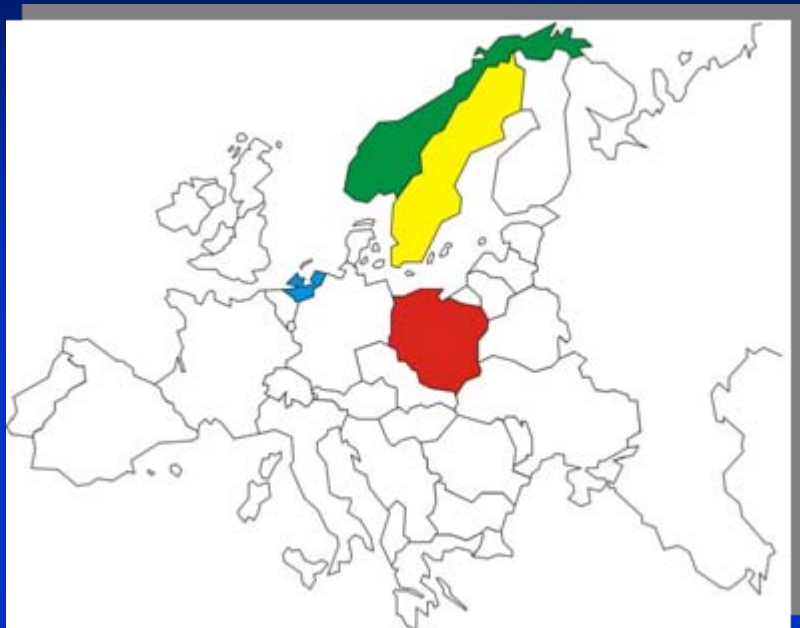
Technology

Business

A short history of Proteon Pharmaceuticals



A NEW TECHNOLOGY FOR FLUORESCENT „CELL CHIP” IMMUNOTOXICITY TESTING



**The Fifth Framework Programme 1998-
2002**

Contract #QLK4-CT-2000-00787

International Institute of Molecular and Cell Biology in Warsaw,
Poland.

Centre for Medical Biology, Polish Academy of Sciences, Lodz,
Poland.

Nofer Institute of Occupational Medicine & WHO/Collaborating
Centre, Lodz, Poland.

Uppsala University, Uppsala, Sweden.

Norwegian Institute of Public Health, Oslo, Norway.

National Institute of Public Health and the Environment,
Bilthoven, the Netherlands.

Development of the "Cell Chip": a new *in vitro* alternative technique for immunotoxicity testing

Erik Ullerås³, Dominika Trzaska¹, Joanna Arkusz⁴, Tove Ringerike⁵, Violetta Adamczewska¹, Maciej Olszewski¹, Janina Wyczółkowska², Aurelia Walczak-Drzewiecka², Khalid Al-Nedawi², Gunnar Nilsson³, Urszula Białek-Wyrzykowska¹, Maciej Stępnik⁴, Henk Van Loveren⁶, Rob J Vandebriel⁶, Martinus Løvik, Konrad Rydzyński⁴, Jarosław Dastych^{1,2}

Toxicology 206; 245-56, 2005

Detection of immunotoxicity using T-cell based cytokine reporter cell lines („Cell Chip”)

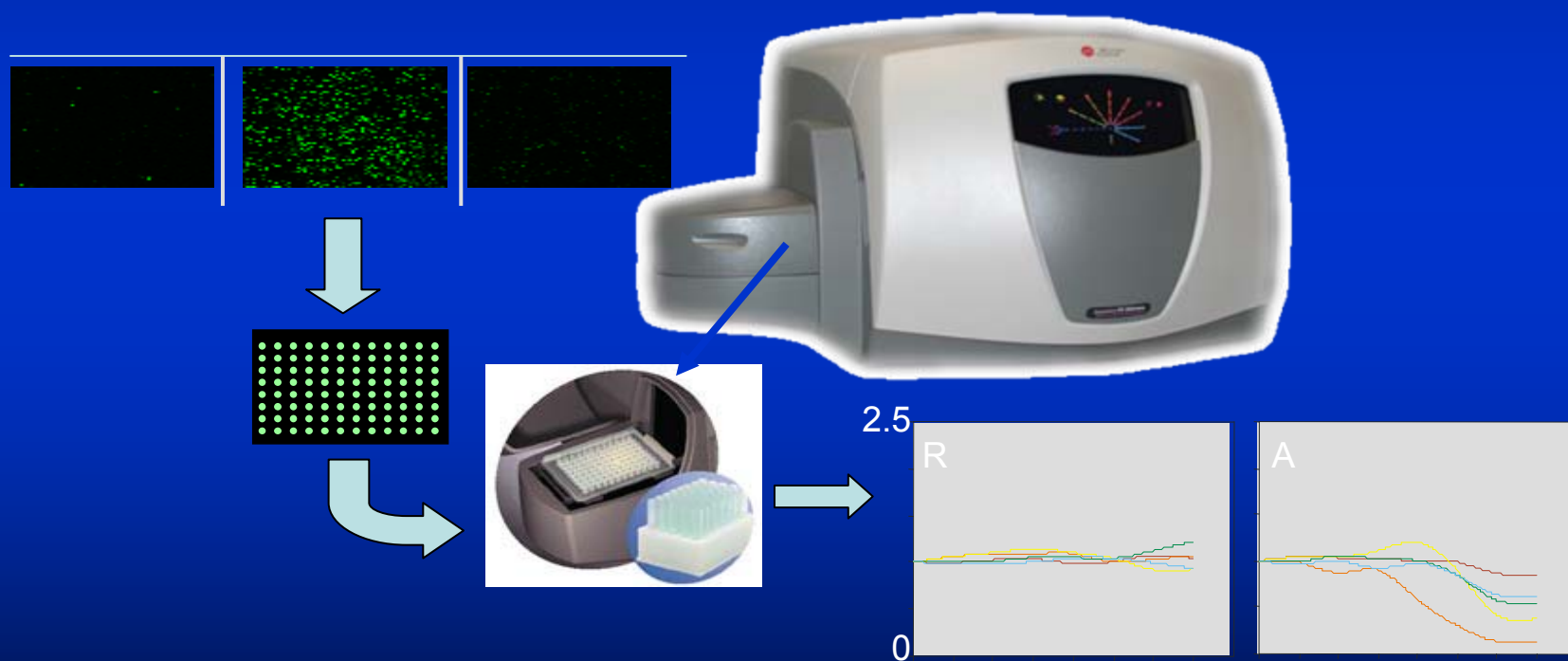
Tove Ringerike⁵, Erik Ullerås³, Rene Völker⁶, Bert Verlaan⁶, Ase Eikeset⁵, Dominika Trzaska¹, Violetta Adamczewska¹, Maciej Olszewski¹, Aurelia Walczak-Drzewiecka², Joanna Arkusz⁴, Henk Van Loveren⁶, Gunnar Nilsson³, Martinus Løvik⁵, Jarosław Dastych¹, Rob J Vandebriel⁶

Toxicology 206; 257-72, 2005

„Fluorescent Cell Chip“

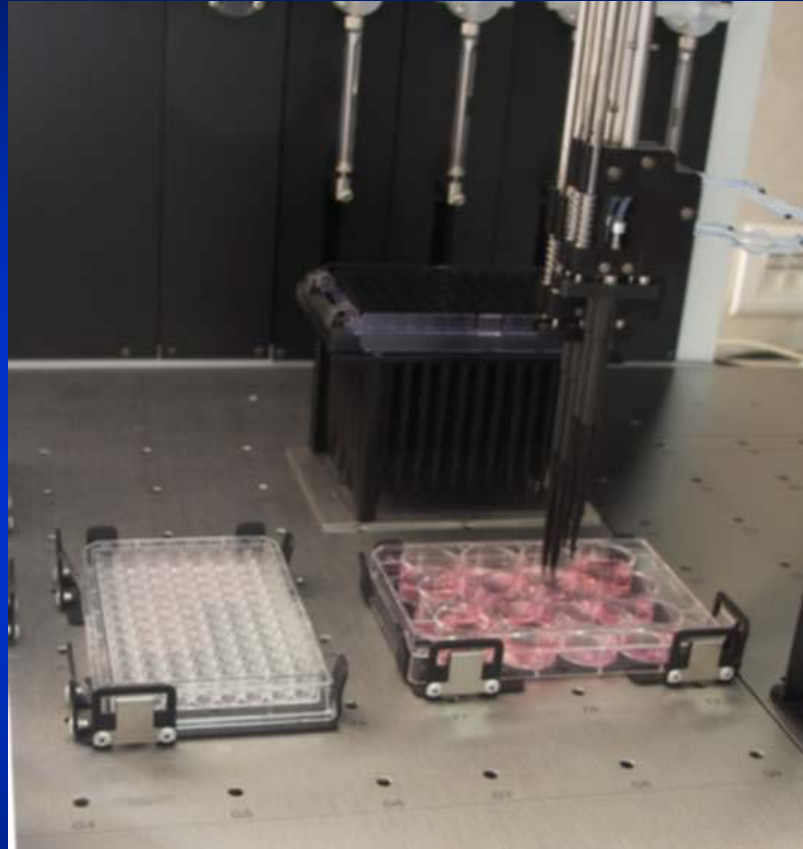
Fluorescent Cell Chip (FCC) detects immunotoxic and immunomodulatory compounds

Genetically modified cells acts as biosensors detecting bioactivity of tested substance



Automated measurements of fluorescence generates substance specific pattern of cytokine expression

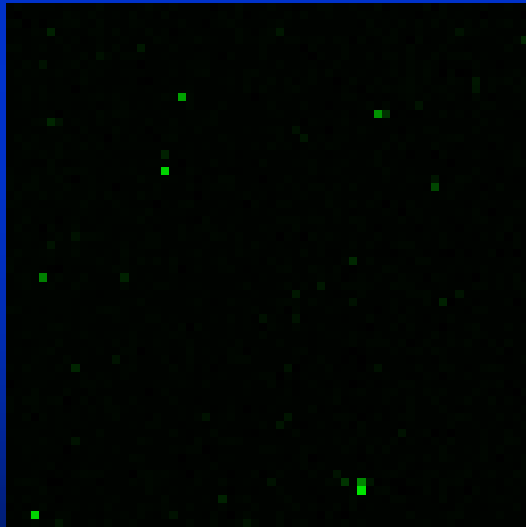
FCC testing



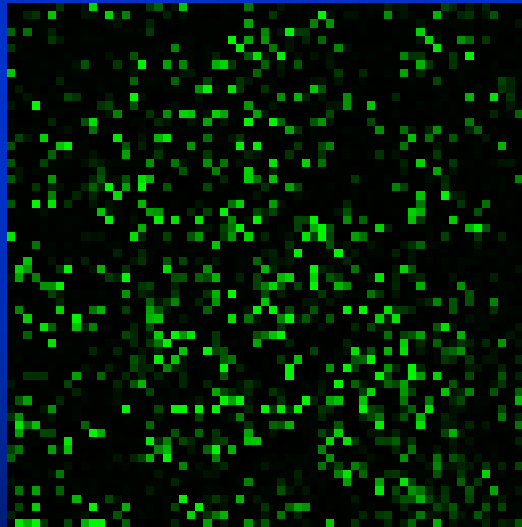
The effect of Cyclosporine A on IL-2 reporter cell line I

Fluorescence microscopy

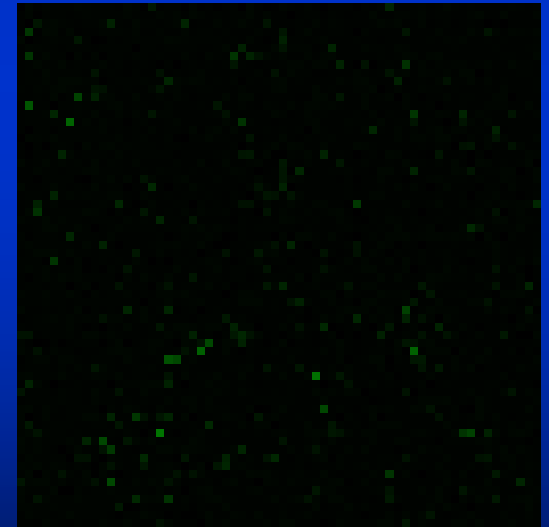
Resting



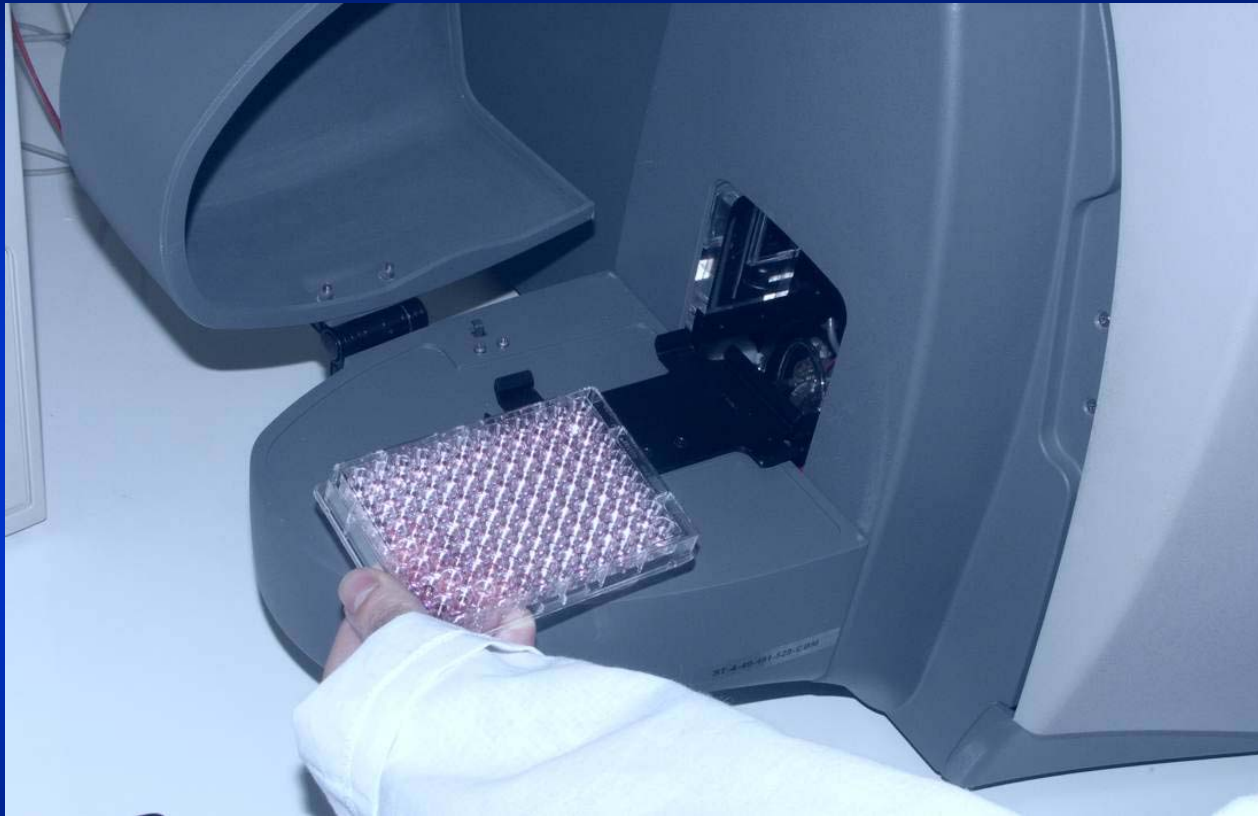
PMA +
Ionophore



PMA +
Ionophore
Cyclosporine A

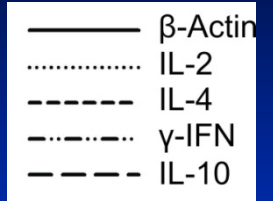
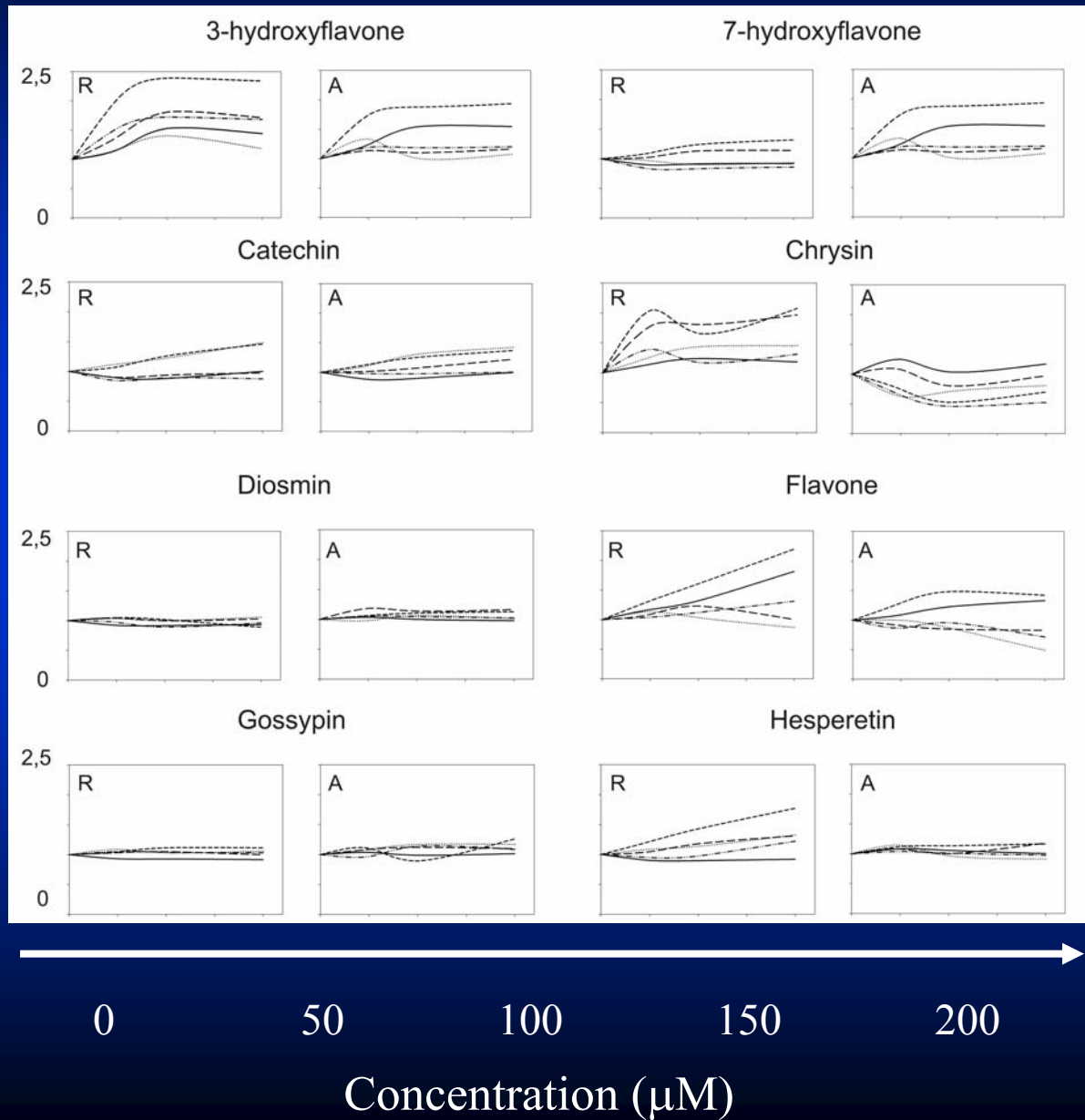


FCC testing



Flavonoids and flavones

EGFP Fluorescence



FCC applications

There are two applications of FCC:

- Searching for novel immunomodulatory drugs
- Screening for immunotoxicity .

Current I.P. status

Owners:

International Institute of Molecular and Cell Biology in Warsaw, Poland

Institute of Medical Biology, Polish Academy of Sciences, Lodz, Poland

Nofer Institute of Occupational Medicine, Lodz, Poland

Norwegian Institute of Public Health, Oslo, Norway

National Institute of Public Health and the Environment, Bilthoven, the Netherlands

Gunnar Nilsson, Sweden

Erik Ulleras, Sweden

Jarosław Dastyk

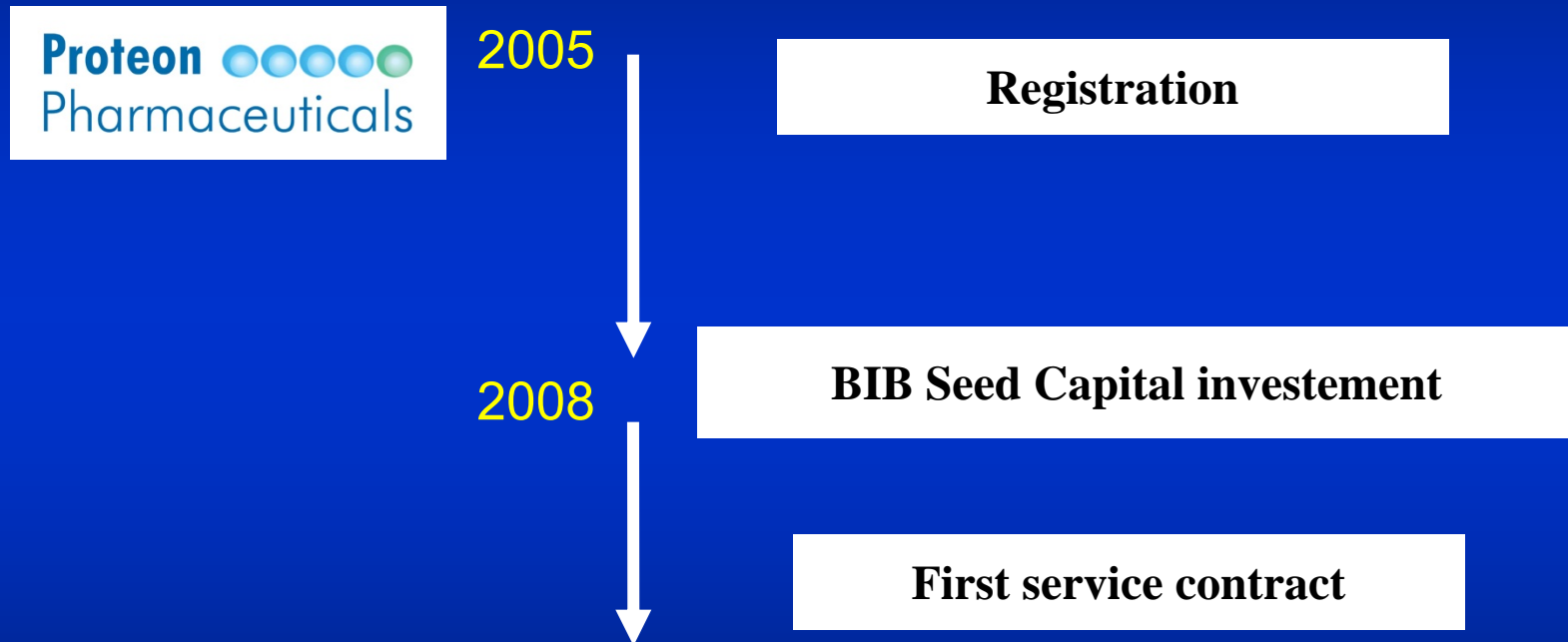
Current I.P. status

PCT/PL2004/000075

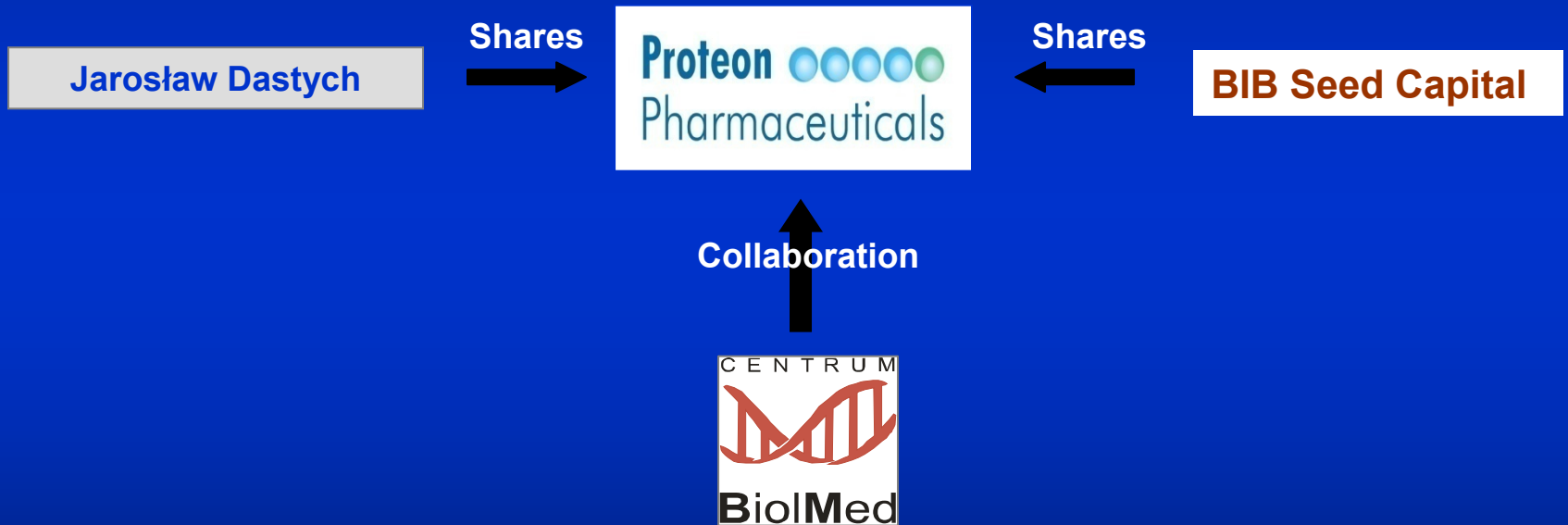
Tools and methods useful in characterising the immunotoxic activity of xenobiotic substances,,

National stage in USA

Proteon Pharmaceuticals




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**INSTYTUT
BIOLOGII MEDYCZNEJ
POLSKIEJ AKADEMII NAUK**


miniINKUBATOR
FIRM BIOTECHNOLOGICZNYCH

 **mabion**

Proteon ●●●●●
Pharmaceuticals

