

## Currently realized projects

### INTERNATIONAL

1. Studies of molecular relationships between *Sclerotinia sclerotiorum* isolates from China and Poland using mini- and microsatellite markers; a Chinese-Polish project

1 June 2009 - 1 June 2012

Head: doc. dr hab. Małgorzata Jędrzycka

Realized by: Witold Irzykowski, Xiaoli Duan

2. Molecular comparisons of Chinese and European isolates of *Leptosphaeria biglobosa*, the cause of stem canker of oilseed rape (*Brassica napus* L.)

1 July 2008 – 30 July 2010

Head: doc. dr hab. Małgorzata Jędrzycka

Realized by: Joanna Kaczmarek, Witold Irzykowski

3. Training in systems biology applied to flowering (Marie Curie Action – Network for Initial Training SYSFLO)

1 December 2009 – 30 November 2013

Head: doc. dr hab. Paweł Krajewski

### NATIONAL

*Ministry of Science and Higher Education*

*Commissioned projects*

1 Identification of molecular markers linked with resistance gene to pathogenic fungus

*Diaporthe toxica* causing stem brown rot in narrow-leaved lupin (*Lupinus angustifolius* L.)

no. PBZ-MNISW-2/3/2006/3

21 August 2007 – 20 August 2010

Head: prof. dr hab. Bogdan Wolko

Realized by: doc. dr hab. Barbara Naganowska, doc. dr hab. Małgorzata Jędrzycka, mgr

Michał Książkiewicz, mgr inż. Karolina Leśniewska, mgr inż. Karolina Wójcik

2 Evaluation and modification of adaptability of spring rape (*Brassica napus* var. *oleifera* L.) to drought stress using functional genomics approaches

No. PBZ-MNISW-2/3/2006/19

21 August 2007 - 20 August 2010

Head: prof. dr hab. Jan Sadowski

Realized by: dr Danuta Babula-Skowrońska, dr Małgorzata Karczmarek, mgr Agata Cieśla

3 Determination of role of genes encoding dehydrin protein DHN24, lipid transporting protein (SsLTP1) and proteins containing B-box domains (SsB-box) in cold acclimation of species from genus *Solanum*

PBZ-MNISW-2/3/2006

21 August 2007 – 20 August 2010

Head: prof. dr hab. Tadeusz Rorat

Realized by: dr Agnieszka Kielbowicz-Matuk, mgr Bartosz Szabała, mgr Magdalena Biegańska

4 Identification of genes related with cold acclimation and frost resistance in perennial ryegrass (*Lolium perenne* L.)

PBZ-MNISW-2/3/2006/21

1 September 2007 - 31 August 2010

Head: prof. dr hab. Zbigniew Zwierzykowski

Realized by: dr Arkadiusz Kosmala, mgr Aleksandra Bocian, prof. dr hab. Zbigniew Zwierzykowski, doc. dr hab. Piotr Kachlicki

#### *Individual projects*

1. Structural analysis of a region in the *Lupinus angustifolius* genome containing anthracnose resistance gene

N301 084 32/3234

7 May 2007 – 6 May 2010

Head: prof. dr hab. Bogdan Wolko

Realized by: doc. dr hab. Barbara Naganowska, mgr Michał Książkiewicz, mgr inż. Karolina Leśniewska

2. Characteristics of fungal isolates from genera *Trichoderma* and *Clonostachys* capable of degrading fusarium mycotoxins

N N310 203037

1 September 2009 - 30 August 2012

Head: prof. dr hab. Jerzy Chelkowski

Realized by: dr Lidia Błaszczuk, dr Karolina Gromadzka, dr Łukasz Stępień, mgr Delfina Popiel

3. Development of statistical-genetic methods required for comprehensive analyses of experiments on oil crops

No. NN 310 315534

14 June 2008 – 11 June 2011

Head: prof. dr hab. Zygmunt Kaczmarek

Realized by: doc. dr hab. Paweł Krajewski, dr Elżbieta Adamska

4. Studies on cytogenetic stability and fertility in successive generations of allotetraploid hybrid *Festuca pratensis* x *Lolium perenne*

No. NN310 090736

26 March 2009 – 25 March 2012

Head: prof. dr hab. Zbigniew Zwierzykowski

Realized by: dr Tomasz Książczyk, mgr Magdalena Taciak

5. Mucointestinal immunization of mice as model animals using prepared plant material containing S-HBsAg for the development of oral vaccine against hepatitis B virus

1578/B/P01/2009/37

22 September 2009 - 21 September 2012

Head: dr Tomasz Pniewski,

Realized by: mgr Marcin Czyż, Teresa Szcześniak

6. Identification of turnip mosaic virus genes encoding proteins containing avirulence determinants and rape proteins connected with viral infection

No. N N310 150035

1 October 2008 – 30 September 2011

Head: dr Przemysław Lehmann

7. Spores of fungi from genera *Alternaria* i *Cladosporium* in air in different regions of Poland and molecular detection of their allergens

N N305 321737

8 October 2009 - 7 October 2012

Head: doc. dr hab. Małgorzata Jędryczka

Realized by: mgr inż. Witold Irzykowski, mgr Joanna Kaczmarek

#### *Doctoral supervisor projects*

1. Localization of sequence-defined markers and quantitative trait loci as well as comparative genome mapping of narrow-leaved lupin (*Lupinus angustifolius* L.)

No. 0905/B/P01/2009/36

June 2009 - May 2010

Head: prof. dr hab. Wojciech Święcicki

Realized by: mgr Magdalena Chudy

2. Development of generative phase of fungi *Leptosphaeria maculans* ([Desm.] Ces. et de Not.) and *L. biglobosa* (Shoemaker i Brun 2001) and protection of rape against these pathogens

N N310 086436

1 June 2009 - 31 March 2010

Head: doc. dr hab. Małgorzata Jędryczka

Realized by: mgr Joanna Kaczmarek

3. Application of fungi *Trichoderma* and *Gliocladium* to control toxin-forming pathogens from genus *Fusarium*

No. N N310 212137

16 September 2009 - 1 September 2010

Head: prof. dr hab. Jerzy Chełkowski

Realized by: mgr Delfina Popiel

#### *Research and development projects*

1. Development of methods of early selection of wheat using grain hardness evaluation and molecular and biochemical markers

No. 0592/R/P01/2007/03, Ministry of Science and Higher Education

25 June 2007 – 31 December 2010

Head: prof. dr hab. Tadeusz Adamski

Realized by: prof. dr hab. Maria Surma, prof. dr hab. Zygmunt Kaczmarek, doc. dr hab.

Bolesław Salmanowicz, dr Elżbieta Adamska, dr Karolina Krystkowiak, dr Anetta

Kuczyńska, mgr Jolanta Nowak, mgr Monika Langer

2. Studies on genetic variation in grasses from genus *Miscanthus* and their interaction with the environment in terms of yielding, biomass and as fuel material

No. R12-009-02

2 March 2007 – 1 March 2010

Head: doc. dr hab. Stanisław Jeżowski

Realized by: dr Katarzyna Głowacka

#### *Participation in projects of the Ministry of Science and Higher Education outside IPG PAN*

1. Application of intergeneric hybrids produced by crossing willow with poplar (*Salix* × *Populus*) to increase biomass yield and drought resistance

No. R 12-061-03

1 October 2007 – 30 September 2010

Coordinator: prof. dr hab. Elżbieta Zenkteler, AMU Poznań

Realized by: (from IPG) doc. dr hab. Stanisław Jeżowski, doc. dr hab. Małgorzata Jędrzycka

2. Involvement of nitrogen oxide (NO) in the mechanism of stress molecular imprinting in plants - in the potato / *Phytophthora infestans* model system

No. NN303 340735

23 October 2008 – 22 October 2011

Head: dr hab. Jolanta Floryszak-Wieczorek, PULS

Realized by: (from IPG) dr Arkadiusz Kosmala

3. Involvement of histone H2A.Z in plant response to drought stress: determination of a dependence between presence of H2A.Z in promoter regions and transcription activity of genes

No. NN303 313437

31 August 2009 – 30 August 2012

Head: dr Piotr Ziólkowski, AMU Poznań

Realized by: (from IPG) dr Arkadiusz Kosmala

4. Purification and determination of immunogenicity of virus-like particles composed of plant-origin HBV antigens as components of 3<sup>rd</sup> generation vaccine against HBV

No. PBZ/MNiSW/07/2006/15

6 September 2007 – 31 December 2011

Head: dr Olga Fedorowicz-Strońska – IBA Warszawa

Realized by: (from IPG) dr Tomasz Pniewski

5. Generation of sage (*Salvia officinalis*) with anticarietic properties

No. IT-1-13-190

2007 - 2010

Head: prof. dr hab. Ryszard Słomski

Realized by: dr Tomasz Pniewski

#### *Projects financed by other entities*

1. Lupins – a search for sources and studies on manner of inheritance of resistance to fungal diseases (fusariosis and anthracnose) as well as low contents and qualitative composition of alkaloids

1 January 2008 – 31 December 2010

Head: prof. dr hab. Wojciech Święcicki

Realized by: mgr Paweł Barzyk

(Ministry of Agriculture and Rural Development)

2. Evaluation of efficacy of selected fungicides in relation to pathogenic fungi of rape

1 January 2009 – 31 July 2010

Head: doc. dr hab. Małgorzata Jędrzycka

Realized by: mgr Witold Irzykowski

(Bayer CropScience)

3. Plant improvement for sustainable agroecosystems, high quality food and plant production for non-food purposes

1 January 2008 – 31 December 2013

Head: doc. dr hab. Wojciech Rybiński

(Ministry of Agriculture and Rural Development)