

Malgorzata Jedryczka

Date of birth: 26 September 1960

Place of birth: Poznan

Nationality: Polish

Personal address: ul. Człopska 9a, 60-453 Poznan, Poland

Address of work: Institute of Plant Genetics, Polish Academy of Sciences, Strzeszyńska 34, 60-479 Poznań, Poland;
phone: +48-61-6550248
fax: +48-61-6550301
email: mjed@igr.poznan.pl

University titles :

1995 – Ph.D.

2007 - Ph. D. Sc.

Occupation : Associate Professor

Activities

Research work published:

Selected papers published in English (1997-2010)

46 original papers in English on pathogens of OSR and its resistance to fungal diseases

1. **Jedryczka M.**, Rouxel T., Balesdent M.H., Mendes-Pereira E., Bertrand J. (1997). Molecular characterization of Polish *Phoma lingam* isolates. *Cereal Res. Comm.* 25, 3/1: 279-283
2. Balesdent M.H., **Jedryczka M.**, Jain L., Mendes-Pereira E., Bertrand J., Rouxel T. (1998) Conidia as a substrate for Internal-Transcribed Spacer- based PCR identification of members of the *Leptosphaeria maculans* species complex. *Phytopathology* 88: 1210-1217
3. Ziman L., **Jedryczka M.**, Šrobarová A. (1998) Relationship between morphological and biochemical characters of *Sclerotinia sclerotiorum* isolates and their aggressivity. *Journal of Plant Diseases and Protection* 105 (3): 283-288
4. Biddulph J.E., Fitt B.D.L., Gladders P., **Jedryczka M.**, West J.S., Welham S.J. (1999) Conditions for infection of oilseed rape leaves by ascospores of UK (A group) and Polish (B group) *Leptosphaeria maculans* (stem canker). *GCIRC Bulletin*: 82-83
5. Biddulph J.E., Fitt B.D.L., **Jedryczka M.**, West J.S., Welham S.J. (1999) Effects of temperature and leaf wetness duration on infection of oilseed rape leaves by ascospores of A group or B-group *Leptosphaeria maculans* (stem canker). 10th International Rapeseed Congress; Canberra, Australia; 26-29 September 1999; Conference Proceedings: CD-ROM
6. **Jedryczka M.**, Fitt B.D.L., Kachlicki P., Lewartowska E., Balesdent M.H., Rouxel T. (1999) Comparison between Polish and United Kingdom populations of *Leptosphaeria maculans*, cause of stem canker of oilseed rape. *Journal of Plant Diseases and Protection* 106 (6): 608-617
7. **Jedryczka M.**, Rouxel T., Balesdent M.H. (1999) Rep-PCR based genomic fingerprinting of a Polish population of *Leptosphaeria maculans*. *European Journal of Plant Pathology* 105: 813-823
8. **Jedryczka M.**, Lewartowska E., Kachlicki P., Walczak F. (1999) Notes on blackleg of oilseed rape in Poland – general information and current research. *Blackleg News* 6: 20-26
9. Kachlicki P., **Jedryczka M.** (1999) Secondary metabolite production by Czech and Slovakian isolates of *Leptosphaeria maculans*. *Proceedings of IX Conference „Microscopic fungi – plant pathogens and their metabolites“*: 22-28

10. Smoliński S., **Jedryczka M.**, Kachlicki P. (1999) Spectroscopic analysis FTIR of melanins produced by the fungi of *Leptosphaeria maculans* species complex. Proceedings of IXth Conference „Microscopic fungi – plant pathogens and their metabolites”: 73-79
11. West J., Evans N., Leech P.K., Fitt B.D.L., **Jedryczka M.**, Penaud A. (1999) Predicting leaf infection by *Leptosphaeria maculans* on winter oilseed rape. IOBC/WPRS Bull. 23 (6): 23-27
12. Ziman L., **Jedryczka M.**, Šrobarová A. (1999). The biodiversity of the fungus *Sclerotinia sclerotiorum* (Lib.) de Bary. Biologia, Bratislava 54: 25-32
13. **Jedryczka M.**, Lewartowska E., Kachlicki P., Plachka E., Šrobarová A. (2000) Characterisation of the strains of *Leptosphaeria maculans* isolated from oilseed rape in the Czech Republic and Slovakia. IOBC/WPRS Bulletin 23 (6): 11-20
14. Kachlicki P., Sótónyi J., Lewartowska E., **Jedryczka M.** (2000) Metabolites of *Phoma lingam* from oilseed rape in Austria and Hungary. Proceedings of X Conference „Microscopic fungi – plant pathogens and their metabolites”: 40-45
15. **Jedryczka M.**, Nikonorenkov V.A., Levitin M., Gasich E., Lewartowska E., Portenko L. (2001) Spectrum and severity of fungal diseases on spring oilseed rape in Russia. IOBC Bulletin 25 (2): 13-20
16. Toscano-Underwood C., West J.S., Fitt B.D.L., Todd A.D., **Jedryczka M.** (2000) Development of phoma lesions on oilseed rape leaves inoculated with ascospores of A-group or B-group *Leptosphaeria maculans* (stem canker) at different temperatures and wetness durations. Plant Pathology 49: 1-15
17. Sadowski Cz., Dakowska S., Łukanowski A., **Jedryczka M.** (2001) Occurrence of fungal diseases on spring rape in Poland. IOBC Bulletin 25 (2): 1-12
18. Voigt K., **Jedryczka M.**, Wöstemeyer J. (2001) Strain typing of Polish *Leptosphaeria maculans* isolates supports at the genomic level the multi-species concept of aggressive and non-aggressive strains. Microbiological Research 156: 169-177
19. Toscano-Underwood C., Huang Y-J., Fitt B.D.L., **Jedryczka M.**, Karolewski Z. (2001) Effects of temperature on germination of UK and Polish *Leptosphaeria maculans* ascospores and on Phoma leaf spot development. GCIRC Bulletin 18: <http://195.101.239.21/index.html>
20. Huang Y-J., Fitt B.D.L., West J.S., Hall A., Todd A., Underwood C., **Jedryczka M.** (2002) Effects of temperature and incubation time on germination of ascospores of A-group and B-group *Leptosphaeria maculans* *in vitro*. IOBC/wprs Bulletin 25 (2): 31-42
21. **Jedryczka M.**, Nikonorenkov V.A., Levitin M., Gasich E., Lewartowska E., Portenko L. (2002) Spectrum and severity of fungal diseases on spring oilseed rape in Russia. IOBC/wprs Bulletin 25 (2): 13-20
22. Sadowski C., Dakowska S., Łukanowski A., **Jedryczka M.** (2002). Occurrence of fungal diseases on spring rape in Poland. IOBC/wprs Bulletin 25 (2): 1-12
23. West J.S., **Jedryczka M.**, Leech P.K., Dakowska S., Huang Y-J., Fitt B.D.L. (2002) Biology of *Leptosphaeria maculans* (stem canker) ascospore release in England and Poland. IOBC/wprs Bulletin 25 (2): 21-30
24. Irzykowski W., Sun J., Li Q., Gao T., Hou S., Águedo A., **Jedryczka M.** (2004) DNA polymorphism in *Sclerotinia sclerotiorum* isolates from oilseed rape in China. IOBC Bulletin 27 (10): 67-76
25. **Jedryczka M.**, Matysiak R., Graham K. (2004) LeptoNet and SPEC - new projects supporting the control of stem canker of oilseed rape in Poland. IOBC Bulletin 27 (10): 125-130
26. Olechnowicz J., Stachowiak A., **Jedryczka M.**, Chèvre A-M., Renard M. (2004) Effects of temperature and humidity on *Leptosphaeria maculans* symptom development on cotyledons of oilseed rape with different resistance genes. IOBC Bulletin 27 (10): 145-156
27. Stachowiak A., Olechnowicz J., **Jedryczka M.**, Rouxel T., Balesdent M-H., Happstadius I., Gladders P., Evans N. (2004) Frequency of avirulence genes in field populations of *Leptosphaeria maculans* in Germany, UK and Poland. IOBC Bulletin 27 (10): 91-94
28. West J.S., **Jedryczka M.**, Penaud A., Fitt B.D.L. (2004) Comparing fungal diseases on oilseed rape in England, France and Poland. IOBC Bulletin 27 (10): 39-44
29. Eckert M., Gout L., Rouxel T., Blaise F., **Jedryczka M.**, Fitt B., Balesdent M-H. (2005) Identification and characterization of polymorphic minisatellites in the phytopathogenic ascomycete *Leptosphaeria maculans*. Current Genetics 47: 37-48
30. Huang YJ., Fitt B.D.L., **Jedryczka M.**, Dakowska S., West J.S., Gladders P., Steed J.M., Li Z.Q. (2005) Patterns of ascospore release in relation to phoma stem canker epidemiology in England (*Leptosphaeria maculans*) and Poland (*Leptosphaeria biglobosa*). European Journal of Plant Pathology 111: 263-277

31. Sun J., Irzykowski W., **Jędrzycka M.**, Han F. (2005) Analysis of the genetic structure of *Sclerotinia sclerotiorum* populations from different regions and host plants by RAPD markers. *Journal of Integrative Plant Biology* 47 (4): 385-395
32. Stachowiak A., Olechnowicz J., **Jędrzycka M.**, Rouxel T., Balesdent M.H., Happstadius I., Gladders P., Latunde-Dada A., Evans N. (2006) Frequency of avirulence alleles in field populations of *Leptosphaeria maculans* in Europe. *European Journal of Plant Pathology* 114: 67-74.
33. **Jędrzycka M.** (2007) Epidemiology and damage caused by stem canker of oilseed rape in Poland. Abstract of habilitation thesis. *Phytopath. Polonica* 45: 73-75
34. Salam M.U., Fitt B.D.L., Aubertot J.N., Diggle A.J., Huang Y.J., Barbetti M.J., Gladders P., **Jędrzycka M.**, Khangura R.K., Wratten N., Fernando W.G.D., Pinochet X., Penaud A., Sivasithamparam K. (2007) Two weather-based empirical models for predicting onset of seasonal release of ascospores of *Leptosphaeria maculans* or *L. biglobosa*, causes of oilseed rape phoma stem canker in Australia, Canada, France, Poland or the UK. *Plant Pathology* 56 (3): 412-423.
35. **Jędrzycka M.**, Kaczmarek J., Dawidziuk A., Brachaczek A. (2008) System for Forecasting Disease Epidemics -Aerobiological methods in Polish agriculture. *Aspects of Applied Biology* 89, *Applied Aspects of Aerobiology*: 65-70.
36. Kaczmarek J., Fitt B.D.L., **Jędrzycka M.**, Latunde-Dada A.O. (2008) Detection by real-time PCR and quantification of *Leptosphaeria maculans* and *L. biglobosa* in air samples from north Poland. *Aspects of Applied Biology* 89, *Applied Aspects of Aerobiology*: 71-76.
37. **Jędrzycka M.** (2008) Epidemiology and damage caused by stem canker of oilseed rape in Poland. Abstract of habilitation thesis. *Phytopathologia Polonica* 45: 73-75..
38. Kaczmarek J., **Jędrzycka M.** (2008) Development of the perfect stage of *Leptosphaeria maculans* and *L. biglobosa* under variable weather conditions of Pomerania in 2004-2008. *Phytopathol. Polon.* 50: 19-31.
39. Kaczmarek J., **Jędrzycka M.**, Fitt B.D.L., Lucas J.A., Latunde-Dada A.O. (2009). Analyses of air samples for ascospores of *Leptosphaeria maculans* and *L. biglobosa* with light microscopic and molecular techniques. *J Appl. Genet.* 50 (4): 411-419.
40. **Jędrzycka M.**, Irzykowski W., Jajor E., Korbas M. (2010). Polymorphism of ten new minisatellite markers in subpopulations of phytopathogenic fungus *Leptosphaeria maculans* differing with metconazole treatment. *Journal of Plant Protection Research* 50 (1): 124-130.
41. Dawidziuk A., Kasprzyk I., Kaczmarek J., **Jędrzycka M.** (2010). Pseudothecial maturation and ascospore release of *Leptosphaeria maculans* and *L. biglobosa* in south-east Poland. *Acta Agrobotanica* 63 (1): 107-120.
42. Kaczmarek J., Latunde-Dada A.O., **Jędrzycka M.** (2010). The complex analysis of stem canker risk factors to winter oilseed rape. *Phytopathologia* 55: 43-59.
43. Dawidziuk A., Popiel D., **Jędrzycka M.** (2010). The influence of *Trichoderma* species on *Leptosphaeria maculans* and *L. biglobosa* growth on agar media and in oilseed rape plants. *IOBC Bulletin*: in press
44. Dawidziuk A., Aubertot J.N., Kaczmarek J., **Jędrzycka M.** (2010). Prediction of *Leptosphaeria maculans* - *L. biglobosa* pseudothecial maturation in Poland. *IOBC Bulletin*: in press
45. Stachowiak A., Irzykowski W., **Jędrzycka M.** (2010). Molecular detection of *Leptosphaeria maculans* and *L. biglobosa* pycnidiospores from cellophane tapes. *IOBC Bulletin*: in press
46. **Jędrzycka M.**, Lewartowska E. (2010). Distribution and change in *Leptosphaeria maculans* /*L. biglobosa* populations in Poland (2000-2004). *IOBC Bulletin*: in press

Themes of works:

Areas of professional interest:

Plant/pathogen interactions:

- 1) fungal pathogens/diseases of oilseed rape (*Brassica napus* subsp. *oleifera* forma *annua*, forma *biennis*) especially *Leptosphaeria maculans* (stem canker) and *Sclerotinia sclerotiorum* (stem rot);

- 2) fungal diseases of pulse crops (peas and lupins): fusariose (*Fusarium oxysporum*, *F. culmorum*, *F. solani*), anthracnose (*Colletotrichum lupini*), stem blight (*Diaporthe toxica*);
- 3) willow and poplar rust (*Melampsora* spp.).
- 4) Virginia mallow (*Sida hermaphrodita*) – white mold (*Sclerotinia sclerotiorum*).

Research methods:

conventional microbiology; plant and seed pathology; epidemiology and disease forecasting based on petal tests and spore trapping; basic statistics; field, glasshouse and controlled environment experiments; laboratory tests; isozyme studies (PGI); molecular techniques (PCR, PFGE – CHEF karyotyping); molecular aerobiology;

Research projects:

1997-2000 - the head of the Polish part of the research project funded by European Union FAIR3-CT96-1669 (ERBIC20-CT97-0003, project acronym: IMASCORE) on "Integrated strategies for the management of stem canker in Europe"

from 2000 - the head of Laboratory of Genetics of Resistance (12 persons)

2003-2006 – the head of Work Package 7 in EU funded project CoE "Centre of Excellence in Plant Agrobiolgy and Molecular Genetics" (5 FP, symbol: QLRT-2001-00379; PAGEN)

2002-2006 – the head of the Polish part of the EU funded research project: „Stem canker of oilseed rape: molecular tools and mathematical modelling to deploy durable resistance” (5FP, symbol: QLRT-2001-01813, project acronym: SECURE) (Coordinator: Dr. N. Evans, Rothamsted Research, UK);

2004-2006 - the head of the Polish part of Russian-Polish bilateral cooperation project “Molecular characterization of *Sclerotinia sclerotiorum* and *Fusarium oxysporum* isolates from oilseed rape”;

2004-2006 - the head of the Polish part of Chinese-Polish bilateral cooperation project “Molecular markers and mycelial compatibility grouping in field populations of *Sclerotinia sclerotiorum* from rapeseed in China and Poland”

2007-2009 – **DeIPHE** project: “Protection of brassicas in China by preventing invasion of *Leptosphaeria maculans*”; coordination: prof. S.Y. Liu, CRI CAAS, China; participants: China, Canada, Poland, United Kingdom;

2009 – head of the supervisor’s project “Development of the generative stage of the fungi *Leptosphaeria maculans* ([Desm.] Ces. et de Not.) and *L. biglobosa* (Shoemaker and Brun 2001) and the protection of oilseed rape against these pathogens.

2007-2010 – main participant of the national project “Exploitation of intergeneric hybrids between *Salix* and *Populus* for biomass production and drought resistance”; coordination: prof. E. Zenkteler, University of Poznan;

2007-2010 - main participant of the national project “Identification of molecular markers linked to resistance of narrow-leaved lupins to Phomopsis stem blight (*Diaporthe toxica*); coordinator: prof. B. Wolko.

Practical achievements

System for Forecasting Disease Epidemics - forecasting of stem canker of oilseed rape in Poland – the biggest system of monitoring of primary inoculum of pathogenic species *L. maculans* and *L. biglobosa* worldwide; www.spec.edu.pl (c/o DuPont Poland) – 10 spore traps constantly operating since 2004 until now; in 2004-2009:

20 thous. users of www.spec.edu.pl website; 50 thous. users of www.supont.pl/spec, 5,5 thous. letters/ 16.2 thous. emails / 41 thous. SMS text messages with SPEC communications; 8 thous. maps with regional results and 2 thous. SPEC brochures distributed among producers of oilseed rape in Poland.

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