

List of publications

Publications in international peer reviewed journals

2013 and in press

Nigrelli L, Thines M (2013) Tropical oomycetes in the German Bight – Climate warming or overlooked diversity? **Fungal Ecology**, in press.

Thines M, Kummer V (2013) Diversity and species boundaries in floricolous downy mildews. **Mycological Progress**, in press.

Mirzaee MR, Ploch S, Runge F, Telle S, Nigrelli L, Thines M (2013) A new presumably widespread species of *Albugo* parasitic to *Strigosella* spp. (Brassicaceae). **Mycological Progress** 12:45-52.

2012

Runge F, Ndambi B, Thines M (2012) Which morphological characteristics are most influenced by the host matrix in downy mildews? A Case Study in *Pseudoperonospora cubensis*. **PLoS ONE** 7:e44863.

Quesada-Ocampo LM, Granke LL, Olsen J, Gutting HC, Runge F, Thines M, Lebeda A, Hausbeck MK (2012) The genetic structure of *Pseudoperonospora cubensis* populations. **Plant Disease** 96:1459-1470.

Lamour KH, Mudge J, Gobena D, Hurtado-Gonzales OP, Schmutz J, Kuo A, Miller NA, Rice BJ, Raffaele S, Cano LM, Bharti AK, Donahoo RS, Finley S, Huitema E, Hulvey J, Platt D, Salamov A, Savidor A, Sharma R, Stam R, Storey D, Thines M, Win J, Haas BJ, Dinwiddie DL, Jenkins J, Knight JR, Affourtit JP, Han CS, Chertkov O, Lindquist EA, Detter C, Grigoriev IV, Kamoun S, Kingsmore SF (2012) Genome Sequencing and Mapping Reveal Loss of Heterozygosity as a Mechanism for Rapid Adaptation in the Vegetable Pathogen *Phytophthora capsici*. **Molecular Plant-Microbe Interactions** 25:1350-1360.

Trigiano RN, Wadl PA, Dean D, Hadziabdic D, Scheffler BE, Runge F, Telle S, Thines M, Ristiano J, Spring O (2012) Ten polymorphic microsatellite loci from *Peronospora tabacina*, the cause of blue mold of tobacco. **Mycologia** 104:633-640.

Rost C, Thines M (2012) A new species of *Pustula* (Oomycetes, Albuginales) is the causal agent of sunflower white rust. **Mycological Progress** 11:351-359.

Shivas RG, Ryley MJ, Telle S, Liberato JR, Thines M (2012) *Peronosclerospora australiensis* sp. nov. and *Peronosclerospora sargae* sp. nov., two newly recognised downy mildews in northern Australia, and their biosecurity implications. **Australasian Plant Pathology** 41:125-130.

Telle S, Thines M (2012) Reclassification of an enigmatic downy mildew species on lovegrass (*Eragrostis*) to the new genus *Eraphthora* with a key to the genera of the Peronosporaceae. **Mycological Progress** 11:121-129.

Runge F, Thines M (2012) Re-Evaluation of host specificity of the closely related species *Pseudoperonospora humuli* and *P. cubensis*. **Plant Disease** 96:55-61.

Choi Y-J; Thines M; Tek MP; Shin H-D (2012) Morphological evidence supports the existence of multiple species in *Pustula* (Albuginaceae, Oomycota). **Nova Hedwigia** 94:181-192.

2011

Ploch S, Thines M (2011) Obligate biotrophic pathogens of the genus *Albugo* are widespread as asymptomatic endophytes in natural populations of Brassicaceae. **Molecular Ecology** 20:3692-3699.

Thines M (2011) Recent outbreaks of downy mildew on grape ivy (*Parthenocissus tricuspidata* Vitaceae) in Germany are caused by a new species of *Plasmopara*. **Mycological Progress** 10:415-422.

Reimer D, Pos KM, Thines M, Grün P, Bode HBA (2011) natural prodrug activation mechanism in nonribosomal peptide synthesis. **Nature Chemical Biology** 7:888-890.

Spring O, Thines M, Wolf S, Zipper R (2011) PCR-based detection of sunflower white blister rust (*Pustula helianthicola* C. Rost & Thines) in soil samples and asymptomatic host tissue. **European Journal of Plant Pathology** 131:519-527.

Choi Y-J, Thines M, Han J-G, Shin H-D (2011) Mitochondrial phylogeny reveals intraspecific variation in *Peronospora effusa*, the spinach downy mildew pathogen. **The Journal of Microbiology** 49:1039-1043.

Choi Y-J, Shin H-D, Ploch S, Thines M (2011) Three new phylogenetic lineages are the closest relatives of the widespread species *Albugo candida*. **Fungal Biology** 115:598-607.

Ploch S, Telle S, Choi Y-J, Cunnington J, Priest M, Rost C, Shin H-D, Thines M (2011) The molecular phylogeny of the white blister rust genus *Pustula* reveals a case of underestimated biodiversity with several undescribed species on ornamentals and crop plants. **Fungal Biology** 115:214-219.

Telle S, Shivas RG, Ryley MJ, Thines M (2011) Molecular phylogenetic analysis of *Peronosclerospora* (Oomycetes) reveals cryptic species and genetically distinct species parasitic to maize. **European Journal of Plant Pathology** 130:521-528.

Choi Y-J, Thines M (2011) Morphological and molecular confirmation of *Albugo resedae* (Albuginales; Oomycota) as a distinct species from *A. candida*. **Mycological Progress** 10:143-148.

Runge F, Telle S, Ploch S, Savory E, Day B, Sharma R, Thines M (2011) The inclusion of downy mildews in a multi-locus-dataset and its reanalysis reveals high degree of paraphyly in *Phytophthora*. **IMA Fungus** 2:163-171.

Choi Y-J, Thines M, Runge F, Hong S-B, Telle S, Shin H-D (2011) Evidence for high degrees of specialisation evolutionary diversity and morphological distinctiveness in the genus *Bremia*. **Fungal Biology** 115:102-111.

Hawksworth DL, Crous PW, Redhead SA, Reynolds DR, Samson RA, Seifert KA, Taylor JW, Wingfield MJ, Abaci Ö, Aime C, Asan A, Bai F-Y, de Beer ZW, Begerow D, Berikten D, Boekhout T, Buchanan PK, Burgess TI, Buzina W, Cai L, Cannon PF, Crane JL, Damm U, Daniel H-M, van Diepeningen AD, Druzhinina IS, Dyer PS, Eberhardt U, Fell JW, Frisvad JC, Geiser DM, Geml J, Glienke C, Gräfenhan T, Groenewald JZ, Groenewald M, de Gruyter JZ, Guého-Kellermann E, Hibbett DS, Hong S-B, de Hoog GS, Houbraken JAMP, Huhndorf SM, Hyde KD, Ismail A, Johnston PR, Kadaifciler DG, Kirk PM, Kõljalg U, Kurtzman CP, Lagneau P-E, Lévesque CA, Liu X, Lombard L, Meyer W, Miller A, Minter DW, Najafzadeh JM, Norvell L, Ozerskaya SM, Öziç R, Pennycook SR, Peterson SW, Pettersson OV, Quaedvlieg W, Robert VA, Ruibal C, Schnürer J, Schroers H-J, Shivas R, Slippers B, Spierenburg H, Takashima M, Tapkún E, Thines M, Thrane U, Uztan HA, van Raak M, Varga J, Vasco A, Verkley G, Videira SIR, de Vries RP, Weir BS, Yilmaz N, Yurkov A, Zhang N. (2011) The Amsterdam Declaration on Fungal Nomenclature. **IMA Fungus** 2:105-112.

Schröder S, Telle S, Nick P, Thines M (2011) Cryptic diversity of *Plasmopara viticola* in North America. **Organisms Diversity and Evolution** 11:3-7.

Runge F, Thines M (2011) Host matrix has major impact on the morphology of *Pseudoperonospora cubensis*. **European Journal of Plant Pathology** 129:147-156.

Guerrero Y, Hofmann TA, Williams C, Thines M, Piepenbring M (2011) *Asterotexis cucurbitacearum*, a poorly known pathogen on Cucurbitaceae new for Panama and Costa Rica. **Mycology** 2:87-90.

Choi Y-J, Thines M, Shin H-D (2011) A new perspective on the evolution of white blister rusts: *Albugo* s.str. (Albuginales; Oomycota) is not restricted to Brassicales but also present on Fabales. **Organisms, Diversity and Evolution** 11:193-199.

Runge F, Choi Y-J, Thines M (2011) Phylogenetic investigations in the genus *Pseudoperonospora* reveal overlooked species and cryptic diversity in the *P. cubensis* species cluster. **European Journal of Plant Pathology** 129:135-146.

Thines M, Runge F, Telle S, Voglmayr H (2011) Phylogenetic investigations in the downy mildew genus *Bremia* reveal several distinct lineages and a species with a presumably exceptional wide host range. **European Journal of Plant Pathology** 129:81-89.

2010

Hulvey J, Telle S, Nigrelli L, Lamour K, Thines M (2010) Salisapiliaceae – A new family of oomycetes from marsh grass litter of southeastern North America. **Persoonia** 25:109-116.

Baxter L, Tripathy S, Ishaque N, Boot N, Cabral A, Kemen E, Thines M, Ah-Fong A, Anderson R, Badejoko W, Bittner-Eddy P, Boore JL, Chibucos MC, Coates M, Dehal P, Delehaunty K, Dong S, Downton P, Dumas B, Fabro G, Fronick C, Fuerstenberg SI, Fulton L, Gaulin E, Govers F, Hughes L, Humphray S, Jiang RHY, Judelson H, Kamoun S, Kyung K, Meijer H, Minx P, Morris P, Nelson J, Phuntumart V, Qutob D, Rehmany A, Rougon A, Ryden P, Torto-Alalibo T, Studholme D, Wang Y, Win J, Wood J, Clifton SW, Rogers J, Van den Ackerveken G, Jones JDG, McDowell JM, Beynon J, Tyler BM, (2010) Signatures of adaptation to obligate biotrophy in the *Hyaloperonospora arabidopsidis* genome. **Science** 330:1149-1151.

Raffaele S, Farrer RA, Cano LM, Studholme DJ, Maclean D, Thines M, Jiang RHY, Zody MC, Kunjeti SG, Donofrio NM, Meyers BC, Nusbaum C, Kamoun S (2010) Genome evolution following host jumps in the Irish potato famine pathogen lineage. **Science** 330:1540-1543.

Thines M, Kamoun S (2010) Oomycete-plant coevolution: Recent advances and future prospects. **Current Opinion in Plant Biology** 13: 427-433.

Ploch S, Choi Y-J, Rost C, Shin H-D, Schilling E, Thines M (2010) Evolution of diversity in *Albugo* is driven by high host specificity and multiple speciation events on closely related Brassicaceae. **Molecular Phylogenetics and Evolution** 57:812-820.

Constantinescu O, Thines M (2010) *Plasmopara halstedii* is absent from Australia and New Zealand. **Polish Botanical Journal** 55:293-298. (invited manuscript)

Thines M (2010) Evolutionary history and diversity of white blister rusts. **Polish Botanical Journal** 55:259-264. (invited manuscript)

Schornack S, van Damme M, Bozkurt TO, Cano LM, Smoker M, Thines M, Gaulin E, Kamoun S, Huitema E (2010) Ancient class of translocated oomycete effectors targets the host nucleus. **PNAS** 107:17421-17426.

Levesque CA, Brouwer H, Cano L, Hamilton JP, Holt C, Huitema E, Raffaele S, Robideau GP, Thines M, Win J, Zerillo MM, Beakes GW, Boore JL, Busam D, Dumas B, Ferriera S, Fuerstenberg SI, Gachon CM, Gaulin E, Govers F, Grenville-Briggs L, Horner N, Hostetler J, Jiang RH, Johnson J, Krajaejun T, Lin H, Meijer HJ, Moore B, Morris P, Phuntmart V, Puiu D, Shetty J, Stajich JE, Tripathy S, Wawra S, van West P, Whitty BR, Coutinho PM, Henrissat B, Martin F, Thomas PD, Tyler BM, De Vries RP, Kamoun S, Yandell M, Tisserat N, Buell CR (2010) Genome sequence of the necrotrophic plant pathogen *Pythium ultimum* reveals original pathogenicity mechanisms and effector repertoire. **Genome Biology** 11:R73.

Oliva R, Win J, Raffaele S, Boutemy L, Bozkurt TO, Chaparro-Garcia A, Segretin ME, Stam R, Schornack S, Cano LM, van Damme M, Huitema E, Thines M, Banfield MJ, Kamoun S (2010) Recent Developments in effector biology of filamentous plant pathogens. **Cellular Microbiology** 12:705-715.

Schorneck S, Huitema E, Cano LM, Bozkurt TO, Oliva R, Van Damme M, Schwizer S, Raffaele S, Chaparro-Garcia A, Farrer R, Segretin ME, Bos J, Haas BJ, Zody MC, Nusbaum C, Win J, Thines M, Kamoun S (2009) Ten things to know about oomycete effectors. **Molecular Plant Pathology** 10:795-803.

Haas BJ, Kamoun S, Zody MC, Jiang RH, Handsaker RE, Cano LM, Grabherr M, Kodira CD, Raffaele S, Torto-Alalibo T, Bozkurt TO, Ah-Fong AM, Alvarado L, Anderson VL, Armstrong MR, Avrova A, Baxter L, Beynon J, Boevink PC, Bollmann SR, Bos JI, Bulone V, Cai G, Cakir C, Carrington JC, Chawner M, Conti L, Costanzo S, Ewan R, Fahlgren N, Fischbach MA, Fugelstad J, Gilroy EM, Gnerre S, Green PJ, Grenville-Briggs LJ, Griffith J, Grünwald NJ, Horn K, Horner NR, Hu CH, Huitema E, Jeong DH, Jones AM, Jones JD, Jones RW, Karlsson EK, Kunjeti SG, Lamour K, Liu Z, Ma L, Maclean D, Chibucos MC, McDonald H, McWalters J, Meijer HJ, Morgan W, Morris PF, Munro CA, O'Neill K, Ospina-Giraldo M, Pinzón A, Pritchard L, Ramsahoye B, Ren Q, Restrepo S, Roy S, Sadanandom A, Savidor A, Schornack S, Schwartz DC, Schumann UD, Schwessinger B, Seyer L, Sharpe T, Silvar C, Song J, Studholme DJ, Sykes S, Thines M, van de Vondervoort PJ, Phuntumart V, Wawra S, Weide R, Win J, Young C, Zhou S, Fry W, Meyers BC, van West P, Ristaino J, Govers F, Birch PR, Whisson SC, Judelson HS, Nusbaum C (2009) Genome sequence and comparative analysis of the Irish potato famine pathogen *Phytophthora infestans*. **Nature** 461:393-398.

Thines M, Choi Y-J, Kemen E, Ploch S, Holub EB, Shin H-D, Jones JDG (2009) A new species of *Albugo* parasitic to *Arabidopsis thaliana* reveals new evolutionary patterns in white blister rusts (Albuginaceae). **Persoonia** 22:123-128.

Choi Y-J, Shin H-D, Thines M (2009) The host range of *Albugo candida* extends from Brassicaceae through Cleomaceae to Capparaceae. **Mycological Progress** 8:329-335.

Choi Y-J, Shin H-D, Thines M (2009) Two novel *Peronospora* species are associated with recent reports of downy mildew on sages. **Mycological Research** 113:1340-1350.

Heller A, Thines M (2009) Evidence for the importance of enzymatic digestion of epidermal walls during subepidermal sporulation and pustule opening in white blister rusts (Albuginaceae). **Mycological Research** 113:657-667.

Thines M, Telle S, Ploch S, Runge F (2009) Identity of the downy mildew pathogens of basil, coleus, and sage with implications for quarantine measures. **Mycological Research** 113:532-540.

Thines M (2009) Bridging the gulf: *Phytophthora* and downy mildews are connected by rare grass parasites. **PLoS ONE** 4:e4790.

Runge F, Thines M (2009) A potential perennial host for *Pseudoperonospora cubensis* in temperate regions. **European Journal of Plant Pathology** 123:483-486.

Telle S, Thines M (2008) Amplification of *cox2* (~620 bp) from 2 mg of up to 129 years old herbarium specimens, comparing 19 extraction methods and 15 polymerases. **PLoS ONE** 3:e3584.

Choi Y-J, Shin H-D, Ploch S, Thines M (2008) Evidence for uncharted biodiversity in the *Albugo candida* complex, with the description of a new species. **Mycological Research** 112:1327-1334.

Thines M, Göker M, Telle S, Ryley M, Mathur K, Narayana YD, Spring O, Thakur RP (2008) Phylogenetic relationships of graminicolous downy mildews based on *cox2* sequence data. **Mycological Research** 112:345-351.

2007

Choi Y-J, Shin H-D, Hong S-B, Thines M (2007) Morphological and molecular discrimination among *Albugo candida* materials infecting *Capsella bursa-pastoris* world-wide. **Fungal Diversity** 27:11-34.

Thines M (2007) Characterisation and phylogeny of repeated elements giving rise to exceptional length of ITS2 in several downy mildew genera (Peronosporaceae). **Fungal Genetics and Biology** 44:199-207.

Thines M, Göker M, Oberwinkler F, Spring O (2007) A revision of *Plasmopara penniseti*, with implications for the host range of the downy mildews with pyriform haustoria (DMPH). **Mycological Research** 111:1377-1385.

Hammer T, Thines M, Spring O (2007) Transient expression of *gfp* in the obligate biotrophic oomycete *Plasmopara halstedii* using electroporation and a mechanoperforation method. **Plant Pathology** 56:177-182.

Komjáti H, Walcz I, Virányi F, Zipper R, Thines M, Spring O. (2007) Characteristics of a *Plasmopara angustiterminalis* isolate from *Xanthium strumarium*. **European Journal of Plant Pathology** 119: 421-428.

Voglmayr H, Thines M (2007) Phylogenetic relationships and nomenclature of *Bremiella sphaerosperma* (Chromista, Peronosporales). **Mycotaxon** 100:11-20.

2006

Thines M, Göker M, Spring O, Oberwinkler F (2006) A revision of *Bremia graminicola*. **Mycological Research** 110:646-656.

Spring O, Bachofer M, Thines M, Göker M, Oberwinkler F (2006) Intraspecific relationship of *Plasmopara halstedii* isolates differing in pathogenicity and geographic origin based on ITS sequence data. **European Journal of Plant Pathology** 114:309-315.

Thines M (2006) Evaluation of characters available from herbarium vouchers for the phylogeny of the downy mildew genera (Chromista, Peronosporales), with focus on scanning electron microscopy. **Mycotaxon** 97:195-218.

Constantinescu O, Thines M (2006) Dimorphism of sporangia in Albuginales (Chromista, Peronosporomycetes). **Sydowia** 58:178-190.

Thines M, Zipper R, Schäuffele D, Spring O (2006) Characteristics of *Pustula tragopogonis* (syn. *Albugo tragopogonis*) newly occurring on cultivated sunflower in Germany. **Journal of Phytopathology** 154:88-92.

2005

Thines M, Spring O (2005) A revision of *Albugo* (Chromista, Peronosporomycetes). **Mycotaxon** 92:443-458.

Constantinescu O, Voglmayr H, Fatehi J, Thines M (2005) *Plasmoverna* gen. nov., and the nomenclature and taxonomy of *Plasmopara* (Chromista, Peronosporales). **Taxon** 54:813-821.

Thines M, Komjáti H, Spring O (2005) Exceptional length of ITS in *Plasmopara halstedii* is due to multiple repetitions in the ITS 2. **European Journal of Plant Pathology** 112:395-398.

2004

Spring O, Thines M (2004) On the necessity of new characters for classification and systematics of obligate biotrophic Peronosporomycetes. **Planta** 219:910-914.

Peer reviewed book chapters

Spring S, Thines M (2010) Molecular Techniques for Classification and Diagnosis of Plant Pathogenic Oomycota. In: Youssuf Gherbawy Y, Voigt K (eds) Molecular identification of Fungi. Springer, pp. 35-50.

Thines M, Voglmayr H, Göker M (2009) Taxonomy and phylogeny of the downy mildews (Peronosporaceae). In: Lamour K, Kamoun S (eds) Oomycete Genetics and Genomics: Biology, Interactions with Plants and Animals, and Toolbox. Wiley-Blackwell, pp. 47-75.

Thines M, Voglmayr H (2009) Evolution, phylogeny and diversity of the white blister rusts (Albuginales) In: Lamour K, Kamoun S (eds) Oomycete Genetics and Genomics: Biology, Interactions with Plants and Animals, and Toolbox. Wiley-Blackwell, pp. 77-92.