Curriculum Vitae

Name & Address

Karl Kuchler – *Professor of Molecular Genetics*
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Main Research Interests

We study fundamental problems in infection biology using a combination of molecular as well as genome-wide and systems biology approaches. We are particularly interested in a better understanding of the dynamic gene regulation during host-pathogen interplay, with a focus on fungal pathogens such as Candida spp. On the pathogen side, we use reverse genetics, systems biology and functional genomics strategies (gene deletions, RNA-Seq / Chip-Seq) to (i) identify virulence and antifungal drug resistance genes, (ii) decipher the role of histone modifications and chromatin alterations in morphogenetic switching or cell fate determination, and (iii) study signaling mechanisms during fungal morphogenesis and host colonization. On the host side, we exploit transcriptomics and proteomics of primary phagocytes (macrophages, dendritic cells, neutrophils) and T cells to study (i) the mechanisms of gene regulation underlying fungal immunity, (ii) the interplay of adaptive (T cells) and innate (dendritic cells) immunity in fungal surveillance, and (iii) type I interferon signaling (i.e. IFN-beta) and inflammation controlling the function and activity of inflammatory phagocytes (monocytes, neutrophils and T cells), and, (iv), the critical role of Th17 inflammation on pathogen elimination in invasive fungal diseases

Scientific Education & Career History

1994 - date	Associate Professor of Molecular Genetics, Medical University Vienna
2008 - 2012	Academic Director Christian Doppler Laboratory Infection Biology
2000 - 2001	Cluster Manager *"Biotechnology & Molecular Medicine"*, City of Vienna Coordination of the Vienna Region Biotechnology Cluster
1994	*Venia docendi* (Habilitation) in Molecular Genetics, University of Vienna
1996	Fulbright Sabbatical Fellow, City of Hope National Cancer Center, USA
1992 - 1994	Faculty position in the Department of Molecular Genetics, Vienna Biocenter
1991 - 1992	Senior Research Associate (with Wolfgang Schneider) Lipid & Lipoprotein Research Group, University Alberta Edmonton, Canada
1998 - 2001	Postdoctoral Fellow (with Jeremy Thorner); Department Molecular Cell Biology, University of California Berkeley, USA
1986 - 1988	Postdoctoral Fellow (with Günther Kreil); Institute of Molecular Biology Austrian Academy of Sciences, Salzburg
1986	PhD in Biochemistry (with Fritz Paltauf) Thesis "*Phospholipid Biosynthesis in Yeast*", Technical University of Graz
1982	Masters Thesis - "Dipl.-Ing." (M.Sc.), Technical University of Graz
1977 - 1982	"Biochemistry & Food Biotechnology", Technical University of Graz

Experience in Scientific Management and Organization and PhD Student Supervision

Since 1992	Supervision and training of **33 Diploma (M.Sc.)** and **23 PhD students**
1997 - 1998	Planning and organization of the Austrian-wide exhibit *"gentechnik pro & contra"* for the broad public on risks of recombinant DNA technologies (>250.000 visitors in Europe)
05/2000 –	Cluster Manager for *"Biotechnology"* at the Vienna Business Agency to

1/2002	coordinate the development of the Vienna Region Biotechnology Cluster
2001 – 2002	Co-Organizer of the international biotechnology business plan competition in life *sciences "Best of Biotech - BOB"* at Vienna Business Agency & Innovation Agency
2004 – date	Co-Chair & Co-Organizer of 1st, 2nd, 3rd, 4th & 5th FEBS Advanced Lecture Courses on Systems Biology (*"Systems Biology: From Molecules to Life"*) with 200 participants, March 2005 & 2007 in Gosau, 2009 Alpbach, 2011 & 2013 in Innsbruck
2005	Co-Founder CIBIV - "*Center Integrative Bioinformatics Vienna", Vienna Biocenter*
1997- date	Main Organizer & Chair of the biannual international 1st, 2nd, 3rd & 4th FEBS Advanced Lecture Courses, and the 1st, 2nd, 3rd & 4th FEBS Special Meetings on ABC Proteins (*"ABC Transporters, From Multidrug Resistance to Genetic Disease"*) with 200 participants; ABC2006, ABC2008, ABC2010 and ABC2012, each with about 320 participants in Innsbruck, Austria
2005 - 2007	Chair & main organizer of the 32nd Annual FEBS Congress FEBS2007 *("Molecular Machines")* with 2400 participants, July 7-12, 2007 in Vienna, Austria
2005 - 2010	Chair of the *"FEBS Advanced Courses Committee"*
2005 - 2010	Executive & *FEBS* Trustee "*Federation of European Biochemical Societies"*
2003 – 2011	Vice-President *Max Kade Section* of the Academy of Sciences Alumni Club
2012 – 2013	President of the *Alumni Association of the Austrian Academy of Sciences*
2013 – 2014	Vice-President of the *Austrian Society for Medical Mycology*

Invited Conference Presentations (5 recent selected)

- 2016 - Keynote Plenary Speaker at 2016 CESC Meeting on Mycology, Szeged, HU
- 2016 - Plenary speaker 2016 Chromosome Stability, Thiruvananthapuram, India
- 2015 - Plenary speaker at the GRC on Fungal Immunology, Galveston, USA
- 2015 - Plenary speaker HFP2015 on Human Fungal Pathogens, Nice, France
- 2014 - Plenary speaker *PCM2014* Meeting of Paracoccioides & Mycoses, Brasilia, Brazil

Honors & Awards (5 selected)

- 1986 - Fellow of the Max Kade Foundation Inc.,
- 1990 - Erwin Schrödinger Fellow of the Austrian Science Foundation FWF
- 1996 - Fulbright Fellow at the City of Hope National Cancer Center, USA
- 1996 - Novartis Prize for Biology, Novartis (Sandoz) Austria
- 2008 - Life-time Honorary Member of *Austrian Society Biochemistry & Molecular Biology*

Member of Reviewing Panels, Editorial Boards, Scientific Organizations (5 selected)

- Regular reviewing for many journals, including *Nature, Immunity, PLoS & Cell Press*
- Editorial Board member of *J. Biological Chemistry*
- Assoc. Editor and Editorial Board member for *Microbiology*
- Assoc. Editor and Editorial Board member for *Pathogens & Disease*
- Reviewing & Jury Panel member of the European Biotechnica Award Jury
- Reviewing & Jury Panel member FWO Funding Agency Grant Panel Bio2

Most Important Research Funding (in the past 5 years)

Since the establishment of my own research group in 1994, I was able to finance my group through numerous peer-reviewed research grants from national (FWF, WWF, FFG) and

international (NIH, EC-FPs, ERA-Net) sources. The most relevant third-party support in the past five years include:

- 2008 – 2012, Doppler Society, Fungal pathogenesis & host immune response - 2650 k€
- 2012 – 2016, FWF - Chromatin - Chromatin modification in fungal virulence - 348 k€
- 2015 – 2018, FWF - SFB035-III, ABC membrane transporters in eukaryotes - 290 k€
- 2014 – 2018, FP7 - Coordinator MC-ITN Training Netwrok “ImResFun” – 840 k€
- 2014 – 2017, FP7 - Partner FP7 FUNGITECT Diagnosis of fungal pathogens - 930 k€

Key International Collaborators (selection of 5 with joint publications since 2012)

- **Neeraj Chauhan** Rutgers University, USA - chauhan1@njms.rutgers.edu
- **Charlie Boone** University of Toronto, CDN - charlie.boone@utoronto.ca
- **Christophe d’Enfert** Pasteur Institute Paris, FRA - christophe.denfert@pasteur.fr
- **Bernhard Hube** HKI Infektionsbiologie Jena, GER - Bernhard.Hube@hki-jena.de
- **Alexander Johnson** UCSF Medical School, USA - ajohnson@cgl.ucsf.edu

List of Publications (2011 - 2016)

Since 2011, **44 original peer-reviewed** research publications, including reviews and 1 invited book chapters without peer-review.

1. Tscherner, M., Schwarzmüller T. & **K. Kuchler** (2011). Pathogenesis and antifungal drug resistance of the human fungal pathogen *Candida glabrata.* **Pharmaceuticals 4**: 169-186; doi:10.3390/ph4010169

2. Hnisz, D., M. Tscherner & **K. Kuchler** (2011). Targeting chromatin in fungal pathogens as novel therapeutic strategy: histone modification gets infectious. **Epigenomics** 3: 129-132

3. **K. Kuchler** (2011). The ABC of ABCs: About multidrug resistance and genetic diseases. **FEBS J.** 278: 3189. doi: 10.1111/j.1742-4658.2011.08234.x

4. Klein, C, **K. Kuchler** & M. Valachovic (2011). ABC proteins in yeast & fungal pathogens. **Essays in Biochem**. 50:101-19

5. Gregori, C., W. Glaser, I.E. Frohner, C. Reinoso-Martin, S. Rupp, C. Schüller & **K. Kuchler** (2011). Efg1 controls CASP-induced cell aggregation of *C. albicans* through the adhesin Als1. **Eukaryotic Cell** 10:1694-704.

6. Bourgeois, C., O. Majer, I.E. Frohner, I. Lesiak.-Markowicz, KS. Hildering, W. Glaser, S. Stockinger, T. Decker, M. Müller, S. Akira, & **K. Kuchler** (2011). Conventional dendritic cells mount a type I IFN response against Candida spp. requiring novel phagosomal TLR7-mediated IFN-b signaling. **J. Immunol**. 186: 3104-3112

7. Seider, K., S. Brunke, L. Schild, N. Jablono, O. Majer, D. Barz, A. Haas, **K. Kuchler**, M. Schaller & B. Hube (2011). The facultative human fungal pathogen *C. glabrata* subverts cytokine response and phagolysosome maturation in macrophages. **J. Immunol**. 187:3072-86

8. Lesiak-Markowicz, I. G. Vogl, T. Schwarzmüller, C. Speth, C. Lass-Flörl, MP. Dierich, **K. Kuchler**, & R. Würzner (2011). *C. albicans HGT1* is a multifunctional complement evasion molecule. **J. Infect. Disease**. 204: 802-809

9. Hnisz, D., M. Tscherner & **K. Kuchler** (2011). Morphological and molecular genetic analysis of epigenetic switching of pathogenic *C. albicans.* Methods Mol. Biol. 734:303-315

10. Borecká, S., E. Pinjon, D. J. Sullivan, **K. Kuchler**, Jaroslav Blaško & H. Bujdáková (2011). Cdr2 contributes to fluconazole resistance in *C. dubliniensis* isolates. **Can. J. Microbiol.** 57:416-426

11. Bourgeois & **K. Kuchler** (2012). Fungal pathogens - A sweet and sour diet for *toll-like* receptors. **Frontiers Cell. Infection Microbiol**. 2:142 doi: 10.3389/fcimb.2012.00142. Epub 2012 Nov 22.

12. Hnisz, D., A. Bardet, C. Nobile, U. Schoeck, A. Petryshin, W. Glaser, A. Stark, & **K. Kuchler** (2012). Histone deacetylation at coding sequences adjusts transcription kinetics during *C. albicans* morphogenesis. **PLoS Genetics** 12:e1003118 doi:10.1371/journal.pgen.1003118.

13. Tscherner, M., E. Stappler, D. Hnisz & **K. Kuchler** (2012). The histone acetyltransferase Hat1 facilitates DNA damage repair and morphogenesis in *C. albicans***. Mol. Microbiol**. 86:1197-214. doi: 10.1111/mmi.12051. Epub 2012 Oct 17

14. Ryan, O., RS. Shapiro, CF. Kurat, D. Mayhew, A. Baryshnikova, B. Chin, Z-Y. Lin, M.J. Cox, F. Vizeacoumar, D. Cheung, S. Bahr, K. Tsui, F. Tebbji, A. Sellam, F. Istel, T. Schwarzmüller, T.B. Reynolds, **K. Kuchler**, D.K. Gifford, M. Whitway, G. Giaever, C. Nislow, M. Costanzo, A-C. Gingras, R.D. Mitra, B. Andrews, G.R. Fink, L.E. Cowen & C. Boone; (2012). Global gene deletion analysis exploring yeast filamentous growth. **Science** 337: 1353-1356 *doi:* 10.1126

15. Majer, O., Bourgeois, C., F. Zwolanek, M. Mack, C. Lassing, D. Kerjaschki, M. Müller & **K. Kuchler** (2012). Type I interferon signaling promotes fatal immunopathology through the recruitment of inflammatory monocytes and neutrophils. **PLoS Pathogens** 8: e1002811

16. Tierney, L., J. Linde, S. Müller, S. Brunke, B. Hube, R. Guthke& **K. Kuchler** (2012). Parallel RNA-Seq reveals novel interspecies gene regulatory networks of *C. albicans* invading innate immune cells. **Frontiers Microbiol** 3: 85, Epub 2012 Mar 12

17. Tierney, L., L. Rizzetto, D. Cavalieri* & K. Kuchler* (2012). Systems biology of host-fungus interactions: turning complexity into simplicity? **Curr Opin Microbiol.** 15: 440-446

18. Miguel Relloso, M., L. Aragoneses-Fenoll, C. Bourgeois, G. Romera, **K. Kuchler**, A.L. Corbí, MA. Muñoz-Fernandez, J.L. Rodríguez-Fernández & Rosalia Diez-Orejas (2012). Estrus impairs the trigger of Th17 immune response by altering dendritic cell function. **J. Leukocyte Biol**. 91:159-165

19. Zavrel, M., O. Majer, **K. Kuchler** & S. Rupp (2012). The transcription factor Efg1 shows a significant haploinsufficiency phenotype in modulating cell wall architecture and immunogenicity of *Candida albicans*. **Eukaryotic Cell**. 11: 129-140

20. Köprülü, A.D, Kastner, R., Wienerroither, S., Lassnig, C., Putz, E-M, Majer, O., Reutterer, B., Sexl, V., **Kuchler, K.,** Müller, M., Decker, T., and W. Ellmeier (2013). Btk regulates the macrophage response to *Listeria monocytogenes* infection. **PLoS ONE** 8: e60476 doi: 10.1371

21. Lee, J., W. Reiter, I. Dohnal, C. Gregori, S. Beese-Sims, **K. Kuchler**, G. Ammerer, & D. Levin (2013). Hog1 MAPK closes the *S. cerevisiae* Fps1 glycerol channel by phosphorylating and displacing its positive regulators. **Genes & Dev** 27: 2590-2601

22. Tscherner, M. and K **Kuchler** (2013). Immunoblot Analysis of Histone H4 Acetylation and Histone H2A Phosphorylation in *Candida albicans*. ***Bio-Protocol*** 3(20): e943. http://www.bio-protocol.org/e943

23. 104. Lackner, M., M. Tscherner, M. Schaller, **K. Kuchler**, C.Mair, B. Sartori, F. Istel, M. C. Arendrup and C. Lass-Flörl (2014). Position and numbers of *FKS* mutations in *C. albicans* selectively influence *in vitro* and *in vivo* susceptibility to echinocandin treatment. **Antimic. Agents Chemoth.** *E-publ.* PMID: 24733467

24. Seider K, Gerwien F, Kasper L, Allert S, Brunke S, Jablonowski N, Schwarzmüller T, Barz D, Rupp S, **Kuchler K**, & Hube B (2014). Immune evasion, stress resistance, and efficient nutrient acquisition are crucial for intracellular survival of *Candida glabrata* within macrophages. **Eukaryotic Cell.** 13(1):170-83. doi: 10.1128/EC.00262-13

25. Kasper, L., Seider K, Gerwien F, Allert S, Brunke S, Schwarzmüller T, Ames L, Barrera CZ, Mansour MK, Becken U, Barz D, Vyas JM, Reiling N, Haas A, Haynes K**, Kuchler K**, & B. Hube (2014). Identification of *Candida glabrata* genes involved in pH modulation and modification of the phagosomal environment in macrophages. **PLoS ONE.** 9: e96015. doi: 10.1371/journal.pone.0096015; PMID: 24789333

26. Schwarzmüller, T., B. Ma, M. Tscherner, F. Istel, E.Hiller, S. Brunke, L. Ames, A. Firon, B. Green, V. Cabral, M. Marcet-Houben, I.D. Jacobsen, J. Quintin, K. Seider, I. Frohner, H. Jungwirth, W. Glaser, D. Ferrandon, S. Rupp, C. D'Enfert, B. Cormack, K. Haynes & **K. Kuchler** (2014). Systematic phenotyping of a genome-scale *C. glabrata* deletion collection reveals novel antifungal drug tolerance genes. **PLoS Pathogens,** 10: e1004211. doi: 10.1371/journal.ppat.1004211. eCollection 2014 Jun

27. Nobile, CJ, N. Hartooni, E. Fox, K. D. Hnisz, D. Andes, **K. Kuchler**, and A.D. Johnson (2014). A histone deacetylase complex mediates biofilm dispersal and drug resistance in *C. albicans.* **mBIO,** 10;5(3). pii: e01201-14. doi: 10.1128/mBio.01201-14

28. Wirnsberger G., F. Zwolanek, J. Stadlmann, L. Tortola, S.Wan-Liu, P. Järvinen, G. Dürnberger, I. Kozieradzki, R. Sarao, AD Martino, K. Boztug, K. Mechtler, **K. Kuchler**, C. Klein, U. Elling, & JM. Penninger (2014). Jagunal-homolog 1 is a critical regulator of neutrophil function in fungal host defense. **Nature Genetics**, 46(9):1028-33. doi: 10.1038/ng.3070. Epub 2014 Aug 17

29. Zwolanek, F., M. Riedelberger, V. Stolz, W. Ellmeier & **K. Kuchler** (2015). The non-receptor tyrosine kinase Tec controls fungal virulence by activating the caspase-8 inflammasome. **PLoS Pathogens**. 10(12):e1004525. doi: 10.1371/journal.ppat.1004525

30. Lüttich A, Linde J, Schreiner M, Horn F, Jacobsen ID, Guthke R**, Kuchler K**, Forche A, d'Enfert C, Brunke S, & B. Hube (2015). Microevolution of *Candida albicans* in macrophages restores filamentation in a nonfilamentous mutant. **PLoS Genetics,** 0(12):e1004824. doi: 10.1371/journal.pgen.1004824

31. Brunke S, J Quintin, L Kasper, ID Jacobsen, ME Richter, E Hiller, T Schwarzmüller, C d'Enfert, **K Kuchler**, S Rupp, B Hube & D Ferrandon (2015) Of fungal pathogens in mice, flies – and men? Comparing infection models for large-scale screening efforts. **Dis Model Mechanism** 8(5):473-86. doi: 10.1242/dmm.019901. Epub 2015 Mar 18.

32. Mota S, R Alves, C Carneiro, S Silva, F Istel, **K Kuchler**, P Sampaio, M Casal, M Henriques, & S. Paiva Acetic acid influences biofilm formation, antifungal drug susceptibility and phagocytosis in *Candida glabrata* (2015). **Frontiers Microbiol***,* 6:919. doi: 10.3389/fmicb.2015.00919. eCollection 2015.

33. Istel F, Schwarzmüller T, Tscherner M & **K Kuchler** (2015). Genetic Transformation of *Candida glabrata* by Electroporation. **Bio Protoc** 5(14). pii: e1528.

34. Istel F, Schwarzmüller T, Tscherner M & **K Kuchler** (2015). Large-scale Phenotypic Profiling of Gene Deletion Mutants in *Candida glabrata*. **Bio Protoc** 5(14). pii: e1530.

35. Istel F, Schwarzmüller T, Tscherner M & **K Kuchler** (2015). Genetic Transformation of *Candida glabrata* by Heat Shock. **Bio Protoc** 5(14). pii: e1529.

36. Tscherner M, F Zwolanek, S. Jenull, F Sedlazeck, A Petryschy, I Frohner, J Mavrianos, N Chauhan, A von Haeseler & **K. Kuchler** (2015). The *Candida albicans* histone acetyltransferase Hat1 regulates stress resistance and virulence via distinct chromatin assembly pathways. **PLoS Pathogens***,* 11(10):e1005218. doi: 10.1371/journal.ppat.1005218. eCollection 2015 Oct.

37. Montanari F, Pinto M, Khunweeraphong N, Wlcek K, Sohail MI, Noeske T, Boyer S, Chiba P, Stieger B, **Kuchler K**, & GF Ecker (2016). Flagging drugs that inhibit the bile salt export pump. **Mol Pharm.** Dec 7. [Epub ahead of print]

38. Schwarz T, Montanari F, Cseke A, Wlcek K, Visvader L, Palme S, Chiba P, **Kuchler K**, Urban E, & GF Ecker (2016). Subtle Structural Differences Trigger Inhibitory Activity of Propafenone Analogues at the Two Polyspecific ABC Transporters: P-Glycoprotein (P-gp) and Breast Cancer Resistance Protein (BCRP). **Chem Med Chem**. 2016 Mar 10. doi: 10.1002/cmdc.201500592. [Epub ahead of print] PMID: 26970257

39. Agustinho DP, de Oliveira MA, Tavares AH, Derengowski L, Stolz V, Guilhelmelli F, Mortari MR, & **K Kuchler*,** I Silva-Pereira* (2016. Dectin-1 is required for miR155 upregulation in murine macrophages in response to Candida albicans. **Virulence**. 13:1-12. *(*corresponding authors)*

40. Wirnsberger* G., F. Zwolanek*, Asaoka T, Kozieradzki I, Tortola L, RA Wimmer, F Fresser, G Baier, WY Langdon, A Kavirayani, F Ikeda, **K. Kuchler*** & JM. Penninger* (2016). The E3-ubiquitin-ligase Cbl-b controls antifungal immune responses. **Nature Medicine** 22:915-23. doi: 10.1038/nm.4134. Epub 2016 Jul 18 *(*Equal first & equal corresponding authors)*

41. Xie J, Jenull S, Tscherner M, & K Kuchler (2016). The paralogous histone deacetylases Rpd3 and Rpd31 play opposing roles in regulating the white-opaque switch in the fungal pathogen *Candida albicans*. **mBio** 7(6):e01807-16. doi:10.1128/mBio.01807-16

42. Nogueira F, Istel F, Pereira L, Tscherner M, & K Kuchler (2017). Immunological identification of fungal species. **Methods Mol Biol.** 1508:339-359.

43. Kuchler* K, Jenull S, Shivarathri R, & N Chauhan* (2016). Fungal KATs/KDACs: A New Highway to Better Antifungal Drugs? **PLoS Pathog.** 12(11):e1005938. doi: 10.1371/journal.ppat.1005938 *(*corresponding authors)*

***Reviews, Book Chapters & Special Journal Issues** (without peer-review)*

44. Tierney, L., K. Tyc, E. Klipp & K. Kuchler (2013). Systems Biology to Understand Fungal Virulence. In *Mycota Vol. XII:* Human Fungal Pathogens, 2nd Ed. (O.Kurzai, Ed.)

Patents

2001 "Improved yeast strain". DSM (formerly Gist-Brocades), European Patent as *Inventor* with Peter Piper and Rutger van Rooijen filed by Gist-Brocades. European Patent Office No. 98201094.4-2105

2005 "Method for detoxification of mycotoxins". European Patent as *Co-Inventor* with Gerhard Adam and Josef Glössl (BOKU Vienna) and others filed by AWS. European Patent Office No. 03450194.0- Poppenberger, B., Adam, G., Berthiller, F., Krska, R., Kuchler, K., Luschnig, C., Glößl, J., Lucyshyn, D., Schumacher, R., and Sieberer, T., (2005) Method for detoxification of mycotoxins. World wide patent *W02005021740-2005-03-1*

2016 "Inhibitors of CBLB as Antifungal Agents". Inventors Gearld Wirnsberger, Joseph Penninger, Florian Zwolanek, Karl Kuchler. Patent application #EP16173740

10 Most Important Career Publications (as first or corresponding author)

Overall, more than **140 publications** listed in *ISI Web of Knowledge*, including papers in peer-reviewed journals, reviews, book chapters; editor of several books or special journal issues. More than **130 invited talks** at international meetings, conferences and university institutions. The cumulative impact factor of all publications is currently exceeding **800.** Based on *Google Scholar,* scientific publications received more than **8700** citations, with a current life-time Hirsch **h Index** of **52.**

1. **Kuchler, K**., R. Sterne, & J. Thorner (1989). *Saccharomyces cerevisiae STE6* gene product: A novel pathway for protein export in eukaryotic cells. EMBO J 8: 3973-3985
2. Piper, P., Y. Mahé, S. Thompson, R. Pandjaitan,C. Holyoak, R. Egner, M. Mühlbauer, P. Coote, & **K. Kuchler** (1998). The Pdr12 ABC transporter is required for the development of weak organic acid resistance in yeast. **EMBO J** 17: 4257-4265
3. Egner, R., F. E. Rosenthal, N. Kralli, D. Sanglard & **K. Kuchler** (1998). Genetic separation of FK506 susceptibility and drug transport in the Pdr5 ABC drug resistance transporter. **Mol Biol Cell** 9: 523-543
4. Kren, A., Y.M. Mamnun, B. Bauer, C. Schüller, H. Wolfger, C. Gregori, K Hatzixanthis, M. Mollapour, P. Piper & **K. Kuchler** (2003). War1p, a novel transcription factor controling weak acid stress response in yeast. **Mol Cell Biol** 23: 1775-1785
5. Hnisz, D., O. Majer, I.E. Frohner, V. Komnenovic, & **K. Kuchler** (2010). The Set3/Hos2 histone deacetylase complex attenuates cAMP/PKA signaling to regulate morphogenesis and virulence of C. albicans. **PLoS Pathogens** 13: e1000889doi: 10.1371
6. Tierney, L., J. Linde, S. Müller, S. Brunke, B. Hube, R. Guthke& **K. Kuchler** (2012). Parallel RNA-Seq reveals novel interspecies gene regulatory networks of *C. albicans* invading innate immune cells. **Frontiers Microbiol** 3: 85, Epub 2012 Mar 12
7. Majer, O., Bourgeois, C., F. Zwolanek, M. Mack, C. Lassing, D. Kerjaschki, M. Müller & **K. Kuchler** (2012). Type I interferon signaling promotes fatal immunopathology through the recruitment of inflammatory monocytes and neutrophils. **PLoS Pathogens** 8: e1002811
8. Schwarzmüller, T., B. Ma, M. Tscherner, F. Istel, E.Hiller, S. Brunke, L. Ames, A. Firon, B. Green,' V. Cabral, M. Marcet-Houben' I.D. Jacobsen, J. Quintin, K. Seider, I. Frohner, H. Jungwirth, W. Glaser, D. Ferrandon, S. Rupp, C. D'Enfert, B. Cormack, K. Haynes & **K. Kuchler** (2014). Systematic phenotyping of a genome-scale *C. glabrata* deletion collection reveals novel antifungal drug tolerance genes. **PLoS Pathogens,** 10: e1004211. doi: 10.1371/journal.ppat.1004211. eCollection 2014 Jun
9. Zwolanek, F., M. Riedelberger, V. Stolz, W. Ellmeier & **K. Kuchler** (2015). The non-receptor tyrosine kinase TEC controls fungal virulence by activating the caspase-8 inflammasome. **PLoS Pathogens**. 10:e1004525. doi: 10.1371/journal.ppat.1004525
10. Wirnsberger* G., F. Zwolanek*, Asaoka T, Kozieradzki I, Tortola L, RA Wimmer, F Fresser, G Baier, WY Langdon, A Kavirayani, F Ikeda, **K. Kuchler*** & JM. Penninger* (2016). The E3-ubiquitin-ligase Cbl-b controls antifungal immune responses. **Nature Medicine** 22:915-23. doi: 10.1038/nm.4134. Epub 2016 Jul 18 *(*Equal first & equal corresponding authors)*