

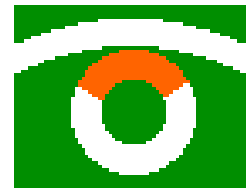


**Veterinärmedizinische Universität Wien**

## **Publikationsliste**

**2004-2005**

**Institut für Tierzucht und Genetik**



mit dem

**Lehrstuhl für Tierzucht und Genetik (O.Univ.Prof. DDr. DI G. Brem)**

und dem

**Lehrstuhl für Veterinärmedizinische Biotechnologie und  
Molekulargenetik (O.Univ.Prof. Dr. M. Müller)**

Vorstand:

**O.Univ.Prof. Dr.**

**Mathias Müller**

**in Kollaboration mit**



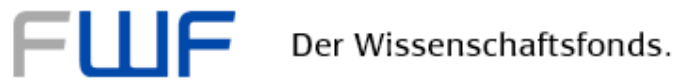
**Universität für Bodenkultur Wien**

**Interuniversitäres Department  
für Agarbiotechnologie, IFA Tulln  
mit dem Institut Biotechnologie in der Tierproduktion  
(Leitung: O.Univ.Prof. Dr. Mathias Müller)**



**Ludwig Boltzmann Institut für Immuno-, Zyto- und  
molekulargenetische Forschung  
(Leitung: O.Univ.Prof. DDr. DI G. Brem)**

# Projekt-Förderung



Wiener Wissenschafts-, Forschungs- und Technologiefonds



EC fünftes und sechstes Rahmenprogramm

**Profillinienförderung der Veterinärmedizinischen  
Universität Wien**

# Publikationen 2005

Im Berichtsjahr 2005 sind 32 Publikationen erschienen oder zum Druck akzeptiert, die im Journal Citation Reports® gelistet sind und gemäß 2004 JCR Science Edition einen Gesamt-Impact-Factor von 129,394 ergeben. Dabei stammen 79,055 Impact-Factor (IF) Punkte aus 20 Arbeiten („Full-Paper“) und 1 Abstract (0,92 IF), die unter massgeblicher Beteiligung des Instituts (Erst- und/oder Letztautor) veröffentlicht wurden. 49,419 IF Punkte (11 „Full-Paper“) resultieren aus nationalen und internationalen Kollaborationen mit Beteiligung von Mitarbeitern der Institute.

## ‘Full papers’ in ‘peer-reviewed’ Journalen gelistet im Journal Citation Reports® 2004

1. Aghaallaei, N., Bajoghli, B., Walter, I., and Czerny, T. (2005). Duplicated members of the Groucho/Tle gene family in fish. *Dev Dyn* 234, 143-150.
2. Bajoghli, B., Aghaallaei, N., and Czerny, T. (2005). Groucho corepressor proteins regulate otic vesicle outgrowth. *Dev Dyn* 233, 760-771.
3. Catania, F., and Schlotterer, C. (2005). Non-African origin of a local beneficial mutation in *D. melanogaster*. *Mol Biol Evol* 22, 265-272.
4. Decker, T., Müller, M., and Stockinger, S. (2005). The Yin and Yang of type I IFN in bacterial infection. *Nat Rev Immunol* 5, 675-687.
5. Dieringer, D., Nolte, V., and Schlotterer, C. (2005). Population structure in African *Drosophila melanogaster* revealed by microsatellite analysis. *Mol Ecol* 14, 563-573.
6. Dierkes, P., Heg, D., Taborsky, M., Skubic, E., and Achmann, R. (2005). Genetic relatedness in groups is sex-specific and declines with age of helpers in a cooperatively breeding cichlid. *Ecol Lett* 8 in press.
7. Dierkes, P., Taborsky, M., and Achmann, R. (2005). Multiple paternity in a cooperatively breeding fish, the Princess of Burundi, *Neolamprologus pulcher*. *Behav Ecol Sociobiol* in press.
8. Drögemüller, C., Kuiper, H., Spötter, A., Martins-Wess, F., Williams, J. L., Lassnig, C., Distl, O., Müller, M., and Leeb, T. (2005). Assignment of the bovine TYK2 and PDE4A genes to bovine chromosome 7q15 by fluorescence in situ hybridization and radiation hybrid mapping. *Cytogenet Genome Res* 108, 363.

9. Gemeiner, M., Miller, I., Müller, M., Radwan, M., and Strobl, B. (2005). Contribution of cell culture additives to the two-dimensional protein patterns of mouse macrophages. *Electrophoresis*, accepted.
10. Gibert, J. M., Marcellini, S., David, J. R., Schlotterer, C., and Simpson, P. (2005). A major bristle QTL from a selected population of *Drosophila* uncovers the zinc-finger transcription factor *Poils-au-dos*, a repressor of *achaete-scute*. *Dev Biol.* 288, 194-205.
11. Grosse-Hovest, L., Wick, W., Minoia, R., Weller, M., Rammensee, H. G., Brem, G., and Jung, G. (2005). Supraagonistic, bispecific single-chain antibody purified from the serum of cloned, transgenic cows induces T-cell-mediated killing of glioblastoma cells in vitro and in vivo. *Int J Cancer* 117, 1060-1064.
12. Haase, B., Schlotterer, C., Hundrieser, M. E., Kuiper, H., Distl, O., Topfer-Petersen, E., and Leeb, T. (2005). Evolution of the spermadhesin gene family. *Gene* 352, 20-29.
13. Havlicek, V., Wetscher, F., Huber, T., Brem, G., Müller, M., and Besenfelder, U. (2005). In vivo culture of IVM/IVF embryos in bovine oviducts by transvaginal endoscopy. *J Vet Med A* 52, 94-98.
14. Klymiuk, N., Müller, M., Brem, G., and Aigner, B. (2005). Phylogeny, recombination and expression of porcine endogenous retrovirus g2 nucleotide sequences. *J Gen Virol* accepted.
15. Kolbe, T., and Holtz, W. (2005). Differences in proteinase digestibility of the zona pellucida of in vivo and in vitro derived porcine oocytes and embryos. *Theriogenology* 63, 1695-1705.
16. Krametter-Frötscher, R., Loitsch, A., Möstl, K., Sommerfeld-Stur, I., and Baumgartner, W. (2005). Seroprävalenz von Border Disease und Boviner Virusdiarrhö bei Schafen und Ziegen in ausgewählten Regionen Österreichs. *Wien Tierarz Monats* 92, 238-244.
17. Kuhne, S., Schroeder, C., Holmquist, G., Wolf, G., Horner, S., Brem, G., and Ballagi, A. (2005). Detection of bovine viral diarrhoea virus infected cattle - testing tissue samples derived from ear tagging using an e capture ELISA. *J Vet Med B Infect Dis Vet Public Health* 52, 272-277.
18. Lassnig, C., Sanchez, C. M., Egerbacher, M., Walter, I., Majer, S., Kolbe, T., Pallares, P., Enjuanes, L., and Müller, M. (2005). Development of a transgenic mouse model susceptible to human coronavirus 229E. *Proc Natl Acad Sci USA* 102, 8275-8280.

19. Lassnig, C., Kolb, A., Strobl, B., Enjuanes, L., and Müller, M. (2005). Studying human pathogens in animal models: fine tuning the humanized mouse. *Transgenic Res* 14, 803-806.
20. Muir, G., and Schlotterer, C. (2005). Evidence for shared ancestral polymorphism rather than recurrent gene flow at microsatellite loci differentiating two hybridizing oaks (*Quercus* spp.). *Mol Ecol* 14, 549-561.
21. Rennhofer, M., Benetka, V., Sommerfeld-Stur, I., and Möstl, K. (2005). Epidemiological investigations on coronavirus infections in dogs and cats in an animal shelter. *Wien Tierarz Monats* 92, 21-27.
22. Revilla-Fernandez, S., Wallner, B., Truschner, F., Benczak, A., Brem, G., Schmoll, F., Müller, M., and Steinborn, R. (2005). The use of endogenous and an exogenous reference RNAs for qualitative and quantitative detection of PRRSV in porcine semen. *J Virol Methods* 126, 21-30.
23. Schlotterer, C., Reiss, M., Schneider, A., and Imhof, M. (2005). Similar mating and sperm displacement patterns in two highly divergent *D. simulans* populations from Africa and Europe. *Mol Ecol* 14, 1511-1515.
24. Schlotterer, C., Neumeier, H., Sousa, C., and Nolte, V. (2005). Highly structured Asian *D. melanogaster* populations provide an effective tool for hitchhiking mapping. *Genetics*, in press.
25. Schofl, G., Catania, F., Nolte, V., and Schlotterer, C. (2005). African Sequence Variation Accounts for Most of the Sequence Polymorphism in Non-African *Drosophila melanogaster*. *Genetics* 170, 1701-1709.
26. Strobl, B., Bubic, I., Bruns, U., Steinborn, R., Lajko, R., Kolbe, T., Karaghiosoff, M., Kalinke, U., Jonjic, S., and Muller, M. (2005). Novel Functions of Tyrosine Kinase 2 in the Antiviral Defense against Murine Cytomegalovirus. *J Immunol* 175, 4000-4008.
27. Vidoni, B., Sommerfeld-Stur, I., and Eisenmenger, E. (2005). Diagnostische und züchterische Aspekte der Patellaluxation bei Klein- und Zwerghunderassen in Österreich. *Wien Tierarz Monats* 92, 2-4.
28. Vogl, C., Sanchez-Cabo, F., Stocker, G., Hubbard, S., Wolkenhauer, O., and Trajanoski, Z. (2005). A fully Bayesian model to cluster gene-expression profiles. *Bioinformatics* 21 Suppl 2, ii130-ii136.
29. Volopich, S., Benetka, V., Schwendenwein, I., Mostl, K., Sommerfeld-Stur, I., and Nell, B. (2005). Cytologic findings, and feline herpesvirus DNA and *Chlamydia felis* antigen detection rates in normal cats and cats with conjunctival and corneal lesions. *Vet Ophthalmol* 8, 25-32.

30. Wetscher, F., Havlicek, V., Huber, T., Müller, M., Brem, G., and Besenfelder, U. (2005). Effect of morphological-structural properties of transferred embryonic stages on tubal migration: implications for in vivo culture in the bovine oviduct. *Theriogenology* 64, 41-44.
31. Wetscher, F., Havlicek, V., Huber, T., Gilles, M., Tesfaye, D., Griese, J., Wimmers, K., Schellander, K., Müller, M., Brem, G., and Besenfelder, U. (2005). Intrafallopian transfer of gametes and early stage embryos for in vivo culture in cattle. *Theriogenology* 64, 30-40.

**‘Abstracts’ in ‘peer-reviewed’ Journalen gelistet im Journal Citation Reports® 2004**

1. Havlicek, V., Wetscher, T., Huber, T., Gilles, M., Tesfaye, D., Griese, J., Rings, F., Müller, H., Schellander, K., Brem, G., and Besenfelder, U. (2005). In vivo-culture of bovine embryos: transfer of semen pre-incubated oocytes, zygotes and 4 to 8 cell stage embryos into the bovine oviduct. *Reprod Fert Dev* 17 (1,2), 231.

## **Publikationen 2004**

Im Berichtsjahr 2004 sind 38 Publikationen erschienen, die im Journal Citation Reports® gelistet sind und gemäß 2004 JCR Science Edition einen Gesamt-IF von 189,247 ergeben. Dabei stammen 84,797 IF Punkte aus 20 Arbeiten (‘Full-Paper’), die unter massgeblicher Beteiligung des Instituts (Erst- und/oder Letztautor) veröffentlicht wurden. 104,45 IF Punkte (17 ‘Full-Paper’ mit Gesamt-IF von 103,53 und 1 Abstract mit 0,92 IF) resultieren aus nationalen und internationalen Kollaborationen mit Beteiligung von Mitarbeitern der Institute.

**‘Full papers’ in ‘peer-reviewed’ Journalen gelistet im Journal Citation Reports® 2004**

1. Achmann, R., Curik, I., Dovc, P., Kavar, T., Bodo, I., Habe, F., Marti, E., Soelkner, J., and Brem, G. (2004). Microsatellite diversity, population subdivision and gene flow in Lipizzan horse. *Anim Genet* 35, 285-292.
2. Bajoghli, B., Aghaallaei, N., Heimbucher, T., and Czerny, T. (2004). An artificial promoter construct for heat-inducible misexpression during fish embryogenesis. *Dev Biol* 271, 416-430.

3. Binder, R., Palme, R., Sommerfeld-Stur, I., Baumgartner, J., Niebuhr, K., Zaludik, K., Bartussek, K., Waiblinger, S., Reifinger, M., Küber-Heiss, A., et al. (2004). Tierschutz in Österreich: Grundkonzepte der Tierethik, rechtliche Rahmenbedingungen und ausgewählte Schwerpunkte der Tierschutzforschung. *Wien Tierarz Monats* 91, 44-58.
4. Brem, G. (2004). Verfahren und Möglichkeiten der Herkunftssicherung bei Lebensmitteln: Genotypisierung von Nutztierpopulationen als innovativer Beitrag zur Lebensmittelsicherheit. *Dtsch Tierarztl Wochenschr* 111, 273-276.
5. Burger, P. A., Steinborn, R., Walzer, C., Petit, T., Müller, M., and Schwarzenberger, F. (2004). Analysis of the mitochondrial genome of cheetahs (*Acinonyx jubatus*) with neurodegenerative disease. *Gene* 338, 111-119.
6. Catania, F., Kauer, M. O., Daborn, P. J., Yen, J. L., Ffrench-Constant, R. H., and Schlotterer, C. (2004). World-wide survey of an Accord insertion and its association with DDT resistance in *Drosophila melanogaster*. *Mol Ecol* 13, 2491-2504.
7. Catania, F., and Schlotterer, C. (2005). Non-African Origin of a Local Beneficial Mutation in *D. melanogaster*. *Mol Biol Evol* 22, 265-272.
8. de Hooge, A. S., van de Loo, F. A., Koenders, M. I., Bennink, M. B., Arntz, O. J., Kolbe, T., and van den Berg, W. B. (2004). Local activation of STAT-1 and STAT-3 in the inflamed synovium during zymosan-induced arthritis: exacerbation of joint inflammation in STAT-1 gene-knockout mice. *Arthritis Rheum* 50, 2014-2023.
9. Drögemüller, C., Kuiper, H., Spötter, A., Martins-Wess, F., Williams, J. L., Lassnig, C., Distl, O., Müller, M., and Leeb, T. (2005). Assignment of the bovine TYK2 and PDE4A genes to bovine chromosome 7q15 by fluorescence in situ hybridization and radiation hybrid mapping. *Cytogenet Genome Res* 108, 363.
10. Grosse-Hovest, L., Müller, S., Minoia, R., Wolf, E., Zakhartchenko, V., Wenigerkind, H., Lassnig, C., Besenfelder, U., Müller, M., Lytton, S. D., et al. (2004). Cloned-transgenic farm animals produce a bispecific antibody for T-cell mediated tumor cell killing. *Proc Natl Acad Sci USA* 101, 6858-6863.
11. Harr, B., and Schlotterer, C. (2004). Patterns of microsatellite variability in the *Drosophila melanogaster* complex. *Genetica* 120, 71-77.

12. Hiendleder, S., Mund, C., Reichenbach, H., Wenigerkind, H., Brem, G., Zakhartchenko, V., Lyko, F., and Wolf, E. (2004). Tissue-specific elevated genomic cytosine methylation levels are associated with an overgrowth phenotype of bovine fetuses derived by in vitro techniques. *Biol Reprod* 71, 217-223.
13. Hiendleder, S., Prella, K., Brüggerhoff, K., Reichenbach, H.-D., Wenigerkind, H., Bebbere, D., Stojkovic, M., Müller, S., Brem, G., Zakhartchenko, V., and Wolf, E. (2004). Nuclear-cytoplasmic interactions affect in utero developmental capacity, phenotype and cellular metabolism of bovine nuclear transfer fetuses. *Biol Reprod* 70, 1196-1205.
14. Hofmann, A., Zakhartchenko, V., Weppert, M., Sebald, H., Wenigerkind, H., Brem, G., Wolf, E., and Pfeifer, A. (2004). Generation of transgenic cattle by lentiviral gene transfer into oocytes. *Biol Reprod* 71, 405-409.
15. Huttunen, S., Aspi, J., Hoikkala, A., and Schlötterer, C. (2004). QTL analysis of variation in male courtship song characters in *Drosophila virilis*. *Heredity* 92, 263-269.
16. Kauer, M. O., and Schlötterer, C. (2004). An analysis of genetic differentiation among assortatively mating *Drosophila melanogaster* in Zimbabwe. *J Evol Biol* 17, 493-500.
17. Kuittinen, H., de Haan, A. A., Vogl, C., Oikarinen, S., Leppala, J., Koch, M., Mitchell-Olds, T., Langley, C. H., and Savolainen, O. (2004). Comparing the linkage maps of the close relatives *Arabidopsis lyrata* and *A. thaliana*. *Genetics* 168, 1575-1584.
18. Lang, C., Sipos, W., Dürwald, R., Herwig, V., Sommerfeld-Stur, I., Schuh, M., and Schmoll, F. (2004). Abklärung des Vorkommens des Schweineinfluenzavirus A-Subtyps H1N2 in österreichischen Betrieben. *Wien Tierarz Monats* 91, 297-308.
19. Leeb, T., Martins-Wess, F., Kuiper, H., Lassnig, C., Distl, O., and Müller, M. (2004). Molecular characterisation of the porcine TYK2 gene on SSC 2q1.3—>q2.1. *Cytogenet Genome Res* 107, 103-107.
20. Leeb, T., and Müller, M. (2004). Comparative human-mouse-rat sequence analysis of the ICAM gene cluster on HSA 19p13.2 and a 185 kb porcine region from SSC 2q. *Gene* 343, 239-244.
21. Maritano, D., Sugrue, M., Tininini, S., Dewilde, S., Strobl, B., Fu, X.-P., Murray-Tait, V., and Poli, V. (2004). Non-redundant functions of STAT3a and STAT3b revealed by specific ablation of either isoform. *Nat Immunol* 5, 401-409.

22. Muir, G., Lowe, A. J., Fleming, C. C., and Vogl, C. (2004). High Nuclear Genetic Diversity, High Levels of Outcrossing and Low Differentiation Among Remnant Populations of *Quercus petraea* at the Margin of its Range in Ireland. *Ann Bot* 93, 691-697.
23. Myburg, A., Vogl, C., Griffin, A. R., Sederoff, R. R., and Whetten, R. W. (2004). Genetics of postzygotic isolation in eucalyptus: whole-genome analysis of barriers to introgression in a wide interspecific cross of *E. grandis* and *E. Globulus*. *Genetics* 166, 1405-1418.
24. Orsini, L., Huttunen, S., and Schlotterer, C. (2004). A multilocus microsatellite phylogeny of the *Drosophila virilis* group. *Heredity* 93, 161-165.
25. Puelles, E., Annino, A., Tuorto, F., Usiello, A., Acampora, D., Czerny, T., Brodski, C., Ang, S. L., Wurst, W., and Simeone, A. (2004). *Otx2* regulates the extent, identity and fate of neuronal progenitor domains in the ventral midbrain. *Development* 131, 2037-2048.
26. Raudsepp, T., Santani, A., Wallner, B., Kata, S. R., Ren, C., Zhang, H.-B., Womack, J. E., Skow, L. C., and Chowdhary, B. P. (2004). A detailed physical map of the horse Y chromosome. *Proc Natl Acad Sci USA* 101, 9321-9326.
27. Schleicher, U., Mattner, J., Blos, M., Schindler, H., Röllinghoff, M., Karaghiosoff, M., Müller, M., Werner-Felmayer, G., and Bogdan, C. (2004). Control of *Leishmania major* in the absence of Tyk2 kinase. *Eur J Immunol* 34, 519-529.
28. Schlötterer, C. (2004). The evolution of molecular markers-just a matter of fashion? *Nat Rev Genet* 5, 63-69.
29. Schlötterer, C., Kauer, M., and Dieringer, D. (2004). Allele excess at neutrally evolving microsatellites and the implications for tests of neutrality. *Proc R Soc Lond B Biol Sci* 271, 869-874.
30. Schofl, G., and Schlotterer, C. (2004). Patterns of microsatellite variability among X chromosomes and autosomes indicate a high frequency of beneficial mutations in non-African *D. simulans*. *Mol Biol Evol* 21, 1384-1390.
31. Stockinger, S., Reutterer, B., Schaljo, B., Schellack, C., Brunner, S., Materna, T., Yamamoto, M., Akira, S., Taniguchi, T., Murray, P. J., et al. (2004). IFN regulatory factor 3-dependent induction of type I IFNs by intracellular bacteria is mediated by a TLR- and Nod2-independent mechanism. *J Immunol* 173, 7416-7425.

32. Stoiber, D., Kovacic, B., Schuster, C., Schellack, C., Karaghiosoff, M., Kreibich, R., Weisz, E., Artwohl, M., Kleine, O. C., Müller, M., et al. (2004). TYK2 is a key regulator of the surveillance of B lymphoid tumors. *J Clin Invest* 114, 1650-1658.
33. Strasser, P., Unger, U., Strobl, B., Vilas, U., and Vlasek, R. (2004). Recombinant viral sialate-O-acetyltransferases. *Glycoconjugate J* 20, 551-561.
34. Teppner, I., Aigner, B., Schreiner, E., Müller, M., and Windisch, M. (2004). Polymorphic microsatellite markers in the outbred CFW and ICR stocks for the generation of speed congenic mice on C57BL/6 background. *Lab Anim* 38, 406-412.
35. Tsiligianni, T., Saratsi, A., Besenfelder, U., Anastasiadis, A., Vainas, E., Saratsis, P., and G., B. (2004). The use of cytological examination of vaginal smears (CEVS) in the selection of rabbits for superovulation. *Theriogenology* 61, 989-995.
36. Wallner, B., Piumi, F., Brem, G., Müller, M., and Achmann, R. (2004). Isolation of Y chromosome-specific microsatellites in the horse and cross-specific amplification in the genus *Equus*. *J Hered* 95, 158-164.
37. Werner, F. A., Durstewitz, G., Habermann, F. A., Thaller, G., Krame, W., Kollers, S., Buitkamp, J., Georges, M., Brem, G., Mosner, J., and Fries, R. (2004). Detection and characterization of SNPs useful for identity control and parentage testing in major European dairy breeds. *Anim Genet* 35, 44-49.

**‘Abstracts’ in ‘peer-reviewed’ Journalen gelistet im Journal Citation Reports® 2004**

1. Hiendleder, S., Reichenbach, H.-D., Wenigerkind, H., Bebbere, D., Brem, G., Zakhartchenko, V., and Wolf, E. (2004). Maternal origin of oocytes affects in utero developmental capacity and phenotype of bovine nuclear transfer fetuses. *Reprod Fertil Dev* 16(1,2), 142.