

CURRICULUM VITAE
Terje RAUDSEPP, Ph.D

PRESENT POSITION AND ADDRESS

Title: Assistant Professor
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EDUCATION

<u>Degree</u>	<u>Conferring Institution</u>	<u>Field of Study</u>	
Ph.D	The Swedish University of Agricultural Sciences	Molecular Genetics	1999
B.S./MSc.	Tartu University, Estonia	Genetics & Cytology	1982

PROFESSIONAL EXPERIENCE AND ACADEMIC APPOINTMENTS

<u>Year</u>	<u>Position & Institution</u>
Sept. 2005 to present	<i>Assistant Professor</i> Department of Veterinary Integrative BioSciences (VIBS), Texas A & M University, College Station, TX 77 843, USA
Feb. 2001- Sept.2005	<i>Assistant Research Scientist</i> Department of Veterinary Anatomy & Public Health, Texas A & M University, College Station, TX 77 843, USA
May 1999 – Jan. 2001	<i>Assistant Research Professor</i> Dept. of Animal Breeding and Genetics, The Royal Veterinary & Agricultural University, Copenhagen, Denmark
Feb.1999-Apr.1999	<i>Guest Scientist</i> Dept. of Animal Breeding and Genetics, The Royal Veterinary & Agricultural University, Copenhagen, Denmark (<i>Recipient of NorFA scholarship for three months</i>)
Feb. 1995- Jan.1999	Dept. of Animal Breeding and Genetics, Swedish University of Agricultural Sciences, Uppsala, Sweden (<i>Recipient of the Swedish Institute's International scholarship for two years</i>)
1994-1995	<i>Research Associate</i> Laboratory of Molecular Genetics, Institute of Chemical & Biophysics, Estonian Academy of Sciences, Tallinn, Estonia.
1982-1994	<i>Jr. Res. Associate</i> Dept. of Animal Genetics, Institute of Experimental Biology, Estonian Academy of Sciences, Tallinn, Estonia.

CLINICAL SPECIALITY/ BOARD CERTIFICATION

None

AWARDS AND HONORS

- Helsinki University (Finland) Scholarship Award, August 1994. (Project: *Fluorescent in situ hybridization on human metaphase chromosomes*).
- The Swedish Institute (Stockholm Sweden) Scholarship Award, 1995-1997. (Project: *Gene mapping in farm animals*).
- The Nordic Academy of Training Researchers, NorFA Scholarship Award, Feb. 1999 - Apr. 1999. (Project: *Heterologous FISH mapping between human, pig and horse*).
- Cold Spring Harbor Laboratory (USA) Travel Award, March 2003. (Course: *Aquiring and Analyzing Genomic Sequence Data*).

EDITORIAL BOARDS

None

GRANT REVIEW EXPERIENCE

- 2007 Ad hoc external reviewer for Estonian Science Foundation.
- 2007 Ad hoc grant reviewer, National Science Foundation, Population and Evolutionary Processes cluster.
- 2008 Ad hoc external reviewer for Estonian Science Foundation.

TEACHING EXPERIENCE**The Swedish University of Agricultural Sciences, Uppsala, Sweden**

Participated in several undergraduate and graduate courses where my responsibilities were to prepare laboratory protocols and conduct actual lab training in cytogenetics and physical gene mapping.

- Graduate course: "*Genome Analysis*", 1996, 1997, 1999
- Undergraduate course: "*Molecular Cytogenetics*", 1997

The Royal Veterinary University, Copenhagen, Denmark

Lectures and laboratory training in molecular cytogenetics and Fluorescence *In Situ* Hybridization (FISH).

- Graduate course "*Genome Analysis*", 2001

Texas A & M University, College Station, USA

Responsibilities: developing teaching material and teaching undergraduate (Biomedical Genetics) and graduate (Cytogenetics) courses. While the undergraduate course has been solely my responsibility, the graduate course is co-taught with Drs. Stelly and Chowdhary.

Undergraduate courses

<u>Course Title</u>	<u>Institution</u>	<u>Credit Hr</u>	<u>% of Course</u>	<u>Dates</u>
GENE/BIMS320	TAMU	3	100	Fall 2007
GENE/BIMS320	TAMU	3	100	Fall 2008

Graduate courses

<u>Course Title</u>	<u>Institution</u>	<u>Credit Hr</u>	<u>% of Course</u>	<u>Dates</u>
GENE620	TAMU	3	30	Spring 2006
GENE620	TAMU	3	50	Spring 2007
GENE620	TAMU	3	50	Spring 2008

Graduate Advisor or Member of Graduate Committees

Name	Degree	Institution	Advisor/Committee	Dates
Candice Brinkmeyer				
Langford	Ph.D	TAMU	Committee Member	2003-2006
Keith Durkin	Ph.D	TAMU	Committee Member	2003-present
Nandina Paria	Ph.D	TAMU	Advisor	2006-present
Jixin Wang	Ph.D	TAMU	Committee Member	2008-present
Brian W. Davis	MSc	TAMU	Committee Member	2008-present
Melissa Worthy	MSc	TAMU	Committee Member	2006-2007

Graduate Student Research Topics (as the Main Advisor)

Nandina Paria Discovery of candidate genes for stallion fertility from the horse Y chromosome.

Recognition of Graduate Students

Nandina Paria

- 2nd place for oral presentation “Study of Y-linked Candidate Genes for Male Fertility in Horses”, CVM-GSA Research Symposium, Texas A&M University, College Station, Texas, April 3, 2008.
- Best Graduate Student Platform Presentation Award for “Study of Y-linked Candidate Genes for Male Fertility in Horses”, 35th Annual Meeting of Texas Genetics Society, College Station, Texas, March 27-29, 2008.
- Session Winner and 2nd place in Genetics Taxonomy for oral presentation “The Horse Y Chromosome and Stallion Fertility”, Student Research Week, 2008, Texas A&M University, March 25-28, 2008.
- Neal A. Jorgensen Travel Award for oral presentation “Identification of Y-linked Candidate Genes for Male Fertility in Horses” Plant & Animal Genome XVI, San Diego, California, January 12-16, 2008.
- Honorable Mention Award for oral presentation “Isolation and Expression Analysis of Y Chromosome Gene in Horses”, College of Veterinary Medicine-Graduate Student Association Research Symposium, Texas A&M University, April 23, 2007.
- CVM-GSA 2008-2009 Travel Award (\$1250.00) to attend Plant & Animal Genome Conference in San Diego, CA, USA.

Undergraduate and graduate training - laboratory training and introduction to scientific research

Name	Students category	Dates
Valerie Reiss	graduate rotation	Spring 2006
Amy Ploy Jeffries	undergraduate 485	Spring 2007
Josie Hilley	graduate rotation	Fall 2008
Lauren Ritchie	graduate rotation	Fall 2008

Postdoctoral Fellows

Ivan Leyva-Baca – 2007-2008 Search for candidate genes and mutations associated with equine cryptorchidism. Generation of a preliminary gene catalogue for sex and reproduction related genes in horses.

TEACHING PROGRAMS

None

RESEARCH/ SCHOLARY ACTIVITIES

- 2000 Co-Investigator, Danish Agricultural & Veterinary Research Council (SJVF), #9901545, Genome Analysis in the Horse: expanding on the created resource of radiation hybrid panel and moving towards applicability of the gene map, 2000-2003, 1,188,853 DKK.
- 2000 Co-Investigator, Danish Natural Sciences Research Council (SNF). #9901975, Comparative genome analysis in Perissodactyla: an order comprising endangered species and demonstrating karyotype evolution peculiarities, 2000-2003, 300,000 DDK.
- 2002 Co-Investigator, Schubot Center. Identification of the genetic cause for Chondrodystrophy in highly endangered California Condor, 2002-2004, \$10,000 and \$12,500.
- 2003 Co-Investigator, American Quarter Horse Association (AQHA), Identifying molecular causes of stallion infertility for improved diagnostics and prevention Projects #3008 & #9032, 2003-2005, \$90,288.
- 2005 Co-Investigator, Texas Equine Research Fund (TERF), Whole genome cDNA microarray for improved equine health and fertility, 2005-2007, \$50,000.
- 2005 Consortium proposal, Morris Animal Foundation, Horse Genomics: Linear mapping and microarray development, 2005-2008, \$300,000.
- 2005 Equine Genomics Group proposal, Link Endowment Fund, Equine Genome Analysis, 2005-2006, \$147,972.
- 2006 Co-Investigator, Canine Health Foundation, Characterizing the Canine Y chromosome: Identifying gene targets for male infertility, 2006-2007, \$96,466.
- 2006 Co-Investigator, Winn Feline Foundation, Targeted gene mapping in gaps of human/feline comparative map, 2006-2007, \$13,700.
- 2006 Co-Investigator, Grayson Jockey Club Research Foundation, Role of Y chromosome factors in regulating stallion fertility, 2006-2008, \$50,000.
- 2007 Co-Investigator, USDA 43.0 Animal Genome, #2006-04801, Integrated physical, functional and comparative maps of cattle, horse and pig Y chromosomes, 2007-2010, \$995,801.
- 2007 Equine Genomics Group proposal, Link Endowment Fund, Equine Genome Analysis, 2007-2008, \$70,000.
- 2007 Principal Investigator, VIBS (Texas A & M) Programmatic Development Grants, Cataloguing Y chromosome genes in horses, 2007, \$20,000.
- 2008 Principal Investigator, VIBS (Texas A & M) Programmatic Development Grants for travel & instrumentation, 2008, \$10,850.
- 2008 Equine Genomics Group proposal, Link Endowment Fund, Equine Genome Analysis, 2008-2009, \$70,000.

BIBLIOGRAPHY**Publications in Refereed Journals**

1. **Raudsepp, T.**, Frönicke, L., Scherthan, H., Gustavsson, I., Chowdhary, B.P. 1996. Zoo-FISH delineates conserved chromosomal segments in horse and man. *Chromosome Res.*, 4, 218-225.
2. Svensson, A.-C., **Raudsepp, T.**, Larsson, C., Di Cristofano, A., Chowdhary, B., La Mantia, G., Rask, L., Andersson, G. 1996. Chromosomal localization and expression of the human endogenous retrovirus ERV9. Ph.D. Thesis, SLU, Uppsala.
3. ISCNH 1997. International System for Cytogenetic Nomenclature of the Domestic Horse. Bowling, A.T., Breen, M., Chowdhary, B.P., Hirota, K., Lear, T., Millon, L., Ponce de Leon, F.A., **Raudsepp, T.** and Stranzinger, G. (Committee...) *Chromosome Res.*, 5, 1-11.
4. Primmer, C., **Raudsepp, T.**, Chowdhary, B.P., Moller, A.P., Ellegren, H. 1997. Low frequency of microsatellites in the avian genome. *Genome Res.*, 471-482.

5. **Raudsepp, T.**, Otte, K., Rozell, B., Chowdhary, B.P. 1997. FISH mapping of the IGF2 gene in horse and donkey - detection of homoeology with HSA11. *Mamm. Genome*, 8, 569-572.
6. Chowdhary, B.P., **Raudsepp, T.**, Frönicke, L., Scherthan, H. 1998. Emerging patterns of comparative genome organization in some mammalian species as revealed by Zoo-FISH. *Genome Res.*, 8, 577-589.
7. Chaudhary, R., **Raudsepp, T.**, Guan, X.-Y., Zhang, H., Chowdhary, B.P. 1998. Zoo-FISH using microdissected arm specific paints for HSA2, 5, 16, and 19 refines known homology with pig and horse chromosomes. *Mamm. Genome*, 9, 44-49.
8. Fridolfsson, A.-K., Cheng, H., Copeland, N.G., Jenkins, N.A., Liu, H.-C., **Raudsepp, T.**, Woodage, T., Chowdhary, B., Halverson, J. and Ellegren, H. 1998. Evolution of the avian sex chromosomes from an ancestral pair of autosomes. *Proc. Natl. Acad. Sci. USA* 95, 8147-8152.
9. Chaudhary, R., Kijas, J., **Raudsepp, T.**, Guan, X.-Y., Zhang, H., Chowdhary, B.P. 1998. Microdissection of pig chromosomes: dissection of whole chromosomes, arms and bands for construction of paints and libraries. *Hereditas* 128, 265-271.
10. Soldatov, N., **Raudsepp, T.**, Chowdhary, B.P. 1998. Repetitive exon 45/46-related sequences of human Ca²⁺ channel alpha 1C subunit gene. *Hum. Hered.* 48, 241-244.
11. **Raudsepp, T.**, Kijas, J., Godard, S., Guérin, G., Andersson, L., Chowdhary, B. P. 1999. Comparison of ECA3 with donkey and human chromosomes using cross species painting and heterologous FISH mapping. *Mamm. Genome* 10, 277-282.
12. Gåfväls, M., Olin, M., Chowdhary, B.P., **Raudsepp, T.**, Andersson, U., Persson, B., Jansson, M., Björkhem, I. and Eggertsen, G. 1999. Structure and chromosomal assignment of the sterol 12 alpha-hydroxylase gene (CYP8B1) in human and mouse: eukaryotic cytochrome P-450 gene devoid introns. *Genomics* 56, 184-196.
13. **Raudsepp, T.** and Chowdhary, B.P. 1999. Construction of chromosome specific paints for meta- and submeta-centric autosomes and the sex chromosomes in horse and their use to detect homologous chromosomal segments in donkey. *Chromosome Res.* 6, 103-114.
14. Chowdhary, B.P. and **Raudsepp, T.** 2000. HSA4 and GGA4: remarkable conservation in spite of 300 Myrs divergence *Genomics* 64, 102-105.
15. **Raudsepp, T.** Christensen K., Chowdhary B.P. 2000. Cytogenetics of donkey chromosomes: nomenclature proposal based on GTG-banded chromosomes and depiction of NORs and telomeric sites. *Chromosome Res.* 8, 659-670.
16. Chowdhary B.P. and **Raudsepp T.** (2001) Chromosome painting in farm, pet and wild animal species. *Methods Cell Sci.* 23 (1-3): 37-55.
17. Mariat, D., Oustry-Vaiman, A., Cribiu, E.P., **Raudsepp, T.**, Chowdhary, B., Guérin, G. (2001) Isolation, characterization and FISH assignments of horse BAC clones containing type I and II markers. *Cytogenet. Cell Genet.* 92, 144-148.
18. Svensson, A.-C., **Raudsepp, T.**, Larsson, C., Di Cristofano, A., Chowdhary, B., La Mantia, D., Rask, L., Andersson, G. (2001) Chromosomal distribution, localization and expression of the human endogenous retrovirus ERV9. *Cytogenet. Cell Genet.* 92, 89-98.
19. Mariat, D., Oustry-Vaiman, A., Cribiu, E.P., **Raudsepp, T.**, Chowdhary, B., Guérin, G. (2001) Isolation, characterization and FISH assignments of horse BAC clones containing type I and II markers. *Cytogenet. Cell Genet.* 92, 144-148.
20. **Raudsepp T.**, Mariat D., Guerin G. Chowdhary B.P. (2001) Comparative FISH mapping of 32 loci reveals new homologous regions between donkey and horse karyotypes. *Cytogenet. Cell Genet.* 94, 180-185.
21. **Raudsepp T.**, Chowdhary B.P. (2001) Correspondence of human chromosomes 9, 12, 15, 16, 19 and 20 with donkey chromosomes refines homology between horse and donkey karyotypes. *Chromosome Res.* 9, 623-629.
22. Chowdhary B.P., **Raudsepp T.**, Honeycutt D, Owens EK, Piumi F, Guérin G, Fredholm M, Matisse TC, Kata SR, Womack JE, Skow LC (2002) Construction of a 5000_{rad} whole genome radiation hybrid panel in the horse and generation of a comprehensive map for ECA11. *Mamm. Genome* 13, 89-94.
23. **Raudsepp T.**, Kata S.R., Piumi F., Swinburne J. Womack J.E., Skow L.C., Chowdhary B.P. (2002) Conservation of gene order between horse and human X chromosomes as evidenced through radiation hybrid mapping. *Genomics* 79, 451-457. **received JOURNAL COVER**
24. **Raudsepp T.**, Lear L.T., Chowdhary B.P. 2002. Comparative mapping in equids: the asine X chromosome is rearranged compared to horse and Hartmann's mountain zebra. *Cytogenet. Genome Res.* 96: 206-209.
25. Santani, A., **Raudsepp, T.**, Chowdhary, B.P. 2002. Interstitial telomeric sites and NORs in Hartmann's zebra (*Equus zebra hartmannae*) chromosomes *Chromosome Res.* 10, 527-534.
26. Giese A, Jude R, Kuiper H, **Raudsepp T**, Piumi F, Schambony A, Guerin G, Chowdhary B.P., Distl O, Topfer-Petersen E, Leeb T. 2002. Molecular characterization of the equine testis-specific protein 1

- (TPX1) and acidic epididymal glycoprotein 2 (AEG2) genes encoding members of the cysteine-rich secretory protein (CRISP) family. *Gene* 16:101-109.
27. **Raudsepp, T.**, Houck, M.L., O'Brien, P.C., Ferguson-Smith, M.A., Ryder, O.A., Chowdhary, B.P. 2002. Cytogenetic analysis of California condor (*Gymnogyps californianus*) chromosomes: comparison with chicken (*Gallus gallus*) macrochromosomes. *Cytogenet. Genome Res. Cytogenet. And Genome Res.* 98, 54-60.
 28. Chowdhary B.P., **Raudsepp T.**, Kata S.R., Goh G., Millon L.V., Allan V., Piumi F., Guerin G., Swinburne J., Binns M., Lear T., Mickelson J., Murray J., Antczak D., Womack J.E., Skow L.C. 2003 The first generation whole genome radiation hybrid map in the horse identifies conserved segments in human and mouse genomes. *Genome Research* 13, 742-751. **received JOURNAL COVER**
 29. Schiöth H.B., **Raudsepp T.**, Ringholm A., Fredriksson R., Takeuchi S., Larhammar D., Chowdhary B.P. 2003. Remarkable synteny conservation of melanocortin receptors (MC1-5R) in chicken, human and other vertebrates. *Genomics* 81, 504-509.
 30. Bryan, T.M., C.A. Abbey, **T. Raudsepp**, B.P. Chowdhary, C.A. Gill, T.L. Blanchard, N.H. Ing and T.H. Welsh, Jr. 2003. Characterization of equine bacterial artificial chromosomes (BACs) relevant to endocrine and immunosystem regulation. *J. Anim. Sci.* 81(Suppl.1):102-103 (Abstract #407).
 31. Lee E-J, **Raudsepp T**, Kata SR, Adelson D, Womack JE, Skow CL, Chowdhary BP. 2003. A 1.4 Mb interval RH map of horse chromosome 17 provides detailed comparison with human and mouse homologues. *Genomics* 83, 203-215.
 32. Cirera S. Jørgensen, C.B., Sawera, M., **Raudsepp, T.**, Chowdhary B.P. and M. Fredholm. 2003 Comparative mapping in the pig: localization of 214 expressed sequence tags. *Mammalian Genome* 14, 405-426.
 33. Ward T.L., Valberg S.J., Lear T.R., Guérin G., Milenkovic D., Swinburne J.E., Binns M., **Raudsepp T**, Skow L., Chowdhary B.P., and Mickelson J.R. (2003). Genetic Mapping of GBE1 and its Association with Glycogen Storage Disease IV in American Quarter Horses. *Cytogenet. Genome Res.* 102, 201-206.
 34. Gustafson A.L., Tallmadge R.L., Ramlachan N., Miller D., Bird H., Antczak D.F., **Raudsepp T.**, Chowdhary B.P., and Skow L.C. (2003). An Ordered BAC Contig Map of the Equine Major Histocompatibility Complex. *Cytogenet. Genome Res.* 102, 189-195.
 35. Jørgensen, C.B., Cirera, S., Anderson, S., Archibald, A., **Raudsepp, T.**, Chowdhary, B.P., Andersson, L., Fredholm, M. 2003. Linkage and comparative mapping of the locus controlling susceptibility towards *E. coli* F4ab/ac diarrhoea in pigs. *Cytogenet. Genome Res.* 102: 157-162.
 36. Takahashi, T., Yawata, M., **Raudsepp, T.**, Lear, T.L., Chowdhary, B.P., Antczak, D.F., Kasahara, M. 2004. Natural killer cell receptors in the horse: evidence for the existence of multiple transcribed LY49 genes. *Eur. J. Immunol.* 34: 1-12.
 37. **Raudsepp, T.**, Lee, E.-J., Kata, S.R., Brinkmeyer, C., Mickelson, J.R., Skow, L.C., Womack, J.E., Chowdhary, B.P. 2004. Exceptional conservation of horse-human gene order on X chromosome revealed by high-resolution radiation hybrid mapping. **PNAS** 101, 2386-2391.
 38. Wagner ML, Goh G, Wu JT, **Raudsepp T**, Morrison LY, Alexander LJ, Skow LC, Chowdhary BP, Mickelson JR. 2004a. Radiation hybrid mapping of 63 previously unreported equine microsatellite loci. *Anim Genet.* 35:159-162.
 39. Wagner ML, Goh G, Wu JT, **Raudsepp T**, Morrison LY, Alexander LJ, Skow LS, Chowdhary BP, Mickelson JR. 2004b. Radiation hybrid mapping of 75 previously unreported equine microsatellite loci. *Anim Genet.* 35:68-71.
 40. Wagner ML, Goh G, Wu JT, Morrison LY, Alexander LJ, **Raudsepp T**, Skow LC, Chowdhary BP, Mickelson JR. 2004c. Sixty-seven new equine microsatellite loci assigned to the equine radiation hybrid map. *Anim. Genet.* 35: 484-486.
 41. Mickelson JR, Wagner ML, Goh G, Wu JT, Morrison LY, Alexander LJ, **Raudsepp T**, Skow LC, Chowdhary BP, Swinburne JE, Binns MM. 2004. Thirty-five new equine microsatellite loci assigned to genetic linkage and radiation hybrid maps. *Anim Genet.* 35: 481-484.
 42. **Raudsepp, T.**, Santani, A., Wallner, B., Kata, S.R., Ren, C., Zhang, H.-B., Womack, J.E., Skow, L.C., Chowdhary, B.P. 2004. A detailed physical map of the horse Y chromosome. **PNAS**, 101, 9321-9326.
 43. Halbert, N.D., **Raudsepp, T.**, Chowdhary, B.P., Derr, J.N. 2004. Conservation genetic analysis of the Texas state bison herd. *J. of Mammalogy*, 85, 924-931.
 44. Gustafson-Seabury, A*., **Raudsepp, T.***, Goh, G., Kata, S.R., Wagner, M.L., Tozaki, T., Mickelson, J.R., Womack, J.E., Skow, L.C., Chowdhary, B.P. 2005. High-resolution RH map of horse chromosome 22 reveals a putative ancestral vertebrate chromosome. *Genomics* 85, 188-200. **received JOURNAL COVER>(*equal contribution).**

45. Momozawa Y, Takeuchi Y, Tozaki T, Kikusui T, Hasegawa T, **Raudsepp T**, Chowdhary BP, Kusunose R, Mori Y. 2005. Sequence, detection of polymorphisms and radiation hybrid mapping of the equine catechol-o-methyltransferase gene. *Anim. Genet.* 36, 190.
46. William J. Murphy, Denis M. Larkin, Annelie Everts-van der Wind, Guillaume Bourque, Glenn Tesler, Loretta Auvil, Jonathan E. Beever, Bhanu P. Chowdhary, Francis Galibert, Lisa Gatzke, Christophe Hitte, Stacey N. Meyers, Elaine A. Ostrander, Greg Pape, Heidi G. Parker, **Terje Raudsepp**, Margarita B. Rogatcheva, Lawrence B. Schook, Loren C. Skow, Michael Welge, James E. Womack, Stephen J. O'Brien, Pavel A. Pevzner, Harris A. Lewin. 2005. Dynamics of Mammalian Chromosome Evolution Inferred from Multispecies Comparative Maps. *Science* 22 July: 613-617.
47. Lagerstrom M.C., Fredriksson R., Bjarnadóttir T.K., Fridmanis D., Holmquist T., Andersson J., Yan Y.-L., **Raudsepp T.**, Zoorobn R, Kukkonen J.P., Lundin L.-G., Klovins J., Chowdhary B.P., Postlethwait J.H., Helgi B. Schiøth H.B. 2005. Origin of the prolactin-releasing hormone (PRLH) receptors: Evidence of coevolution between PRLH and a redundant neuropeptide Y receptor during vertebrate evolution. *Genomics*, 85, 688-703.
48. Brinkmeyer-Langford,C, **Raudsepp,T**, Lee,E-J, Goh,G, Schäffer,AA, Agarwala,R, Wagner,ML, Tozaki.T , Skow,LC, Womack,JE, Mickelson,JR, and Chowdhary,BP. 2005. A high-resolution physical map of equine homologues of HSA19 shows divergent evolution compared to other mammals. *Mamm. Genome*, 16, 631-649. **received JOURNAL COVER**
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49. Swinburne JE, Bournsnel M, Hill G, Pettitt L, Allen T, Chowdhary B, Hasegawa T, Kurosawa M, Leeb T, Mashima S, Mickelson JR, **Raudsepp T**, Tozaki T, Binns M. 2006. Single linkage group per chromosome genetic linkage map for the horse, based on two three-generation, full-sibling, crossbred horse reference families. *Genomics* 87: 1-29.
50. Wagner, M.L., **Raudsepp, T.**, Goh, G., Agarwala, R., Schäffer, A.A., Dranchak, P.K., Brinkmeyer-Langford, C., Skow, L.C., Chowdhary, B.P., and Mickelson, J.R. 2006. A 1.3-Mb interval map of equine homologs of HSA2. *Cytogenet. Genome Res.* 112, 227-234.
51. Carbone L, Nergadze SG, Magnani E, Misceo D, Francesca Cardone M, Roberto R, Bertoni L, Attolini C, Francesca Piras M, de Jong P, **Raudsepp T**, Chowdhary BP, Guerin G, Archidiacono N, Rocchi M, Giulotto E. (2006). Evolutionary movement of centromeres in horse, donkey, and zebra. *Genomics*, 87, 777-782.
52. Perrocheau M., Boutreux V., Chadi S., Mata, X., Decaunes, P., **Raudsepp T.**, Durkin K., Incarnato D., Iannuzzi L., Lear T.L., Hirota K., Hasegawa T., Zhu B., de Jong P., Cribru E.P., Chowdhary B.P., Guérin G. (2006) Construction of a medium density equine gene map. *Animal Genet.*, 37, 145-155.
53. William J. Murphy, Alison J. Pearks Wilkerson, **Terje Raudsepp**, Richa Agarwala, Alejandro A. Schäffer, Roscoe Stanyon, Bhanu P. Chowdhary. 2006. Novel Gene Acquisition on Carnivore Y Chromosomes. *PLoS Genetics* 2, 1-11.
54. Dranchak, P.K., Ekenstedt, K.J., Valberg, S.J., Chowdhary, B.P., **Raudsepp, T.**, Mickelson, J.R. 2006. Chromosomal assignments for the equine AMPK family genes. *Animal Genet.*, 37, 293-307.
55. Momozawa,Y, Takeuchi,Y, Tozaki,T, Kikusui,T, Hasegawa,T, **Raudsepp,T**, Chowdhary,BP, Kusunose,R and Mori,Y. 2006. Polymorphism Identification, RH Mapping, and Association Analysis with the Anxiety Trait of the Equine *serotonin transporter (SLC6A4)* Gene. *Journal of Veterinary Medical Science* 68, 619-621.
- 2007**
56. Goh,G*, **Raudsepp,T***, Durkin,K, Wagner,ML, Schäffer,AA, Agarwala,R, Tozaki,T, Mickelson,JR and Chowdhary,BP. 2007. High-resolution gene maps of horse chromosomes 14 and 21: additional insights into evolution and rearrangements of HSA5 homologues in mammals. *Genomics* 89:89-112. **(*equal contribution). Received JOURNAL COVER.**
57. Momozawa, Y., Takeuchi, Y., Tozaki, T., Kikusui, T., Hasegawa, T., **Raudsepp, T.**, Chowdhary, B.P., Kusunose, R. and Mori, Y. 2007. SNP detection and radiation hybrid mapping horses of nine candidate genes for temperament. *Animal Genetics*, 38, 81–91.
58. Chiang, H.-I., Zhou, H., **Raudsepp, T.**, Jesudhasan, P.R., Zhu, J.J. 2007. Chicken CD69 and CD94/NKG2-like genes in a chromosomal region syntenic to mammalian natural killer gene complex. *Immunogenetics* 59, 603-611.
59. Hansen GR, Abbey CA, Gaile DP, **Raudsepp T**, Chowdhary BP, Womack JE, Gill CA. 2007. Assignment of six genes to bovine chromosomes 5 and 16 by fluorescence in situ hybridization, radiation hybrid mapping and genetic linkage analysis. *Cytogenet. Genome Res.* 116: 194-197.
- 2008**
60. Chowdhary BP, **Raudsepp T**. 2008. The Horse Genome Derby: racing from map to whole genome sequence. *Chromosome Res.* 16, 109-127.

61. Brinkmeyer-Langford C, **Raudsepp T**, Gustafson-Seabury A, Chowdhary BP. 2008. A BAC contig map over the proximal approximately 3.3 Mb region of horse chromosome 21. *Cytogenet. Genome Res.* 120:164-172.
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Theses

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Book Chapters

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Non-Refereed publications

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Science popularization

Since 2003 a corresponding author for The Journal of Estonian Native Horse Conservation Society ("*MY HORSE*"): layman articles about horse genetics (in Estonian).

PATENTS AND RELATED DISCOVERY ACTIVITIES

None

SERVICE ACTIVITIES

Membership in Professional Organizations and Service

1. Member of the *Committee for the Standardization of the Horse Karyotype*. The efforts of this work were published in *Chromosome Research* 1997.
2. *International Society of Animal Genetics*. Member since 2002.
3. *Texas Genetics Society*. Member since 2002, currently serve as a member of the Board of Directors.

Manuscript Review for Journals

Ad hoc reviewer for the following journals:

- Abstracts of The International Equine Gene Mapping Workshop
- Animal Genetics
- BMC (BioMed Central) Genomics
- Chromosome Research
- Cytogenetics and Genome Research
- Genomics
- Hereditas
- Journal of Animal Breeding and Genetics
- PLoS ONE

Major Committee Assignments

Departmental:

Member of VIBS International Program Advisory Committee.

College:

Member for the CVM Genetics Graduate Teaching Committee (Chaired by W. Murphy).

University:

Member of the Genetics Faculty Recruiting Committee for graduate students.

Chromosome Analysis Service

Associate Director of Texas A & M Cytogenetic Service Laboratory.

OTHER RESEARCH/ SCHOLARY ACTIVITIES

Delivered Seminars/Presentations

1. "*Differential activity of nucleolus organizer regions in cattle*". National Conference for Junior Researchers, May 1983, Institute of Experimental Biology, Tallinn, Estonia.

2. "The karyotype of the Estonian breed of Japanese quail (*Coturnix coturnix japonica*): G- and Q-banding". National Conference for Junior Researchers, October 1987, Institute of Experimental Biology, Tallinn, Estonia.
3. "European Pancreatic Cancer Reference Library System, EPCRLS: Identification of genes with specific expression in pancreatic cancer". Annual Meeting of Estonian Acad. Sci, January 1995, Institute of Chemical & Biophysics, Tallinn, Estonia.
4. "Chromosome field theory and the karyotype of the Estonian quail". The First International Quail Conference, September 16-19, 1989, Tartu, Estonia.
5. "Analysis of the European Pancreatic Cancer Reference Library: cDNA sequencing and FISH mapping". European Meeting for the EPCRL Research Project, October 1994, University of Ulm, Germany.
6. "Physical gene mapping in horses: comparative status with the humans". The First International Equine Gene Mapping Workshop, October 17-19, 1995, Lexington, Kentucky, USA.
7. "Emerging patterns of mammalian genome organization". December 1996, Annual Meeting, Swedish University of Agricultural Sciences, Uppsala, Sweden.
8. "New approaches to develop the equine physical gene map". October 1997, Department Seminar, Swedish University of Agricultural Sciences, Uppsala, Sweden.
9. "Microdissection of horse chromosomes for an orderly expansion of the equine gene map". Plant & Animal Genome VI, January 18-22, 1998, San Diego, CA, USA.
10. "Chromosome microdissection and genome analysis". March 1998, Department Seminar, Swedish University of Agricultural Sciences, Uppsala, Sweden.
11. "Comparative Genome Organisation in Mammals". March 2000, The School of Veterinary Medicine, University of California, Davis, CA, USA.
12. "Radiation Hybrid Analysis in the horse: Current Status". June 2000, 14th European Colloq. On Cytogenetics of Domestic Animals, Brno, Czech Republic.
13. "Comparative Genomics and Mammalian Genomes". November 2000, The San Diego Zoological Society, San Diego Zoo, San Diego, CA, USA.
14. "Cytogenetic and Zoo-FISH Studies of Hippopotamus (*Hippopotamus amphibious*)". July 2001, 12th North American Colloquium on Animal Cytogenetics & Gene Mapping, UC Davis, CA, USA.
15. "Horse and Donkey Chromosomes: Similarities and Differences". July 2001, 12th North American Colloquium on Animal Cytogenetics & Gene Mapping, UC Davis, CA, USA.
16. "The First Generation Whole Genome Radiation Hybrid and Comparative Map in the Horse". January 2003, PAG XI, San Diego, CA, USA.
17. "Radiation Hybrid and FISH map of Horse Y Chromosome". July 15, 2003, Louisville, Kentucky, USA.
18. "Targeted mapping of horse chromosomes: refined physical and comparative maps for ECA17, 22, and X". 5th International Equine Gene Mapping Workshop, August 10-14, 2003, Kruger National Park, South Africa.
19. "The Second Generation RH and Comparative Map of the Horse Genome". 29th International Conference on Animal Genetics, ISAG 2004, Sept. 11-16, 2004, Tokyo, Japan.
20. "Sequencing –ready map of the horse Y chromosome". Equine Workshop, 31st International Conference on Animal Genetics, ISAG 2008, July 23, 2008, Amsterdam, Holland.

Invited Lectures

1. "Genome Studies in California Condors: A Comparative Approach". Department of Pathobiology and The Schubot Exotic Bird Health Center Seminar, Texas A & M University, October 28, 2003.
2. "Domestic Animal Cytogenetics in the Era of Sequenced Genomes – Relic or Survivor?" Symposium "Mammalian Chromosomes: Milestones and Applications", November 11, 2006, San Diego Wild Animal Park.
3. "HORSE GENOMICS - Current Directions and Future Prospects", Department of Veterinary Integrative Biosciences Seminar, Texas A & M University, May 19, 2005.

4. "*Cytogenetics of reproductive disorders in llamas and alpacas*". 1st International Workshop on Camelid Genetics, February 23, 2008 at The Hotel Scottsdale in Scottsdale, Arizona
5. "*Structure and Organization of the horse Y chromosome and the mammalian pseudoautosomal region*". Mini-Symposium "From Z to Y: Male Specific Chromosomes and Genetics of Male Infertility in Vertebrates", April 3, 2008, Texas A & M University.

Conferences, Symposia: Organized/Chaired

1. Co-Chair of Equine Workshop at international conference of Plant & Animal Genome XV, January 13-14, 2007, San Diego, CA, USA.
2. Chair of Equine Workshop at international conference of Plant & Animal Genome XVI, January 12-13, 2008, San Diego, CA, USA.