

Supplementary Table 2. Published and Author-submitted Microarray projects in Porcine Biology

Category	Reviewed	Laboratory Institution	Contact info	Type of profiling analysis tool	Analytical elements (porcine sequence unless noted)	Tissues/cell types surveyed (porcine unless noted)	Research focus	Available references	Public data accession	
muscle	x	Purdue University	D. M. Spurlock (moodyd-at-iastate.edu)	GF211 human genefilters nylon microarray	4,324 human cDNAs	pig and human skeletal muscle	Cross-species hybridization of pig RNA to human nylon microarrays	Moody et al. 2002. BMC Genomics. <a href="http://biomedcentral.com/1471-2164/3/27">biomedcentral.com/1471-2164/3/27</a>	NA	
	x	Iowa State University	C.K. Tuggle (Cktuggle-at-iastate.edu)	Custom cDNA array	327 cDNAs	skeletal muscle expression	expression in fetal and postnatal skeletal muscle	Zhao et al. 2003. J. Anim. Sci. 81: 2179-2188	NA	
	x	University of Glasgow, UK	K.C. Chang (k.chang-at-vet.gla.ac.uk)	custom cDNA spotted microarray	5,500 clones from two cDNA libraries	psoas(red) and L. dorsi(white)	analysis of differential transcript expression in phenotypically distinct muscles	Bai et al. BMC Genomics. 2003. <a href="http://biomedcentral.com/1471-2164/4/8">biomedcentral.com/1471-2164/4/8</a>	NA	
	x	University of Glasgow Veterinary School, Scotland, UK	N. da cCosta (nadc1a-at-udcf.gla.ac.uk)	porcine skeletal muscle cDNA macroarray	5,500 clones from two cDNA libraries	psoas(red) and L. dorsi (white)	Molecular changes in response to dietary restriction in young growing skeletal muscle	da Costa et al. 2004. J. of Nutrition. 134: 2191-2199	NA	
	x	Washington State University	H. Granzier (granzier-at-wsunix.wsu.edu)	titin exon microarray	363 human exons	muscle	Using a novel titin exon microarray to evaluate titin isoform expression and altered function during cardiac muscle development across species (rabbits, rat, mice and pigs)	Lahmers et al, Circ Res. 2004; 94(4):505-13	NA	
			National Taiwan University hospital, Taiwan	J. L. Lin (jlinn-at-ha.mc.ntu.edu.tw)	human cDNA microarray	6,035 human cDNAs	atria	using pig as a model to study atrial fibrillation	Lai et al. 2004. J Cardio-vasc Electrophysiol. 15:214-223	NA
	x	Wageningen university and Research Centre	M.F.W. te Pas (marinus.tepas-at-wur.nl)	custom cDNA spotted microarray	200 cDNAs + 309 myogenesis genes	Prenatal skeletal muscle 14-91 days of gestation	Duroc- Pietrain comparison of prenatal muscle expression	Te Pas et al., Muscle Res. Cell Motil. 26 2005:157-165	NA	
	x	National Chiao Tung University, Taiwan	C.S. Lin (lincs.biotech-at-msa.hinet.net)	human cDNA microarray	9182 human cDNAs	skeletal muscle	compare the transcriptional expression in skeletal muscle of Duroc and Taoyuan pigs	Lin and Hsu, 2005. J.Anim.Sci.83:2075-2086	NA	
			Korea	Chul Wook Kim (email unavailable)	custom cDNA spotted microarray	4434 cDNAs	muscle and fat	investigate differentially expressed genes in muscle and fat of pig with body weight of 30 kg	Kim et al. 2005. Asian-Aust. J. Anim. Sci. 18(7):933	NA
			Korea	Chul Wook Kim (email unavailable)	custom cDNA spotted microarray	4434 cDNAs	muscle	screen specific genes related to the muscle growth of swine	Kim et al. 2005. Asian-Aust. J. Anim. Sci. 18(8):1080	NA
	x		Wageningen University and Research Centre and University of Bologna-Italy	M.F.W. te Pas (marinus.tepas-at-wur.nl) or R. Davoli (roberta.davoli-at-unibo.it)	custom cDNA spotted microarray	200 cDNAs + 309 myogenesis genes	Prenatal skeletal muscle 14-91 days of gestation	Duroc- Pietrain comparison of prenatal muscle expression	Cagazzo et al., J. Anim Sci 84 2006. 1-10	NA
reproduction	x	University of Nebraska-Lincoln	D. Pomp (dpomp-at-unc.edu)	UniGEM human chips	7,100 - 9,100 cDNAs	ovarian follicles	evaluate gene expression differences in porcine ovarian follicles between pigs selected for ovulation rate and randomly selected control pigs	Gladney et al, 2004, J.Anim.Sci. 82:17-31	NA	
	x	University of Nebraska-Lincoln	D. Pomp (dpomp-at-unc.edu)	Custom cDNA array	3,636 cDNAs	Whole ovaries and dissected ovarian follicles	Differential expression in divergent genetic lines	Caetano et al. 2004. Genetics 168: 1529-1537	NA	
	x	Iowa State University	C.K. Tuggle (Cktuggle-at-iastate.edu)	Custom cDNA array	1,016 cDNAs	peri-implantation conceptus	conceptus gene expression during elongation	Lee et al. 2005. Mole. Reprod. Dev. 71:129-139	NA	
	x	University of Missouri-Columbia, Columbia	R. Prather (PratherR-at-Missouri.edu)	custom cDNA spotted microarray	>14,000 cDNAs	germinal vesicle oocytes; four-cell;blastocyst; in vitro-produced four-cell; in vitro-produce blastocyst stage embryos	Transcriptional profiling of pig embryogenesis	Whitworth et al. 2005. Biology of reproduction. 72, 1437-1451	NA	
	x	University of Guelph	E.J. Squires (jsquires-at-uoguelph.ca)	human cDNA microarray	3,840 spots, 1718 ESTs	testis	compare gene expression in testis of pig with high and low levels of plasma estrone sulphate	Stewart et al. 2005. Anim Biotechnol. 16(2):139-151	NA	
	x	University of Missouri-Columbia, Columbia	M. Lucy (lucym-at-missouri.edu)	porcine ovary cDNA macroarray	8,009 cDNAs	follicle	evaluate genes expression in porcine ovary and examine their respective roles during the luteinization of porcine preovulatory follicles	Agca et al. 2006. Reproduction. 132: 133-145	NA	
	x	University of Missouri-Columbia, Columbia	J. Green (greenjo-at-missouri.edu)	custom cDNA spotted microarray	>14,000 cDNAs	cyclic endometrium	define genes that are differentially expressed in endometrium during the oestrous cycle	Green et al. 2006. Reprod Suppl. 62:163-176	NA	
infection	x	Walter Reed Army Institute of Research	M. Jett (marti.jett-at-na.amedd.army.mil)	human cDNA microarray	1,185 human cDNAs	peripheral blood mononuclear cells	Genetic variations in peripheral blood mononuclear cells in piglets used as an animal model for staphylococcal enterotoxin exposures	Hammamieh et al. 2003, OMICS 7(4):401-409	NA	
	x	Walter Reed Army Institute of Research	M. Jett (marti.jett-at-na.amedd.army.mil)	human cDNA microarray	1,185 human cDNAs	white blood	using pig as the model to study the host response exposed to staphylococcal enterotoxin B	Hammamieh et al. Biosensors Bioelectronics 2004. 20:719-727	NA	
	x	CSIRO Livestock Industries, Queensland Bioscience, Australia	A. Reverter (tony.reverter-gomez-at-csiro.au)	custom cDNA spotted microarray	6,420 cDNAs	peripheral blood Leukocytes	host transcriptional response to Actinobacillus pleuropneumoniae	Moser et al. 2004, J.Anim. Sci. 82:1261-1271	NA	

	x	Plum Island Animal Disease Center, USDA-ARS	C.L. Afonso (cafonso-at-piadc.ars.usda.gov)	custom cDNA spotted microarray	7,712 cDNAs	macrophages	Macrophage response to African swine fever virus	Afonso et al. 2004. J. Virology 78:1858-1864	NA
	x	Laboratoire de Pharmacologie-Toxicologie, INRA, France	I.P. Oswald (ioswald-at-toulouse.inra.fr)	custom cDNA spotted microarray	63 cDNAs	peripheral blood mononuclear cells	immunological gene expression was compared between nonstimulated PBMCs and PMA-Iono stimulated PBMCs	Ledger et al. 2004. Clinical and diagnostic laboratory immunology. 11:691-698	NA
	x	University of Minnesota	M. P. Murtaugh (murta001-at-umn.edu)	cDNA array and real-time PCR	2,569 cDNAs	Peyer's patch	Validation of cDNA libraries	Dvorak, et al. Vet. Immun. Immunopath, 2005 105:301-315	GEO: GSE1970
	x	University of Minnesota	M. P. Murtaugh (murta001-at-umn.edu)	cDNA array and real-time PCR	2,569 cDNAs	Peyer's patch and MLN	Juvenile vs. adult Peyer's patch gene expression	Machado, et al. Mamm. Genome, 2005 16:599-612	GEO: GSE1913
	x	Animal Sciences Group of Wageningen University, The Netherlands	T. Niewold (theo.niewold-at-biw.kuleuven.be)	custom cDNA spotted microarray	3,468 cDNAs	small intestine jejunal mucosa	host response to enterotoxigenic E. coli.	Niewold et al. 2005. Vet Immunol Immunopathol. 15;105(3-4):317-329.	NA
	x	Iowa State University	C.K. Tuggle (Cktuggle-at-iastate.edu)	NRSP-8-Qiagen custom oligonucleotide array	13,297 oligonucleotides	Lung	host transcriptional response to Salmonella Choleraesuis	Zhao et al 2006 Mammalian Genome 17: 777-789	GEO: GSE2339
	x	University of Nevada	M. Okomo-Adhiambo (mokomo-at-cabnr.unr.edu)	custom cDNA spotted microarray	420 cDNAs	kidney epithelial cell line PK13	Host-pathogen interaction during the Toxoplasma gondii infection	Okomo-Adhiambo et al. 2006. Infect.Immun 74: 4254-4265	NA
	x	Animal Sciences Group of Wageningen University, The Netherlands	T. Niewold (theo.niewold-at-biw.kuleuven.be)	custom cDNA spotted microarray	3,468 cDNAs	mucosa from Jejunum	Investigate the early transcriptional response of pig small intestinal mucosa to Salmonella Typhimurium DT104	Niewold et al. 2007. Molecular Immunology 44: 1316-1322	NA
others	x	Michigan State University	P.M. Coussens (coussens-at-msu.edu)	custom cDNA spotted microarray	877 cDNAs	brain	Development of a porcine brain cDNA library, EST database, and microarray resource	Nobis et al. 2003. Physiol.Genomics 16:153-159	NA
		SUNY Upstate Medical University	D. Kittur (kitturd-at-upstate.edu)	Affymetrix U-133 A	22,283 human probesets	human brain, human kidney and pig kidney	Cross-species comparison of gene expression between human and porcine tissue	Shah et al. 2004 Clin Transplant. 12:76-80	NA
		University of Pennsylvania	P.F.Davies (pfd-at-pobox.upenn.edu)	human cDNA microarray	13824 cDNAs	aortic endothelial cells	transcription profiles in a disturbed flow region of the adult porcine aorta	Passerini et al, 2004. PNAS.10:2482-2487	NA
		Children's Hospital of Orange County Research Institute	H.Klassen (hklassen-at-choc.org)	HGU133 human affy chip	22,283 oligos	Pocine neural precursor cells and human neural precursor cells	expression of Neurodevelopmental markers by cultured porcine neural precursor cells	Schwartz et al. 2005. Stem Cell. 23:1286-1294	NA
	x	University of illinois at Urbana-Champaign	M. T. Nakamura (mtnakamu-at-uiuc.edu)	custom cDNA spotted microarray	1,272 cDNAs	liver	Endothelial Cells Reveal Phenotypic Differences	Cheon et al. 2005. Am J Physiol Regul Integr Comp Physiol. 288:R1525-R1535	GEO:GSE714
	x	Research Institute for the Biology of Farm and Animals, Germany	K. Wimmers (wimmers-at-fbn-dummerstorf.de)	custom cDNA spotted microarray	238 cDNAs	liver	identify hepatic genes affecting traits related to body composition	Ponsuksili et al. 2005. Biochim Biophys Acta. 1730(1):31-40	NA
	x	Iowa State University	C.K. Tuggle (Cktuggle-at-iastate.edu)	NRSP-8-Qiagen custom oligonucleotide array	13,297 oligonucleotides	normal liver, skeletal muscle, small intestine	Validation of Oligonuceotide Microarray	Zhao et al 2005 Genomics 86: 618-625	GEO: GSE2335
		University of California-Davis and Harbor-University of California Los Angeles Medical Center	C.H. Halsted (chhalsted-at-ucdavis.edu)	HumU133A oligo arrays (Affymetrix)	22,283 human probesets	liver	explore the gene expression changes associated with ethanol feeding and folate deficiency	Esfandiari et al. 2005. Am J Physiol Gastrointest Liver Physiol. 289: G54-63.	GEO: GSE2099
		Oregon Health and Science University	T.S. Acott (acott-at-ohsu.edu)	custom cDNA spotted microarray	8400 cDNAs	Trabecular meshwork cells	To study the gene expression changes in Porcine Trabecular meshwork cells in response to mechanical stretching	Vittal et al. 2005. Investigative Ophthalmology & Visual Science. 46: 2857-2868.	NA
	x	Michigan State University	A.J. Zanella (zanella-at-msu.edu)	custom cDNA spotted microarrays	866 cDNAs	brain	effect of stress on brain gene expression patterns	Poletto et al. 2006 Brain Research 1068:7-15	NA
		Petit Institute for Bioengineering and Bioscience	R.M. Nerem (Robert.nerem-at-ibb.gatech.edu)	Agilent Human 1 cDNA microarray slides (Agilent #G4100A)	12,814 human oligonucleotides	Monolayers of aortic endothelial cells and aortic valve endothelial cells	Transcriptional Profiles of Valvular and Vascular Endothelial Cells Reveal Phenotypic Differences Influence of Shear Stress	Butcher et al. 2006; Arterioscler Thromb Vasc Biol. 26:69-77.	NA
	x	USDA-ARS, Russell Agricultural Research Center	G. Hausman (ghausman-at-saa.ars.usda.gov)	custom cDNA spotted microarray	600 oligonucleotides	stromal-vascular cell, adipose tissue	transcriptional profiling of neonatal adipose tissue and fetal S-V cells	Hausman et al, 2006. J.Anim.Sci.84:1666-1681	NA
unpublished		INRA-LGC, GDO group	Gwenola Tosser-Klopp; (tosser -at- toulouse.inra.fr)	custom cDNA nylon spotted microarrays	1,2 k or 4,6 k (triplicate) cDNAs	multi tissues (41 different tissues)	ovarian folliculogenesis, pilot study	Unpublished	GEO: GPL3970 / GPL3971 / GSE5299
		INRA-LGC, GDO group	Agnès Bonnet (abonnet-at-toulouse.inra.fr)	custom cDNA nylon spotted microarrays	2849 cDNAs	ovarian cells (granulosa) and multi tissues	gene networks involved in ovarian follicular development	Unpublished	GEO: GPL3978 / GSE5797 / GSE5798
		INRA-LGC, GDO group	Agnès Bonnet (abonnet-at-toulouse.inra.fr)	custom cDNA nylon spotted microarrays	9216 cDNAs	multi tissues (41 different tissues)	genes and gene networks involved in ovarian follicular atresia	Unpublished	GEO: GPL3729
		INRA-LGC, GDO group	Laurence Liaubet (liaubet-at-toulouse.inra.fr)	custom cDNA nylon spotted microarrays	3456 cDNAs	muscle	gene expression in skeletal muscle following intra muscular injection	Submitted	GEO: GPL2731, GSE3217
		INRA-LGC, GDO group	Laurence Liaubet (liaubet-at-toulouse.inra.fr)	custom cDNA nylon spotted microarrays	3456 cDNAs	muscle	genes involved in muscle tenderness	Unpublished	GEO: GPL2731
	x	Iowa State University	C.K. Tuggle (Cktuggle-at-iastate.edu)	Affymetrix Porcine Genechip	23, 935 probesets	mesenteric lymph node	immune response to bacterial infection	Y.-F. Wang et al., submitted	NA
		Iowa State University	C.K. Tuggle (Cktuggle-at-iastate.edu)	Affymetrix Porcine Genechip	23, 935 probesets	Pregnant/nonpregnant endometrium	Maternal response to pregnancy	In preparation	NA
		Iowa State University	C.K. Tuggle (Cktuggle-at-iastate.edu)	Affymetrix Porcine Genechip	23, 935 probesets	Perimplantation conceptus	Maternal-fetal communication/implantation	Unpublished	NA

	Livestock Genomics I Group (PTP) Italy	S. Genini (sem.genini-at-tecnoparco.org) and E. Giuffra (elisabetta.giuffra-at-tecnoparco.org)	Affymetrix GeneChip® Porcine Array	23,935 probesets	alveolar macrophages (PAM)	Gene expression profiling of the treatment with the anti-Sialoadhesin monoclonal antibody 41D3 on PAM	In preparation	NA
	Livestock Genomics I Group (PTP) Italy	S. Genini (sem.genini-at-tecnoparco.org) and E. Giuffra (elisabetta.giuffra-at-tecnoparco.org)	Affymetrix GeneChip® Porcine Array	23,935 probesets	alveolar macrophages (PAM)	Gene expression profiling of early steps of PRRSV pathogenesis on porcine alveolar macrophages.	In preparation	NA
	University of Bologna-Italy	R. Davoli (roberta.davoli-at-unibo.it)	Pig Oligo Set 13K V.1 (Operon-Qiagen)	13,297 oligonucleotides	mainly muscle,liver, s.intestine	Comparison between pigs extreme for Glycolitic potential	Russo V. et al. (2006) Proc. 57th EAAP 2006	NA
	University of Minnesota	M. P. Murtaugh (murta001-at-umn.edu)	oligo array and real-time PCR	13,297 oligonucleotides	islets	Profiling of stress-response in islets	Dvorak et al, submitted	GEO:GSE4744
	Uppsala University - IMBIM	E. Bourneuf or L. Andersson (emmanuelle.bourneuf-at-hgen.slu.se or leif.andersson-at-imbim.uu.se)	Affymetrix Porcine Genechip	23, 935 probesets	Subcutaneous adipose tissue	Fat1 QTL effects on gene expression	Unpublished	NA
	Michigan State University	C.A. Ernst (ernstc-at-msu.edu)	NRSP-8-Qiagen custom oligonucleotide array	13,297 oligonucleotides	skeletal muscle	developmental gene expression patterns	Unpublished	GEO: GSE4958