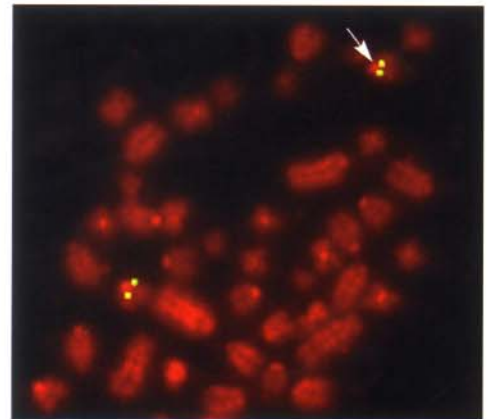
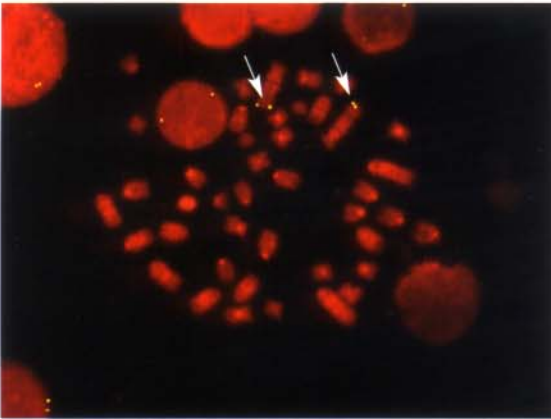
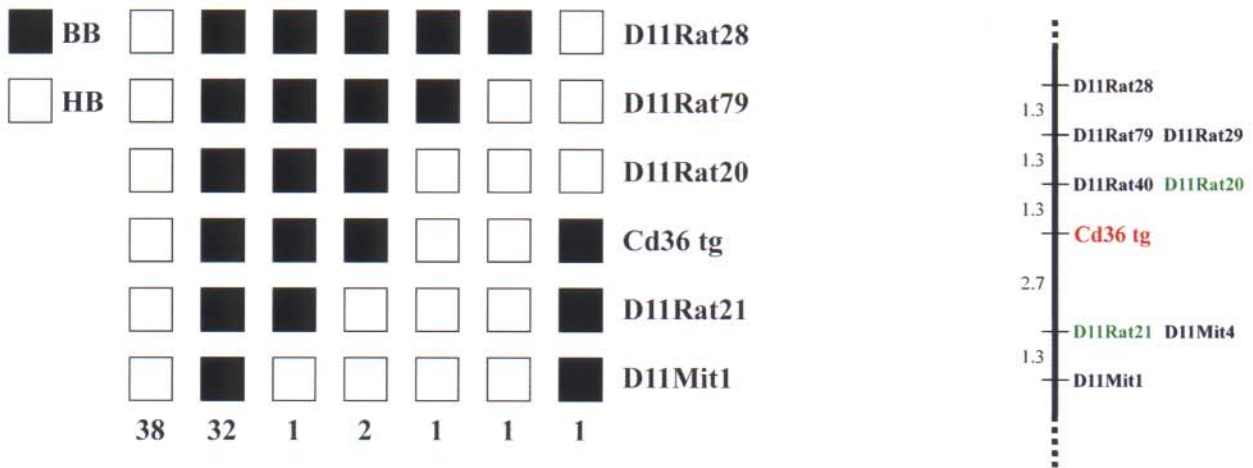


*Fig. 1.* PCR detection of the transgenic *Cd36* insert. Rat DNA was isolated by phenol-chloroform extraction from tail biopsy, and amplified with primers F: 5'-AGT TCG CTA TTT AGC CAA GG-3' and R: 5'-AGG ATA AAA CAC ACC AAC TGT-3', in exons 5 and 7, respectively, according to rat-human homology. In transgenic animals, an approximately 320 bp fragment was obtained, as expected due to lack of introns in the *Cd36* transgene. The larger fragment represents amplification of a deletion variant of the *Cd36* gene on RNO4. First lane: pBR322 DNA *Hae*III digest, 2<sup>nd</sup> lane: SHR/OlaIpcv, 3<sup>rd</sup> lane: SHR-TG19, 4<sup>th</sup> lane: BN.*Lx.Cd36.1K*/Cub, 5<sup>th</sup> lane: F<sub>1</sub>(SHR.TG19xBN.*Lx.Cd36.1K*), the last lane: 20 bp low ladder.



*Fig. 2.* FISH – TG10, TG19

Determination of the chromosomal insertion sites (arrows) of the *Cd36* transgene by FISH. Hybridization signals can be seen on RNO1q55 in the SHR-TG10 transgenic lines (a) and on RNO11q11 in the SHR-TG19 transgenic lines (b).



*Fig. 3.* Linkage mapping of the *Cd36* transgenic insertion site in the SHR-TG19 line.

A) Haplotype figure from BN.*Lx.Cd36.1K* x F<sub>1</sub>(BN.*Lx.Cd36.1K* x SHR.TG19) backcross showing part of RNO11 with loci linked to the *Cd36* transgene. Black boxes represent the BN.*Lx.Cd36.1K* allele, whereas the white boxes are hetero- or hemizygous combinations of the BN.*Lx.Cd36.1K* allele with the SHR-TG19 allele. The number of animals for a given haplotype is indicated at the bottom of each column. B) Partial linkage map of an RNO11 segment containing the transgene, derived from the haplotype analysis shown in A). The numbers represent distances between linked loci in centimorgans (Kosambi map function).

Table 1. Genes and ESTs found between D11Rat20 and D11Rat21 by Virtual Comparative Mapping Tool (<http://rgd.mcw.edu/VCMAP/>).

cR	Name	Characteristics and expression	Mouse orthologue and its expression
568.4	D11Rat21		
568.5	Rn.41680	2ESTs ovary (AI547883), placenta, adult lung, brain, liver, kidney, heart, spleen, ovary, muscle, embryos 8, 12, and 18dpc	
568.6	Rn.1528	7ESTs ovary, lung, pineal gland	Mm.170971 kidney, mammary gland, cerebellum, medulla oblongata, adrenal gland, diencephalon, spinal ganglion, aorta and vein, thymus, heart, lung
574	Rn.5790	Atp5j ATP synthase, H <sup>+</sup> transporting, mitochondrial F0 complex, subunit F6 – ubiquitously expressed	Mm.353 ubiquitously expressed
576.2	Rn.19066	1EST ovary (AI059097)	
578.9	Rn.16839	7ESTs spleen, embryo 13dpc, kidney, brain, ovary, placenta, lung, liver, heart, muscle	
594.8	L11926	App amyloid precursor protein (APP) gene, 5' end	Mm.15571 ubiquitously expressed
605.6	Rn.18313	4ESTs placenta, embryo 8dpc	Mm.77895 caecum, colon, corpora quadrigemina, embryonic body between diaphragm region and neck, eyeball, forelimb, head, hypothalamus, medulla oblongata, skin, spinal cord, spinal ganglion, sympathetic ganglion
612.7	Rn.40214	5ESTs spleen, heart, embryo 13dpc, kidney, ventricle 15dpc	Mm.31546 colon, embryo, infiltrating ductal carcinoma, kidney, lung, lymph, mammary gland, pooled lung tumours, spleen, uterus
617.4	D11Rat20		

line harbours only a single copy of the transgene. It is worth mentioning that reduction in the copy number often results in a marked increase in expression of the transgene and is accompanied by decreased chromatin compaction and decreased methylation at the transgene locus. Vice versa, the presence of multiple homologous copies of a transgene within a concatemeric array can have a repressive effect upon gene expression in mammalian systems (Garrick et al., 1998).

## 2/ Linkage mapping of the transgene in the SHR-TG19 line

The increased transgenic expression of the wild-type *Cd36* in the kidney of the SHR-TG19 was associated with a significant decrease in blood pressure compared to the SHR-TG10 and SHR strains (Pravenec et al., 2000). In the SHR-TG19 line, we decided to determine the precise position of the transgene on RNO11 in relation to surrounding genetic markers in order to