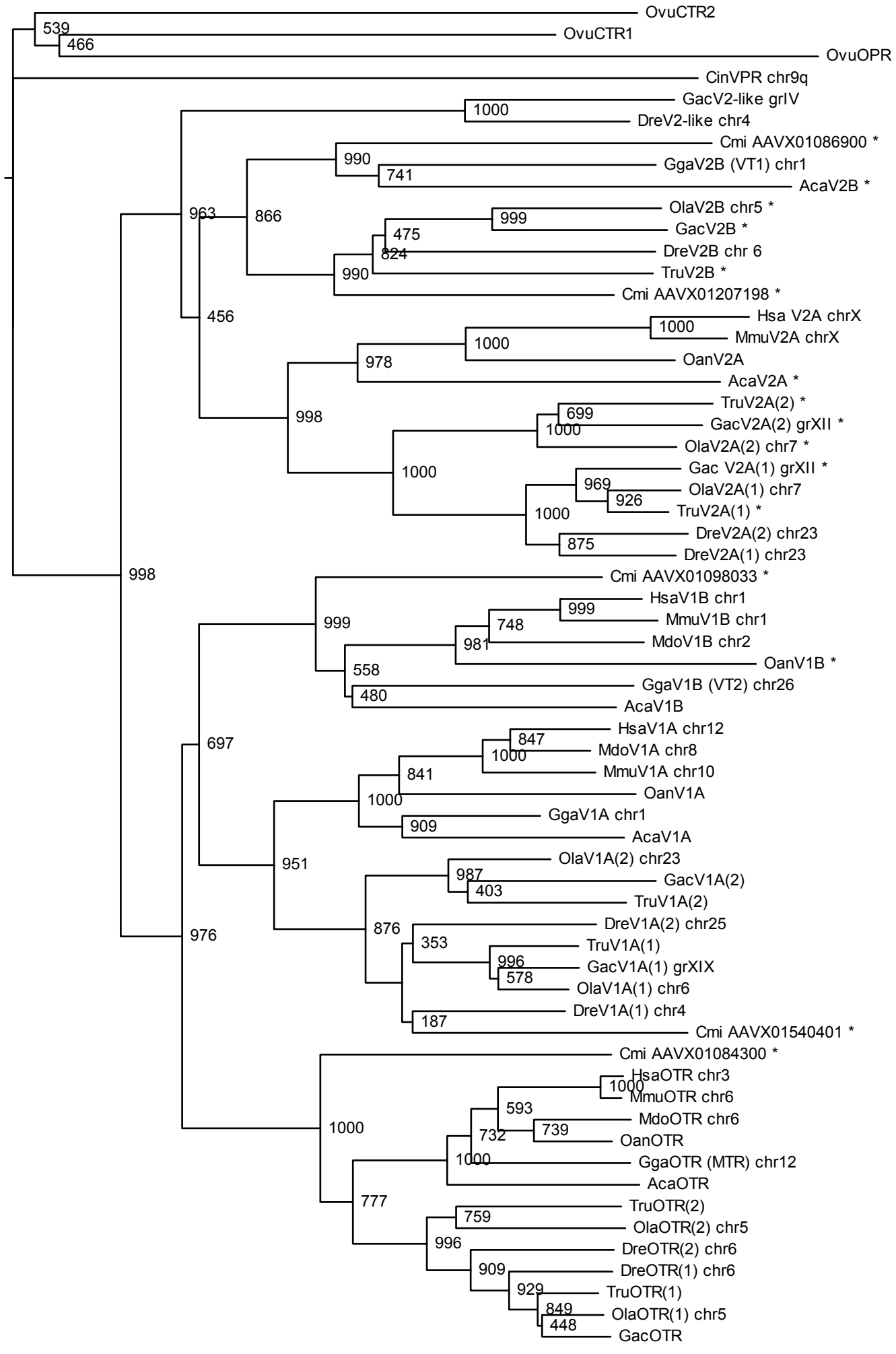
SUPPLEMENTARY MATERIAL 4

Initial neighbor joining (NJ) tree of the oxytocin and vasopressin receptor family made in order to identify the main gnathostome clusters. Species abbreviations are applied: Aca (anole lizard), Dre (zebrafish), Cin (tunicate), Cmi (elephant shark), Gac (stickleback), Gga (chicken), Hsa (human), Mdo (opossum), Mmu (mouse), Oan (platypus), Ola (medaka), Ovu (octopus), Tru (fugu). Frog sequences seen in the phylogenetic maximum likelihood tree (Fig. 1) were identified and added to subsequent alignments following this NJ analysis, as was the opossum V2A. Where known, the chromosome assignments of the identified receptor sequences are given next to the sequence name. For the elephant shark sequences, the scaffold IDs are shown (see section 3.4). Accession IDs and detailed locations for all sequences can be found in Supplementary Material 1. Sequences marked with an asterisk are fragments and in some cases do not span the entire length of the sequence alignment used to construct this tree (see Table 1 and Supplementary Material 3). Branch support is shown for each node (out of 1000 bootstrap iterations).


OvuCTR2
539
OvuCTR1
466
OvuOPR
CinVPR chr9q
GacV2-like grIV
1000
DreV2-like chr4
Cmi AAVX01086900 *
990
GgaV2B (VT1) chr1
741
AcaV2B *
963
866
OlaV2B chr5 *
999
GacV2B *
475
824
DreV2B chr 6
990
TruV2B *
Cmi AAVX01207198 *
456
Hsa V2A chrX
1000
MmuV2A chrX
1000
978
OanV2A
AcaV2A *
TruV2A(2) *
699
998
1000
GacV2A(2) grXII *
OlaV2A(2) chr7 *
1000
Gac V2A(1) grXII *
969
OlaV2A(1) chr7
926
1000
TruV2A(1) *
DreV2A(2) chr23
875
DreV2A(1) chr23
998
Cmi AAVX01098033 *
HsaV1B chr1
999
999
MmuV1B chr1
748
981
MdoV1B chr2
OanV1B *
558
GgaV1B (VT2) chr26
480
AcaV1B
HsaV1A chr12
847
697
1000
MdoV1A chr8
841
MmuV1A chr10
1000
OanV1A
GgaV1A chr1
909
AcaV1A
951
OlaV1A(2) chr23
987
GacV1A(2)
403
TruV1A(2)
876
DreV1A(2) chr25
976
353
TruV1A(1)
996
GacV1A(1) grXIX
578
OlaV1A(1) chr6
DreV1A(1) chr4
187
Cmi AAVX01540401 *
Cmi AAVX01084300 *
HsaOTR chr3
1000
MmuOTR chr6
593
1000
MdoOTR chr6
732
739
OanOTR
1000
GgaOTR (MTR) chr12
AcaOTR
777
TruOTR(2)
759
OlaOTR(2) chr5
996
DreOTR(2) chr6
909
DreOTR(1) chr6
929
TruOTR(1)
849
OlaOTR(1) chr5
448
GacOTR
0.04