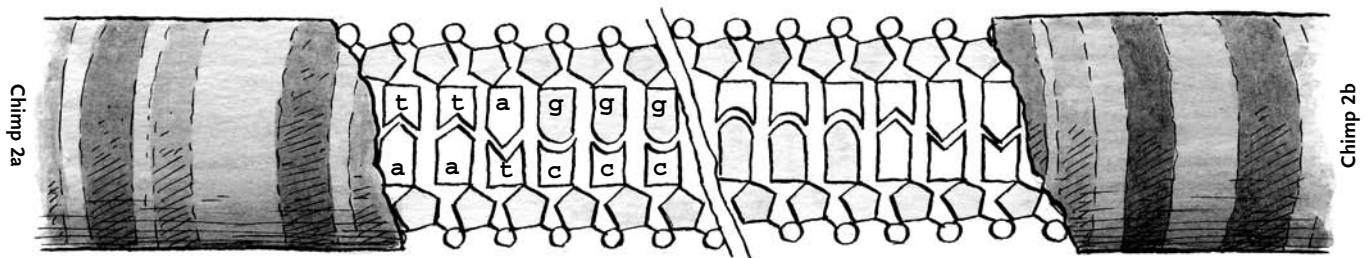


# Sequence Search

The following DNA base sequences are from a segment of present-day human chromosome 2. The graphic represents the ancestral condition of the chromosomes. In order for fusion to have occurred, the head-end telomere of chimpanzee chromosome 2b would have had to invert and rotate on its axis a half-turn to correctly join the head-end telomere of chimpanzee chromosome 2a. If this occurred, the fossil remnants of this fusion would be seen in

modern human chromosome 2 in the form of a DNA sequence showing head-to-head telomere DNA. If the two ancestral chromosomes fused, what would the sequence be at the fusion point? Write down the remainder of the DNA sequence in the graphic below. Then search the code below for the string of letters that most closely matches the **top line** of chimp 2a and chimp 2b segments in the code in the graphic. (Mutations may have caused some letters to change.)



107881	tgcgacggcg	gagttgcggt	ctcctcagca	cagacccgga	gagcaccgcg	agggcggacc
107941	tgcggtgtcc	tctgcacaga	tttcagtggg	actgcgaagg	cggagcagag	ttctcctcag
108001	gtcagaccgg	ggcgggcggg	cgggctgagg	ataccgcgag	ggcggagctg	cgttctgctc
108061	agcacagacc	tgggggtcac	cgtaaagggtg	gagcagcatt	cccctaagca	cagagggttg
108121	ggccactgcc	tggctttgtg	acaactcggg	gcgcatcaac	ggtgaataaa	atctttcccg
108181	gttgcagccg	tgaataatca	aggttagaga	ccagttagag	cggttcagtg	cggaaaacgg
108241	gaaagaaaaa	gccccctctga	atcctgggca	gcgagattct	cccaaagcaa	ggcgaggggc
108301	tgcattgcag	ggtgaggggtg	agggttaggg	tttggggttg	gtttgggggt	gggggtgggg
108361	taggggtggg	gttgggggtg	gggttggggg	taggggtagg	ggtaggggta	ggggtagggg
108421	cagggtcagg	gtcaggggta	gggttttagg	gttaggattt	taggggttagg	gtaagggta
108481	aggggtgggg	ttgggggttag	ggttaggggt	taggggtggg	gttgggggtg	gggttggggg
108541	tgggggtggg	gttaggggta	gctaaaccta	accctaacc	ctaaccctaa	ccccaacccc
108601	aaccctacce	ctacccttac	ccctaaccce	aacccccacc	cttaaccctt	aacccttacc
108661	ctaaccctaa	cccaaaccct	aaccctacce	taaccctaac	ccaaccctaa	ccctaaccct
108721	accctaacc	taacacccta	aaaccgtgac	cctgaccttg	accctgacc	ttaaccctta
108781	accctaacca	taaccctaaa	ccctaaccct	aaaccctaac	cctaaaccct	aaccctaaca
108841	ctaccctacc	ctaaccctaa	ccctaaccce	ctaaccctaa	ccctaccctt	aaccctaac
108901	ccagccccaa	cccttaccct	aaccctacce	taacccttaa	ccctaaccce	taaccctaac
108961	ccctaaccct	aaccctacce	caaccctaaa	cccaacccta	accctaacct	aaccctaac
109021	cctaaccctt	accctaacc	ctagccctag	ccctagccct	aaccctaac	ctcgccttaa
109081	ccctaccctt	aaccctcacc	ctcaccctaa	cccaacgtct	gtgctgagaa	gaatgctgct
109141	ccgcctttaa	ggtgcccccc	aggtctgtgc	tgaacagaac	gcagctccgc	cgctgcagtg
109201	ccctcagccc	gcccgcggcg	gtctgacctg	agaagaactc	tgctccgctt	tcgcaatagc
109261	cccgaagtct	gtgcagagga	gaacgcagct	ccgcctcgc	gatgctctcc	ggctgtgtgc
109321	taaagagAAC	gcaactccgc	cctcgcaaac	gcgccgcgcc	ggcggaggcg	cggagaggcg
109381	cagggcgcgc	gagggcgcag	cgcgagaggg	cgaggcgcgc	ccgaggcgcga	ggcgaggaga
109441	ggcgcgggcg	tcttgggggag	acgcggcgca	gggcatagac	gtacgcgggc	gcctccccgg
109501	aggggagggg	tcgctggggcg	ggcgggagtg	agggcggggc	ccggcgcaga	gacgcacgtc