

A glycine tRNA gene from lupine mitochondria

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The sequence of a lupine mitochondrial gene coding for a glycine tRNA (anticodon GCC) is presented here. The cloning of the plasmid from which the gene is derived has been described (1). This plasmid, pEB3, was transcribed after microinjection into *Xenopus laevis* oocyte nuclei yielding a tRNA-sized final product (2). The isolated tRNA-sized transcript was used to map the position of the gene. The glycine tRNA forms a typical cloverleaf structure with all appropriate conserved bases, with one unusual feature, the last two nucleotides of the aminoacyl stem do not form a base pair; a similar situation is encountered in a bacterial tRNA^{Ala} gene (3).

10	20	30	40	50	60	70
TTT	GAC	AGT	CAT	GCC	ACG	ACC
100	90	80	70	60	50	40
TAT	CTA	TCT	CGG	GTG	GAT	CCG
110	100	90	80	70	60	50
TAT	CTA	TCT	CGG	GTG	GAT	CCG
120	110	100	90	80	70	60
TAT	CTA	TCT	CGG	GTG	GAT	CCG
130	120	110	100	90	80	70
TAT	CTA	TCT	CGG	GTG	GAT	CCG
140	130	120	110	100	90	80
150	160	170	180	190	200	210
GACA	ACAT	GACT	CTTC	CAGC	TGGAT	TCTG
160	170	180	190	200	210	220
TCA	TAA	AGA	GAT	CTG	GAT	CTT
170	180	190	200	210	220	230
AA	AGA	GAT	CTG	GAT	CTT	GGG
180	190	200	210	220	230	240
T	T	T	T	T	T	T
190	200	210	220	230	240	250
G	G	G	G	G	G	G
200	210	220	230	240	250	260
C	C	C	C	C	C	C
210	220	230	240	250	260	270
T	T	T	T	T	T	T
220	230	240	250	260	270	280
C	C	C	C	C	C	C
230	240	250	260	270	280	290
G	G	G	G	G	G	G
240	250	260	270	280	290	300
C	C	C	C	C	C	C
250	260	270	280	290	300	310
G	G	G	G	G	G	G
260	270	280	290	300	310	320
C	C	C	C	C	C	C
270	280	290	300	310	320	330
T	T	T	T	T	T	T
280	290	300	310	320	330	340
G	G	G	G	G	G	G
290	300	310	320	330	340	350
C	C	C	C	C	C	C
300	310	320	330	340	350	360
G	G	G	G	G	G	G
310	320	330	340	350	360	370
C	C	C	C	C	C	C
320	330	340	350	360	370	380
T	T	T	T	T	T	T
330	340	350	360	370	380	390
G	G	G	G	G	G	G
340	350	360	370	380	390	400
C	C	C	C	C	C	C
350	360	370	380	390	400	410
T	T	T	T	T	T	T
360	370	380	390	400	410	420
G	G	G	G	G	G	G
370	380	390	400	410	420	430
C	C	C	C	C	C	C
380	390	400	410	420	430	440
T	T	T	T	T	T	T
390	400	410	420	430	440	450
G	G	G	G	G	G	G
400	410	420	430	440	450	460
C	C	C	C	C	C	C
410	420	430	440	450	460	470
T	T	T	T	T	T	T
420	430	440	450	460	470	480
G	G	G	G	G	G	G
430	440	450	460	470	480	490
C	C	C	C	C	C	C
440	450	460	470	480	490	500
T	T	T	T	T	T	T
450	460	470	480	490	500	510
G	G	G	G	G	G	G
460	470	480	490	500	510	520
C	C	C	C	C	C	C
470	480	490	500	510	520	530
T	T	T	T	T	T	T
480	490	500	510	520	530	540
G	G	G	G	G	G	G
490	500	510	520	530	540	550
C	C	C	C	C	C	C
500	510	520	530	540	550	560
T	T	T	T	T	T	T
510	520	530	540	550	560	570
G	G	G	G	G	G	G
520	530	540	550	560	570	580
C	C	C	C	C	C	C
530	540	550	560	570	580	590
T	T	T	T	T	T	T
540	550	560	570	580	590	600
G	G	G	G	G	G	G
550	560	570	580	590	600	610
C	C	C	C	C	C	C
560	570	580	590	600	610	620
T	T	T	T	T	T	T
570	580	590	600	610	620	630
G	G	G	G	G	G	G
580	590	600	610	620	630	640
C	C	C	C	C	C	C
590	600	610	620	630	640	650
T	T	T	T	T	T	T
600	610	620	630	640	650	660
G	G	G	G	G	G	G
610	620	630	640	650	660	670
C	C	C	C	C	C	C
620	630	640	650	660	670	680
T	T	T	T	T	T	T
630	640	650	660	670	680	690
G	G	G	G	G	G	G
640	650	660	670	680	690	700
C	C	C	C	C	C	C
650	660	670	680	690	700	710
T	T	T	T	T	T	T
660	670	680	690	700	710	720
G	G	G	G	G	G	G
670	680	690	700	710	720	730
C	C	C	C	C	C	C
680	690	700	710	720	730	740
T	T	T	T	T	T	T
690	700	710	720	730	740	750
G	G	G	G	G	G	G
700	710	720	730	740	750	760
C	C	C	C	C	C	C
710	720	730	740	750	760	770
T	T	T	T	T	T	T
720	730	740	750	760	770	780
G	G	G	G	G	G	G
730	740	750	760	770	780	790
C	C	C	C	C	C	C
740	750	760	770	780	790	800
T	T	T	T	T	T	T
750	760	770	780	790	800	810
G	G	G	G	G	G	G
760	770	780	790	800	810	820
C	C	C	C	C	C	C
770	780	790	800	810	820	830
T	T	T	T	T	T	T
780	790	800	810	820	830	840
G	G	G	G	G	G	G
790	800	810	820	830	840	850
C	C	C	C	C	C	C
800	810	820	830	840	850	860
T	T	T	T	T	T	T
810	820	830	840	850	860	870
G	G	G	G	G	G	G
820	830	840	850	860	870	880
C	C	C	C	C	C	C
830	840	850	860	870	880	890
T	T	T	T	T	T	T
840	850	860	870	880	890	900
G	G	G	G	G	G	G
850	860	870	880	890	900	910
C	C	C	C	C	C	C
860	870	880	890	900	910	920
T	T	T	T	T	T	T
870	880	890	900	910	920	930
G	G	G	G	G	G	G
880	890	900	910	920	930	940
C	C	C	C	C	C	C
890	900	910	920	930	940	950
T	T	T	T	T	T	T
900	910	920	930	940	950	960
G	G	G	G	G	G	G
910	920	930	940	950	960	970
C	C	C	C	C	C	C
920	930	940	950	960	970	980
T	T	T	T	T	T	T
930	940	950	960	970	980	990
G	G	G	G	G	G	G
940	950	960	970	980	990	1000
C	C	C	C	C	C	C
950	960	970	980	990	1000	1010
T	T	T	T	T	T	T
960	970	980	990	1000	1010	1020
G	G	G	G	G	G	G
970	980	990	1000	1010	1020	1030
C	C	C	C	C	C	C
980	990	1000	1010	1020	1030	1040
T	T	T	T	T	T	T
990	1000	1010	1020	1030	1040	1050
G	G	G	G	G	G	G
1000	1010	1020	1030	1040	1050	1060
C	C	C	C	C	C	C
1010	1020	1030	1040	1050	1060	1070
T	T	T	T	T	T	T
1020	1030	1040	1050	1060	1070	1080
G	G	G	G	G	G	G
1030	1040	1050	1060	1070	1080	1090
C	C	C	C	C	C	C
1040	1050	1060	1070	1080	1090	1100
T	T	T	T	T	T	T
1050	1060	1070	1080	1090	1100	1110
G	G	G	G	G	G	G
1060	1070	1080	1090	1100	1110	1120
C	C	C	C	C	C	C
1070	1080	1090	1100	1110	1120	1130
T	T	T	T	T	T	T
1080	1090	1100	1110	1120	1130	1140
G	G	G	G	G	G	G
1090	1100	1110	1120	1130	1140	1150
C	C	C	C	C	C	C
1100	1110	1120	1130	1140	1150	1160
T	T	T	T	T	T	T
1110	1120	1130	1140	1150	1160	1170
G	G	G	G	G	G	G
1120	1130	1140	1150	1160	1170	1180
C	C	C	C	C	C	C
1130	1140	1150	1160	1170	1180	1190
T	T	T	T	T	T	T
1140	1150	1160	1170	1180	1190	1200
G	G	G	G	G	G	G
1150	1160	1170	1180	1190	1200	1210
C	C	C	C	C	C	C
1160	1170	1180	1190	1200	1210	1220
T	T	T	T	T	T	T
1170	1180	1190	1200	1210	1220	1230
G	G	G	G	G	G	G
1180	1190	1200	1210	1220	1230	1240
C	C	C	C	C	C	C
1190	1200	1210	1220	1230	1240	1250
T	T	T	T	T	T	T
1200	1210	1220	1230	1240	1250	1260
G	G	G	G	G	G	G
1210	1220	1230	1240	1250	1260	1270
C	C	C	C	C	C	C
1220	1230	1240	1250	1260	1270	1280
T	T	T	T	T	T	T
1230	1240	1250	1260	1270	1280	1290
G	G	G	G	G	G	G
1240	1250	1260	1270	1280	1290	1300
C	C	C	C	C	C	C
1250	1260	1270	1280	1290	1300	1310
T	T	T	T	T	T	T
1260	1270	1280	1290	1300	1310	1