

Nucleotide sequence of cytochrome P450 L1A1 (lanosterol 14 α -demethylase) from *Candida albicans*

M.H.Lai⁺ and D.R.Kirsch⁺

Squibb Institute for Medical Research, Department of Molecular Biology, PO Box 4000, Princeton, NJ 08543-4000, USA

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Candida albicans is the major fungal pathogen of humans. The incidence of candidal disease has been rising steadily due to recent increases in the number of immunocompromised patients (1). The imidazoles and triazoles are a major class of antifungal compounds which act through the inhibition of lanosterol 14 α -demethylase (2). Figure 1 shows the nucleotide sequence of *C. albicans* lanosterol 14 α -demethylase determined using a genomic clone from a clinical isolate which produced disseminated candidiasis (3). The deduced amino acid sequence is highly similar to the lanosterol 14 α -demethylase sequence recently reported for *Saccharomyces cerevisiae* (4) both in size (528 vs. 530 amino acids) and amino acid homology (62% amino acid identity).

ATCTTACTACTCTTCATCTTATAAATCAATTATTTATATAATAGAACAGAAAGGAAATTCTAGGTATTATCTTCCATATTACTTCTTCATTTATTATATAATAAGT	120
TCTTTTCAAGAGATCATATCATATGGCTATTGGAAACTGTCTATTGGCATTAAATTCTTTTGTCTCCTAGTACACACAGATCGTATTATTAATGGTTTCATTG	240
MAIVTVDINNYFLSRSYVSPWVQFVLSLGSASVYDPSVQFVLSLGSASVYDPSVQFVLSLGSASVYDPSVQFVLSLGSASVYDPSVQF	31
GTTTACAACCTAGTAGGCATATTTATTCATTAAAGAAAAGATAGAACGCTCATTAGTGTCTTTGGATCTCTGGTTCTCAGCTTCATATGGCAACACCTTATGATT	360
TTCGAGATCTGTTGAGGATTTAAAGGTT	400
FESCKRQYSGDVFSRMLKIGVYLGPKHGFEPVNAKLSDFP	71
TTGGATCTGCTGAAAGATCTTATAAATTCAGTCTTGGCTTAAGGGTTTATGAGCTTCTAGCTCAGGAGCTAGGTGTTGTTGTTGTTGTTGTTGTTGTTGTT	600
VSAEADAYKHLTKGVYIYDGTGKPLRSLMEEQKKFKAFPE	151
TTGGATCTGCTGAAAGATCTTATAAATTCAGTCTTGGCTTAAGGGTTTATGAGCTTCTAGCTCAGGAGCTAGGTGTTGTTGTTGTTGTTGTTGTTGTTGTT	720
ACTGATTCAATTAAAGATGATGTTGAGTAAAGAGAAATTGGTT	191
TTGGATCTGCTGAAAGATCTTATAAATTCAGTCTTGGCTTAAGGGTTTATGAGCTTCTAGCTCAGGAGCTAGGTGTTGTTGTTGTTGTTGTTGTTGTTGTT	231
ACTGATTCAATTAAAGATGATGTTGAGTAAAGAGAAATTGGTT	271
TTGGATCTGCTGAAAGATCTTATAAATTCAGTCTTGGCTTAAGGGTTTATGAGCTTCTAGCTCAGGAGCTAGGTGTTGTTGTTGTTGTTGTTGTTGTTGTT	311
TTGGATCTGCTGAAAGATCTTATAAATTCAGTCTTGGCTTAAGGGTTTATGAGCTTCTAGCTCAGGAGCTAGGTGTTGTTGTTGTTGTTGTTGTTGTTGTT	351
TTGGATCTGCTGAAAGATCTTATAAATTCAGTCTTGGCTTAAGGGTTTATGAGCTTCTAGCTCAGGAGCTAGGTGTTGTTGTTGTTGTTGTTGTTGTTGTT	391
TTGGATCTGCTGAAAGATCTTATAAATTCAGTCTTGGCTTAAGGGTTTATGAGCTTCTAGCTCAGGAGCTAGGTGTTGTTGTTGTTGTTGTTGTTGTTGTT	431
TTGGATCTGCTGAAAGATCTTATAAATTCAGTCTTGGCTTAAGGGTTTATGAGCTTCTAGCTCAGGAGCTAGGTGTTGTTGTTGTTGTTGTTGTTGTTGTT	471
TTGGATCTGCTGAAAGATCTTATAAATTCAGTCTTGGCTTAAGGGTTTATGAGCTTCTAGCTCAGGAGCTAGGTGTTGTTGTTGTTGTTGTTGTTGTTGTT	511
TTGGATCTGCTGAAAGATCTTATAAATTCAGTCTTGGCTTAAGGGTTTATGAGCTTCTAGCTCAGGAGCTAGGTGTTGTTGTTGTTGTTGTTGTTGTTGTT	551
TTGGATCTGCTGAAAGATCTTATAAATTCAGTCTTGGCTTAAGGGTTTATGAGCTTCTAGCTCAGGAGCTAGGTGTTGTTGTTGTTGTTGTTGTTGTTGTT	591
TTGGATCTGCTGAAAGATCTTATAAATTCAGTCTTGGCTTAAGGGTTTATGAGCTTCTAGCTCAGGAGCTAGGTGTTGTTGTTGTTGTTGTTGTTGTTGTT	631
TTGGATCTGCTGAAAGATCTTATAAATTCAGTCTTGGCTTAAGGGTTTATGAGCTTCTAGCTCAGGAGCTAGGTGTTGTTGTTGTTGTTGTTGTTGTTGTT	671
TTGGATCTGCTGAAAGATCTTATAAATTCAGTCTTGGCTTAAGGGTTTATGAGCTTCTAGCTCAGGAGCTAGGTGTTGTTGTTGTTGTTGTTGTTGTTGTT	711
TTGGATCTGCTGAAAGATCTTATAAATTCAGTCTTGGCTTAAGGGTTTATGAGCTTCTAGCTCAGGAGCTAGGTGTTGTTGTTGTTGTTGTTGTTGTTGTT	751
TTGGATCTGCTGAAAGATCTTATAAATTCAGTCTTGGCTTAAGGGTTTATGAGCTTCTAGCTCAGGAGCTAGGTGTTGTTGTTGTTGTTGTTGTTGTTGTT	791
TTGGATCTGCTGAAAGATCTTATAAATTCAGTCTTGGCTTAAGGGTTTATGAGCTTCTAGCTCAGGAGCTAGGTGTTGTTGTTGTTGTTGTTGTTGTTGTT	831
TTGGATCTGCTGAAAGATCTTATAAATTCAGTCTTGGCTTAAGGGTTTATGAGCTTCTAGCTCAGGAGCTAGGTGTTGTTGTTGTTGTTGTTGTTGTTGTT	871
TTGGATCTGCTGAAAGATCTTATAAATTCAGTCTTGGCTTAAGGGTTTATGAGCTTCTAGCTCAGGAGCTAGGTGTTGTTGTTGTTGTTGTTGTTGTTGTT	911
TTGGATCTGCTGAAAGATCTTATAAATTCAGTCTTGGCTTAAGGGTTTATGAGCTTCTAGCTCAGGAGCTAGGTGTTGTTGTTGTTGTTGTTGTTGTTGTT	951
TTGGATCTGCTGAAAGATCTTATAAATTCAGTCTTGGCTTAAGGGTTTATGAGCTTCTAGCTCAGGAGCTAGGTGTTGTTGTTGTTGTTGTTGTTGTTGTT	991
TTGGATCTGCTGAAAGATCTTATAAATTCAGTCTTGGCTTAAGGGTTTATGAGCTTCTAGCTCAGGAGCTAGGTGTTGTTGTTGTTGTTGTTGTTGTTGTT	1031
TTGGATCTGCTGAAAGATCTTATAAATTCAGTCTTGGCTTAAGGGTTTATGAGCTTCTAGCTCAGGAGCTAGGTGTTGTTGTTGTTGTTGTTGTTGTTGTT	1071
TTGGATCTGCTGAAAGATCTTATAAATTCAGTCTTGGCTTAAGGGTTTATGAGCTTCTAGCTCAGGAGCTAGGTGTTGTTGTTGTTGTTGTTGTTGTTGTT	1111
TTGGATCTGCTGAAAGATCTTATAAATTCAGTCTTGGCTTAAGGGTTTATGAGCTTCTAGCTCAGGAGCTAGGTGTTGTTGTTGTTGTTGTTGTTGTTGTT	1151
TTGGATCTGCTGAAAGATCTTATAAATTCAGTCTTGGCTTAAGGGTTTATGAGCTTCTAGCTCAGGAGCTAGGTGTTGTTGTTGTTGTTGTTGTTGTTGTT	1191
TTGGATCTGCTGAAAGATCTTATAAATTCAGTCTTGGCTTAAGGGTTTATGAGCTTCTAGCTCAGGAGCTAGGTGTTGTTGTTGTTGTTGTTGTTGTTGTT	1231
TTGGATCTGCTGAAAGATCTTATAAATTCAGTCTTGGCTTAAGGGTTTATGAGCTTCTAGCTCAGGAGCTAGGTGTTGTTGTTGTTGTTGTTGTTGTTGTT	1271
TTGGATCTGCTGAAAGATCTTATAAATTCAGTCTTGGCTTAAGGGTTTATGAGCTTCTAGCTCAGGAGCTAGGTGTTGTTGTTGTTGTTGTTGTTGTTGTT	1311
TTGGATCTGCTGAAAGATCTTATAAATTCAGTCTTGGCTTAAGGGTTTATGAGCTTCTAGCTCAGGAGCTAGGTGTTGTTGTTGTTGTTGTTGTTGTTGTT	1351
TTGGATCTGCTGAAAGATCTTATAAATTCAGTCTTGGCTTAAGGGTTTATGAGCTTCTAGCTCAGGAGCTAGGTGTTGTTGTTGTTGTTGTTGTTGTTGTT	1391
TTGGATCTGCTGAAAGATCTTATAAATTCAGTCTTGGCTTAAGGGTTTATGAGCTTCTAGCTCAGGAGCTAGGTGTTGTTGTTGTTGTTGTTGTTGTTGTT	1431
TTGGATCTGCTGAAAGATCTTATAAATTCAGTCTTGGCTTAAGGGTTTATGAGCTTCTAGCTCAGGAGCTAGGTGTTGTTGTTGTTGTTGTTGTTGTTGTT	1471
TTGGATCTGCTGAAAGATCTTATAAATTCAGTCTTGGCTTAAGGGTTTATGAGCTTCTAGCTCAGGAGCTAGGTGTTGTTGTTGTTGTTGTTGTTGTTGTT	1511
TTGGATCTGCTGAAAGATCTTATAAATTCAGTCTTGGCTTAAGGGTTTATGAGCTTCTAGCTCAGGAGCTAGGTGTTGTTGTTGTTGTTGTTGTTGTTGTT	1551
TTGGATCTGCTGAAAGATCTTATAAATTCAGTCTTGGCTTAAGGGTTTATGAGCTTCTAGCTCAGGAGCTAGGTGTTGTTGTTGTTGTTGTTGTTGTTGTT	1591
TTGGATCTGCTGAAAGATCTTATAAATTCAGTCTTGGCTTAAGGGTTTATGAGCTTCTAGCTCAGGAGCTAGGTGTTGTTGTTGTTGTTGTTGTTGTTGTT	1631
TTGGATCTGCTGAAAGATCTTATAAATTCAGTCTTGGCTTAAGGGTTTATGAGCTTCTAGCTCAGGAGCTAGGTGTTGTTGTTGTTGTTGTTGTTGTTGTT	1671
TTGGATCTGCTGAAAGATCTTATAAATTCAGTCTTGGCTTAAGGGTTTATGAGCTTCTAGCTCAGGAGCTAGGTGTTGTTGTTGTTGTTGTTGTTGTTGTT	1711
TTGGATCTGCTGAAAGATCTTATAAATTCAGTCTTGGCTTAAGGGTTTATGAGCTTCTAGCTCAGGAGCTAGGTGTTGTTGTTGTTGTTGTTGTTGTTGTT	1751
TTGGATCTGCTGAAAGATCTTATAAATTCAGTCTTGGCTTAAGGGTTTATGAGCTTCTAGCTCAGGAGCTAGGTGTTGTTGTTGTTGTTGTTGTTGTTGTT	1791
TTGGATCTGCTGAAAGATCTTATAAATTCAGTCTTGGCTTAAGGGTTTATGAGCTTCTAGCTCAGGAGCTAGGTGTTGTTGTTGTTGTTGTTGTTGTTGTT	1831

Figure 1. Nucleotide sequence and deduced amino acid sequence of *C. albicans* cytochrome P450 L1A1

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⁺Present address: American Cyanamid Company, Agricultural Research Division, PO Box 400, Princeton, NJ 08540, USA

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