

SUPPLEMENTARY MATERIAL

Supplementary Table II. All novel variants identified in FGF and FGFR CNEs.

| Gene | CNE | Variant | Population | Case Frequency | Control Frequency | UCSC Genome Browser Position ^a | Base Pair Conservation |
|------|-----|---------|--------------|----------------|-------------------|---|-----------------------------|
| FGF2 | 2 | G>C | Iowa | 6/167 | | Chr 4:124,110,145 | M, R, D, A |
| | 2 | G>C | Iowa | 6/167 | | Chr 4:124,110,345 | M, R, Ra, D, A, E |
| | 3 | G>A | Iowa | 7/171 | 13/176 | Chr 4:124,119,428 | M, R, Ra, D, A, E |
| | 3 | G>T | Iowa | 1/171 | 0/176 | Chr 4:124,119,185 | M, R, Ra, D, A, E, O, Xt, T |
| | 4 | G>A | Iowa | 1/177 | | Chr 4:124,133,532 | M, R, D, A, E, O |
| | 4 | C>A | Iowa | 1/177 | | Chr 4:124,133,319 | M, R, D, A, O |
| | 5 | C>T | Iowa | 8/158 | 2/130 | Chr 4:124,163,470 | M, R, Ra, D, E, A |
| FGF3 | 1 | A>G | Phil | 15/109 | | Chr 11:69,346,124 | M, R, D |
| | 1 | T>C | Phil | 1/109 | | Chr 11:69,345,933 | - |
| FGF4 | 2 | C>T | Phil | 2/157 | | Chr 11:69,296,770 | M, R, D |
| FGF7 | 2 | G>t | Phil | 1/140 | | Chr 15:47,472,855 | M, R, Ra, D, A, E, O |
| | 2 | A>T | Phil | 2/140 | | Chr 15:47,473,045 | M, R, Ra, D, A, E, O |
| | 3 | T>C | Phil | 19/142 | | Chr 15:47,490,373 | M, R, D, A, O, Xt |
| | 3 | G>A | Phil Iowa | 12/142 | | Chr 15:47,490,473 | M, R, A, O |
| | 3 | G>C | Phil Iowa | 14/142 | | Chr 15:47,490,489 | M, R, O |

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| | 3 | G>T | Phil | 10/142 | | Chr 15:47,490,496 | - |
| | 4 | G>T | Phil | 2/149 | | Chr 15:47,502,707 | Ra, D, A, E, O C, Xt |
| FGF8 | 2 | A>G | Phil | 1/164 | | Chr 10:103,523,734 | M, R, Ra, D, O, C, Xt |
| | 2 | T>A | Phil | 1/164 | | Chr 10:103,523,780 | M, R, Ra, D, O |
| | 2 | G>A | Iowa | 1/164 | | Chr 10:103,523,419 | M, R, Ra, O, C, Xt |
| FGF9 | 2 | T>C | Iowa | 1/166 | | Chr 13:21,151,510 | M, R, Ra, D |
| | 3 | T>C | Phil | 1/175 | | Chr 13:21,174,985 | M, Ra, D, A, E, O, C |
| FGF10 | 1 | G>A | Phil | 3/173 | 6/174 | Chr 5:44,427,863 | M, R, Ra, D, E, O, C, Xt |
| | 1 | A>G | Iowa | 1/173 | 0/174 | Chr 5:44,427,841 | M, R, Ra, D, E, O, C, Xt |
| | 1 | C>T | Iowa | 4/173 | 3/174 | Chr 5:44,427,983 | M, R, D, E, O, C, Xt, T |
| | 3 | G>C | Iowa | 1/181 | 4/29 | Chr 5:44,340,627 | M, R, Ra, D, A, E, O, C, Xt |
| FGF18 | 6 | C>T | Iowa | 1/173 | | Chr 5:170,798,519 | D, A |
| | 7 | T>C | Iowa | 1/176 | | Chr 5:170,807,429 | M, Ra, D |
| | 11 | C>T | Phil Iowa | 2/149 | | Chr 5:170,822,119 | D, E, O |
| FGFR1 | 1 | G>A | Iowa | 4/177 | | Chr 8:38,449,139 | M, D, A, E |
| | 1 | G>A | Phil Iowa | 22/177 | | Chr 8:38,449,012 | M, R, D, A |
| | 1 | C>A | Phil | 1/177 | | Chr 8:38,448,960 | M, R, D, E |
| | 5 | G>C | Phil | 1/173 | | Chr 8:38,473,234 | M, R, D, E, O |

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| | 5 | T>C | Iowa | 5/173 | | Chr 8:38,473,226 | M, R, D, E |
| | 5 | C>A | Phil | 3/173 | | Chr 8:38,473,376 | D |
| | 6 | A>G | Phil | 2/84 | | Chr 8:38,449,599 | M, R, D, A, E |
| FGFR2 | 1 | T>C | Iowa | 5/102 | | Chr 10:123,458,864 | M, R, Ra, D, A, O |
| | 1 | G>A | Phil | 8/102 | | Chr 10:123,458,555 | M, R, A, E, O, C |
| | 3 | G>T | Iowa | 6/151 | | Chr 10:123,365,553 | D, A, E, O |
| | 3 | C>T | Phil | 1/151 | | Chr 10:123,365,264 | A |
| | 3 | G>A | Phil | 1/151 | | Chr 10:123,365,233 | D |
| | 5 | C>A | Iowa | 1/145 | 0/154 | Chr 10:123,345,664 | M, R, Ra, D, A, E, O, C |
| | 8 | G>A | Phil | 1/152 | 0/155 | Chr 10:123,274,030 | M, R, Ra, D, A, E, O, C |
| | 10 | A>G | Iowa | 2/151 | | Chr 10:123,229,037 | M, R, Ra, D, A, E |
| FGFR3 | 1 | A>C | Phil | 1/141 | | Chr 4:1,777,463 | M, R, A, E |
| | 2 | C>T | Iowa | 1/129 | | Chr 4:1,772,043 | M, R, D, A, E, C |
| | 2 | C>T | Iowa | 1/129 | | Chr 4:1,772,180 | M, R, D, A, O |
| | 3 | C>T | Phil | 6/175 | | Chr 4:1,766,606 | M, R, Ra, D, C |
| | 3 | C>T | Iowa | 1/175 | | Chr 4:1,766,688 | M, R, Ra, D, O |
| | 3 | C>T | Iowa | 1/175 | | Chr 4:1,766,853 | Ra, D |
| | 3 | C>G | Iowa | 3/175 | | Chr 4:1,767,009 | D |
| | 6 | C>T | Phil | 3/174 | | Chr 4:1,756,953 | D, E |

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| | 6 | G>A | Phil | 1/174 | | Chr 4:1,759,877 | D |
| | 6 | G>A | Iowa | 1/174 | | Chr 4:1,757,337 | D, E |
| | 10 | T>C | Iowa | 20/136 | | Chr 4:1,732,295 | M, R, D |
| | 10 | A>G | Phil | 3/136 | | Chr 4:1,732,481 | M, R, D |
| | 10 | C>T | Iowa | 1/136 | | Chr 4:1,732,679 | - |
| Totals | 55 | | | | | | |

Those variants highlighted in red are conserved across 8 species.

^a UCSC Genome Browser Position from the human March 2006 assembly.

M, mouse; R, rat; Ra, rabbit; D, dog; A, armadillo; E, elephant; O, opossum; C, chicken; Xt, X. tropicalis; T, tetradon.