**Modelling for the inheritance of endangered equid multiple births and fertility: determining risk factors and genetic parameters in donkeys *(Equus asinus)***

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| Animals |
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**Supplementary Table S4.**Kruskal Wallis H Ranks for all the levels of the factors affecting historical foal number born per animal, maximum foal number per birth and multiple birth number per animal.

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| Birth year | N | Historical foal number born per donkey | Maximum foal number per birth | Multiple birth number per animal for a given donkey |
| 1984 | 1 | 732 | 728.5 | 737.5 |
| 1985 | 2 | 564.75 | 539.25 | 393.25 |
| 1986 | 1 | 397.5 | 350 | 241.5 |
| 1987 | 6 | 336.75 | 413.08 | 307.83 |
| 1988 | 2 | 222.75 | 350 | 241.5 |
| 1989 | 7 | 445.29 | 404.07 | 460.86 |
| 1990 | 8 | 397.5 | 350 | 418.75 |
| 1991 | 6 | 453.25 | 413.08 | 521.67 |
| 1992 | 6 | 339.25 | 350 | 307.83 |
| 1993 | 3 | 281 | 350 | 342.67 |
| 1994 | 5 | 327.6 | 350 | 330.5 |
| 1995 | 7 | 247.71 | 350 | 385.07 |
| 1996 | 14 | 346.5 | 377.04 | 457.29 |
| 1997 | 20 | 396.75 | 368.93 | 385.48 |
| 1998 | 22 | 396.82 | 367.2 | 399.91 |
| 1999 | 23 | 410.74 | 399.37 | 379.17 |
| 2000 | 24 | 396.25 | 383.06 | 353.06 |
| 2001 | 23 | 365.8 | 382.91 | 328.89 |
| 2002 | 44 | 427.64 | 411.69 | 417.74 |
| 2003 | 51 | 348.35 | 380.32 | 399.45 |
| 2004 | 46 | 336.72 | 350 | 366.62 |
| 2005 | 45 | 403.6 | 392.06 | 375.49 |
| 2006 | 46 | 350.93 | 374.68 | 348.63 |
| 2007 | 39 | 414.27 | 379.12 | 394.24 |
| 2008 | 50 | 368.64 | 372.71 | 381.59 |
| 2009 | 59 | 390.31 | 383.18 | 359.02 |
| 2010 | 47 | 359.04 | 382.9 | 380.41 |
| 2011 | 33 | 385.09 | 396.86 | 395.26 |
| 2012 | 43 | 404.23 | 385.21 | 395.43 |
| 2013 | 27 | 383.44 | 378.04 | 402.07 |
| 2014 | 43 | 420.14 | 394.01 | 387.01 |
| 2015 | 12 | 395 | 413.08 | 390.83 |

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| Birth month | N | Historical foal number born per donkey | Maximum foal number per birth | Multiple birth number per animal for a given donkey |
| January | 124 | 359.89 | 374.68 | 383.23 |
| February | 57 | 390.58 | 369.92 | 371.13 |
| March | 63 | 384.26 | 405.1 | 401.37 |
| April | 112 | 387.2 | 373.66 | 376.33 |
| May | 121 | 424.28 | 403.45 | 383.54 |
| June | 89 | 383.87 | 397.51 | 376.94 |
| July | 42 | 371.46 | 377.04 | 371.8 |
| August | 34 | 346.1 | 350 | 321.01 |
| September | 31 | 362.71 | 374.42 | 425.48 |
| October | 34 | 345.22 | 373.34 | 406.6 |
| November | 27 | 397.61 | 379.24 | 389.72 |
| December | 31 | 385.26 | 374.42 | 414.9 |

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| Birth season | N | Historical foal number born per donkey | Maximum foal number per birth | Multiple birth number per animal for a given donkey |
| Winter | 608 | 371.85 | 373.36 | 384.61 |
| Spring | 450 | 401.73 | 392.53 | 384.61 |
| Summer | 352 | 372.93 | 382.51 | 364.11 |
| Autumn | 717 | 366.49 | 375.43 | 408.01 |

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| Farm | N | Historical foal number born per donkey | Maximum foal number per birth | Multiple birth number per animal for a given donkey |
| 1 | 32 | 397.03 | 361.83 | 353.89 |
| 2 | 1 | 48 | 350 | 686.5 |
| 3 | 19 | 414.32 | 389.84 | 424.42 |
| 4 | 6 | 162 | 413.08 | 292.08 |
| 5 | 36 | 416.08 | 371.03 | 368.54 |
| 6 | 7 | 445.29 | 408.71 | 328.21 |
| 7 | 25 | 397.5 | 350 | 310.64 |
| 8 | 11 | 427.91 | 384.41 | 417.27 |
| 9 | 6 | 732 | 728.5 | 576.5 |
| 10 | 79 | 401.73 | 354.79 | 431.7 |
| 11 | 34 | 243.31 | 350 | 290.97 |
| 12 | 4 | 393.75 | 444.63 | 428.63 |
| 13 | 4 | 397.5 | 350 | 393.25 |
| 14 | 7 | 445.29 | 408.71 | 488 |
| 15 | 20 | 380.03 | 350 | 411.3 |
| 16 | 41 | 295.21 | 350 | 428.54 |
| 17 | 12 | 310.13 | 350 | 391.58 |
| 18 | 3 | 397.5 | 350 | 241.5 |
| 19 | 11 | 364.36 | 387.73 | 325.27 |
| 20 | 15 | 732 | 728.5 | 622.77 |
| 21 | 27 | 433.56 | 421.3 | 468.31 |
| 22 | 7 | 445.29 | 404.07 | 492 |
| 23 | 55 | 333.95 | 350 | 299.88 |
| 24 | 3 | 397.5 | 350 | 241.5 |
| 25 | 10 | 434.25 | 391.1 | 338.8 |
| 26 | 6 | 222.75 | 350 | 241.5 |
| 27 | 57 | 420.97 | 376.56 | 346.86 |
| 28 | 4 | 481.13 | 444.63 | 528.13 |
| 29 | 6 | 281 | 350 | 366.25 |
| 30 | 4 | 48 | 350 | 416.88 |
| 31 | 4 | 397.5 | 350 | 476.75 |
| 32 | 2 | 564.75 | 539.25 | 545 |
| 33 | 15 | 416.8 | 450.93 | 409.9 |
| 34 | 7 | 247.71 | 350 | 405.29 |
| 35 | 5 | 324.6 | 425.7 | 302.2 |
| 36 | 4 | 397.5 | 350 | 504.5 |
| 37 | 1 | 397.5 | 350 | 639.5 |
| 38 | 1 | 732 | 761 | 760.5 |
| 39 | 4 | 477.38 | 539.25 | 652.13 |
| 40 | 12 | 397.5 | 350 | 401.04 |
| 41 | 2 | 397.5 | 350 | 241.5 |
| 42 | 7 | 397.5 | 350 | 241.5 |
| 43 | 3 | 620.5 | 613.17 | 443.83 |
| 44 | 4 | 481.13 | 444.63 | 341 |
| 45 | 3 | 164.5 | 350 | 342.67 |
| 46 | 3 | 397.5 | 350 | 389.83 |
| 47 | 4 | 397.5 | 350 | 393.25 |
| 48 | 5 | 187.8 | 350 | 241.5 |
| 49 | 3 | 397.5 | 350 | 241.5 |
| 50 | 3 | 397.5 | 350 | 342.67 |
| 51 | 12 | 397.5 | 350 | 400.5 |
| 52 | 6 | 281 | 350 | 491 |
| 53 | 3 | 281 | 350 | 374.17 |
| 54 | 1 | 397.5 | 350 | 241.5 |
| 55 | 3 | 392.5 | 476.17 | 389.83 |
| 56 | 7 | 395.36 | 404.07 | 432.07 |
| 57 | 1 | 397.5 | 350 | 241.5 |
| 58 | 5 | 464.4 | 425.7 | 424.1 |
| 59 | 3 | 397.5 | 350 | 475.33 |
| 60 | 1 | 397.5 | 350 | 241.5 |
| 61 | 3 | 397.5 | 350 | 241.5 |
| 62 | 5 | 48 | 350 | 241.5 |
| 63 | 3 | 397.5 | 350 | 409.83 |
| 64 | 2 | 732 | 744.75 | 735.75 |
| 65 | 2 | 397.5 | 350 | 241.5 |
| 66 | 5 | 464.4 | 425.7 | 442.5 |
| 67 | 9 | 397.5 | 350 | 405.17 |
| 68 | 1 | 397.5 | 350 | 241.5 |
| 69 | 3 | 397.5 | 350 | 342.67 |
| 70 | 1 | 397.5 | 350 | 241.5 |
| 71 | 1 | 397.5 | 350 | 241.5 |
| 72 | 3 | 509 | 476.17 | 475.33 |
| 73 | 1 | 48 | 350 | 241.5 |
| 74 | 3 | 509 | 476.17 | 414.5 |
| 75 | 5 | 327.6 | 350 | 490.4 |
| 76 | 1 | 732 | 728.5 | 709.5 |
| 77 | 1 | 397.5 | 350 | 241.5 |
| 78 | 2 | 397.5 | 350 | 241.5 |
| 79 | 7 | 347.57 | 350 | 298.36 |
| 80 | 2 | 397.5 | 350 | 241.5 |
| 81 | 2 | 397.5 | 350 | 393.25 |
| 82 | 4 | 397.5 | 350 | 241.5 |
| 83 | 1 | 48 | 350 | 241.5 |
| 84 | 2 | 397.5 | 350 | 440.5 |
| 85 | 1 | 397.5 | 350 | 241.5 |
| 86 | 3 | 164.5 | 350 | 241.5 |
| 87 | 1 | 397.5 | 350 | 241.5 |
| 88 | 2 | 222.75 | 350 | 440.5 |
| 89 | 2 | 222.75 | 350 | 241.5 |
| 90 | 1 | 397.5 | 350 | 241.5 |

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| Husbandry system | N | Historical foal number born per donkey | Maximum foal number per birth | Multiple birth number per animal for a given donkey |
| Extensive | 14 | 371.46 | 377.04 | 398.54 |
| Semiintensive | 131 | 372.23 | 382.53 | 373.08 |
| Semiextensive | 505 | 400.92 | 387.74 | 383.32 |
| Intensive | 115 | 317.96 | 363.45 | 391.02 |

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| Sex | N | Historical foal number born per donkey | Maximum foal number per birth | Multiple birth number per animal for a given donkey |
| Jack | 14 | 418.85 | 396.75 | 411.3 |
| Jenny | 131 | 371.89 | 378.74 | 374.23 |