YUCATAN MINIPIGS

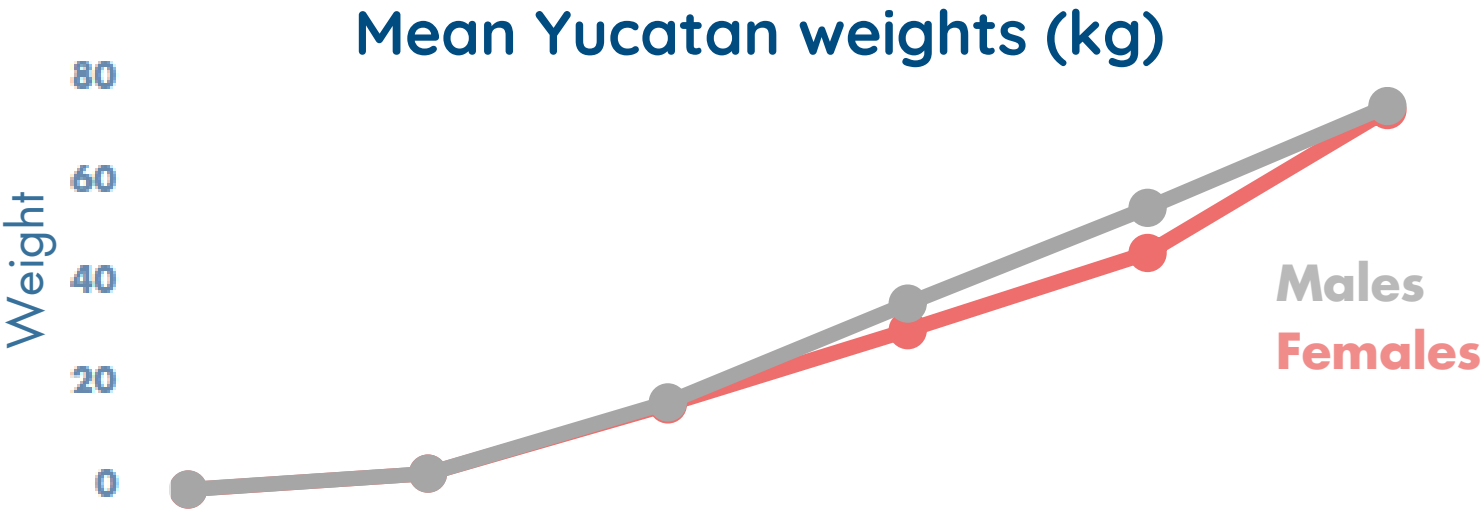
Pig as human model

Animal model of human disease is crucial in biomedical research. Swine are considered one of the major animal species used in translational research and are increasingly being used as human model as they share with humans similar physiologic and anatomic characteristics (Swindle et al., 2015).

Pig and human similarities

	Similar size to human (Swindle et al., 2014)
Omnivorous habits (Phillips et al., 1979) Similar digestive physiology (Swindle et al., 1994)	Similar brain morphology, histology, development and transmitter systems (Sondergaard and Merskin, 2012)
Foodstuffs metabolism (especially lipoprotein) (Jokinen et al., 1985; Mahley et al.;, 1975; Reitman et al., 1979)	Similar innate (Fairbairn et al, 2011) and adaptive (Butler et al, 2009) immune systems
Sedentary habits (used as obesity model) (Phillips et al., 1982)	Organ transplantation (Swindle et al., 2014)
Similar lungs (histology, anatomy and microbiology) (Judge et al, 2014)	Similar cardiovascular system (Shaper and Shaper, 1993)

Mean Yucatan weights (kg)



Means

Birth	weaning (25 days)	6 months	12 months	18 months	24 months
0,83 (± 0,15)	4,0 (± 0,7)	18,0 (± 2,5)	35,4 (± 6,8)	52,9 (± 5,4)	77 (± 4)

Sexual maturity

Beetween 4 and 6 months (Swindle et al., 2015)

Minipigs in biomedical research

Minipig breeds have a size more adapted to biomedical research, to laboratory housing, to long term experiment and to the use of human medical equipment and imagery.

ue3p-contact@inrae.fr