

Table 1. Summary of studies on yacon (*Smallanthus sonchifolius*) in vitro and in vivo in human or animal models.

Author(s)	Year	Stated Yacon Source	Component(s) Under Study	Study Design		Physiological Effect(s)
				Method	In Vivo (Human Study or Animal Model)	
Cocato et al. [10]	2019	Yacon root flour	FOS*		Rats (Wistar)	Improved mineral absorption
Machado et al. [19]	2019	Yacon root flour	FOS		Human (BMI 30 ± 2.4 kg m ⁻²)	Improved body composition
dos Santos et al. [65]	2018	Yacon leaf extract			Rats (Wistar)	Significant reduction in glycemia
Gomes da Silva et al. [20]	2017	Yacon syrup			Human	Improved satiety effects
dos Santos et al. [12]	2017	Yacon leaf extract			Rats (Wistar, diabetic)	Improved glycemic control
An et al. [89]	2016	Yacon root extract	Inulin		Mice (Kuming); Rats (Sprague Dawley)	Antidepressant-like effects
Baroni et al. [70]	2016	Yacon leaf extract	Phenolics		Rats (Wistar, diabetic)	Improved insulin sensitivity
da Silva et al. [77]	2015	Yacon root extract	FOS		Rats (Wistar)	Anti-cancer (against colon carcinogenesis on the early phases)
de Ford et al. [13]	2015	Yacon leaf extract		In vitro		Anti-cancer
Habib et al. [79]	2015	Yacon root flour			Rats (Wistar, diabetic)	Antidiabetic effects
Jimenez et al. [93]	2015	Yacon root	FOS		Rats (Wistar)	Improved intestinal microflora
Lee et al. [81]	2015	Yacon extract		In vitro		Anti-cancer (inhibited cell proliferation)
Russo et al. [27]	2015	Yacon leaf extract	Phenolics	In vitro		Antioxidant effects
Sousa et al. [82]	2015	Yacon tuber flour	Phenolics	In vitro		Antioxidant effects
Sugahara et al. [94]	2015	Yacon leaf extract	Phenolics	In vitro		Antioxidant effects
Scheid et al. [16]	2014	Yacon root powder	FOS		Human (>60 years old)	Diabetes management, no side effects observed
Vaz-Tostes et al. [15]	2014	Yacon root flour	FOS		Human (ages 2–5 years old)	Improved systemic immunity
Oliverra et al. [75]	2013	Yacon leaf extract		In vitro		Anti-inflammatory
Oliverra et al. [80]	2013	Yacon root extract	Fructan		Rats (induced type 1 diabetic)	Antidiabetic effects
Satoh et al. [95]	2013	Yacon tuber extract			Rats (Zucker fa/fa)	Improved insulin sensitivity
Utami et al. [88]	2013	Yacon tuber powder	FOS		Rats (Sprague Dawley)	Improved intestinal microflora
Velez et al. [42]	2013	Yacon root flour	FOS		Mice (BALB/c)	Regulated intestinal microflora
Campos et al. [39]	2012	Yacon root flour	FOS		Guinea pig	Improved intestinal microflora
Delgado et al. [41]	2012	Yacon root flour	FOS		Mice (BALB/c)	Improved immunity efficiency
de Moura et al. [83]	2012	Yacon root extract	FOS		Rats (Wistar)	Anti-cancer (against colon carcinogenesis on the early phases)
Roselino et al. [87]	2012	Yacon root extract	Fructan		Rats (Wistar)	Improved lipid profiles
Habib et al. [78]	2011	Yacon root flour	FOS		Rats (Wistar)	Antidiabetic and hypolipidemic effects
Lobo et al. [84]	2011	Yacon root flour	Inulin		Rats (Wistar)	Improved mineral absorption
Siriwan et al. [72]	2011	Yacon leaf extract		In vitro		Anti-cancer (inhibited cancer cell proliferation)
Siriwan et al. [73]	2011	Yacon leaf extract		In vitro		Anti-cancer (inhibited cancer cell proliferation)
Bonet et al. [96]	2010	Yacon root flour			Mice (BALB/c)	Improved intestinal microflora (growth of <i>Bifidobacteria</i> and <i>Lactobacilli</i>)
Genta et al. [68]	2010	Yacon leaf extract	Phenolics		Rats (Wistar)	Hypoglycemic effects
Joung et al. [71]	2010	Yacon leaf extract		In vitro		Antimicrobial effects
Raga et al. [69]	2010	Yacon leaf extract	Phenolics		Mice (albino)	Hypoglycemic effects
Yun et al. [92]	2010	Yacon root ingestion			Human (a 55-years-old woman)	Anaphylaxis ¹
Genta et al. [17]	2009	Yacon syrup			Human (obese with mild dyslipidemia)	Improve insulin-resistance, and satiety effects
Park et al. [11]	2009	Yacon tuber extract			Rats (Sprague Dawley, diabetic)	Improved glycemic control
Baroni et al. [67]	2008	Yacon leaf extract	Phenolics		Rats (Wistar)	Hypoglycemic effects
Geyer et al. [97]	2008	Yacon syrup	FOS		Human	Improved the colonic transit
Lobo et al. [85]	2007	Yacon root flour			Rats (Wistar)	Improved mineral absorption
Genta et al. [90]	2005	Yacon root flour	FOS		Rats (Wistar)	No adverse side effects observed ²
Valentova et al. [66]	2004	Yacon leaf extract			Rats (diabetic)	Anti-hyperglycemic effects

* FOS: fructooligosaccharides. ¹ A reported case of adverse side effects. ² Toxicity study.