

Claim	Target	Assay	Mechanism	Venom or other tool
Soothes sensitive skin (e.g. after sun, after shave)	TrpV1	patch clamp	Block	SensAmone P5 (Mibelle), Jellyfish
	TrpC	Patch clamp		Theraphosid (GsMTX-4)
	Histamine	Histamine ELISA		Bee - Mellitin like peptides (low doses)
	CGRP	CGRP Release		Spider or Anemone - Trp channel antagonists
	ASIC	Patch clamp		Spider, mamba or anemone
Antiageing, antiwrinkle (Botox-like cream)	epsilon NACR	Patch clamp	Block	Snake (elapids and vipers)
	muscular NaV			Theraphosid
	K2Ps,			Scorpion
	iCa2+	Live cell Imaging	Activate	Scorpion
Antiageing, skin firming, wound healing	Collagen	ELISA	Increase / prevent degradation	Snake (e.g. CaTx ii from <i>c.adamantus</i>)
	Elastin		Increase / prevent degradation	Various including Toad (e.g. Rhinella family)
	AGEs		Block RAGEs	gila monster saliva (e.g. Extendin 4)
	MMP		Block	Scorpion
Antiageing, skin regeneration	EGF	Cell layer scratch regrowth / Western blot	Activate	Snake and spider venom (derived EGF agonists from collaborator data)
	CTGF	qPCR (gene expression)	Up-regulate	king cobra
	Epigenetic targets		modulation	Scorpion and Theraphosid
	Keratinocyte Stem cells		Activate	Snake and spider
Antiageing, Anti pollution /antioxidants	Glutathione	Redox dyes	Up-regulate	Several venoms (e.g. Viper) contain glutathione like sequences
	Anti oxidants			Snake venom that blocks ROS generation pathway
	metal chelators			African viper venoms
Acne / oily skin	PPAR gamma	ELISA / Flow Cytometry /qPCR	Decrease	King cobra venom
	ap2			King cobra venom
	Ceramide			Ceramide binding
	cEBPa			King cobra venom
Acne / inflamed skin	TNFa	ELISA /Flow Cytometry /Phenotypic assays /qPCR	Decrease	Various snake venoms
	IL-6			
	IL-17a			
	IL-1b			
	COX-2			Toad toxin (Gamabufotalin surpresses cox-2)
Antibacterial	cell walls, receptors, ion channels	Growth inhibition / Agar diffusion assay	Decrease	Various (especially snake)
Hair growth / strengthening	wnt signalling, prostaglandins, GPR44, ceramide	qPCR / Imaging / Western blot	Block	Various snake arginine esterases
Skin Pigmentation	Tyrosinase and tyrosinase-related proteins	ELISA /Flow Cytometry /Phenotypic assays / qPCR / block mushroom tyrosinase activity	Block	Centipede venom, spider venom polyamines and cystein knot peptides