

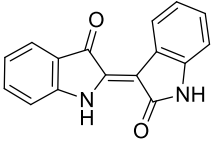
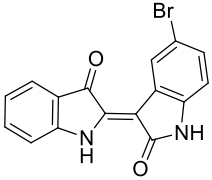
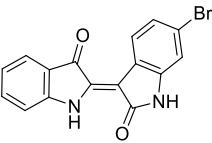
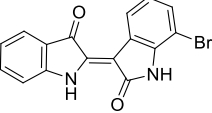
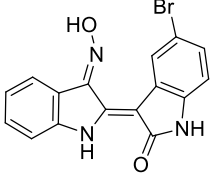
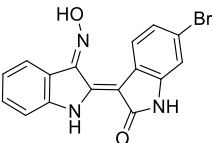
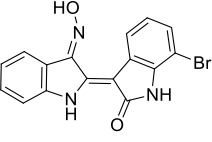


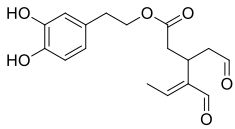
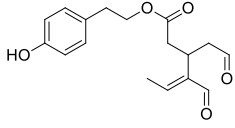
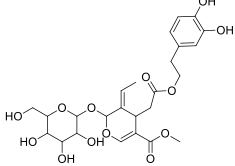
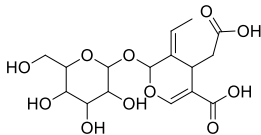
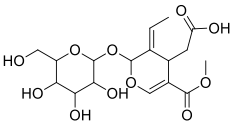
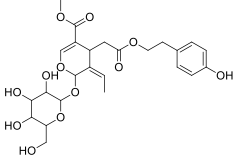
REFERENCE SUBSTANCES PORTFOLIO

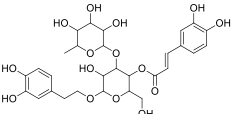
This document presents the reference substances of PharmaGnose S.A. portfolio. All the reference substances are supplied with comprehensive documentation, including Certificates of Analysis (CoA) and Material Safety Data Sheets (MSDS).

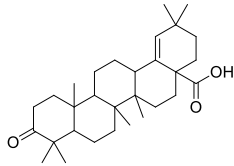
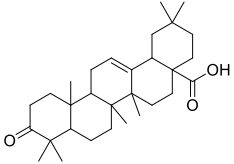
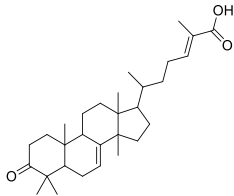
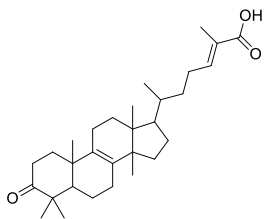
R&D Manager

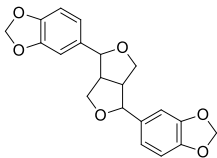
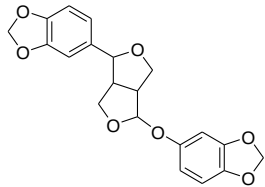
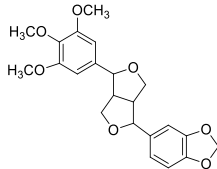
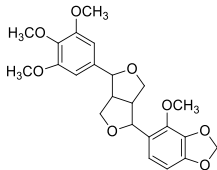
Dimitris Michailidis

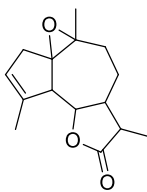
Indole alkaloids				
Product code	Name	Chemical Structure	Chemical Formula	Molecular Weigh
PGPC0001	Indirubin		$C_{16}H_{10}N_2O_2$	262.262
PGPC0002	5-Bromoindirubin		$C_{16}H_9BrN_2O_2$	341.159
PGPC0003	6-Bromoindirubin		$C_{16}H_9BrN_2O_2$	341.159
PGPC0004	7-Bromoindirubin		$C_{16}H_9BrN_2O_2$	341.159
PGPC0005	5-Bromoindirubin-3'-oxime		$C_{16}H_{10}BrN_3O_2$	356.174
PGPC0006	6-Bromoindirubin-3'-oxime		$C_{16}H_{10}BrN_3O_2$	356.174
PGPC0007	7-Bromoindirubin-3'-oxime		$C_{16}H_{10}BrN_3O_2$	356.174

Secoiridoids				
Product code	Name	Chemical Structure	Chemical Formula	Molecular Weigh
PGPC0008	Oleacein		$C_{17}H_{20}O_6$	320.341
PGPC0009	Oleocanthal		$C_{17}H_{20}O_5$	304.342
PGPC0010	Oleuropein		$C_{25}H_{32}O_{13}$	540.513
PGPC0011	Oleoside		$C_{16}H_{22}O_{11}$	390.339
PGPC0012	Methyl-oleoside		$C_{17}H_{24}O_{11}$	404.366
PGPC0023	Ligustroside		$C_{25}H_{32}O_{12}$	524.514

Phenyl ethyl glycoside				
Product code	Name	Chemical Structure	Chemical Formula	Molecular Weigh
PGPC0013	Verbascoside		$C_{29}H_{36}O_{15}$	624.587

Terpenic acids				
Product code	Name	Chemical Structure	Chemical Formula	Molecular Weigh
PGPC0014	Moronic acid		$C_{30}H_{46}O_3$	454.684
PGPC0015	Oleanonic acid		$C_{30}H_{46}O_3$	454.684
PGPC0016	Masticadienoic acid		$C_{30}H_{46}O_3$	454.684
PGPC0017	Isomasticadienoic acid		$C_{30}H_{46}O_3$	454.684

Lignans				
Product code	Name	Chemical Structure	Chemical Formula	Molecular Weigh
PGPC0018	Sesamin		$C_{20}H_{18}O_6$	354.353
PGPC0019	Sesamolin		$C_{20}H_{18}O_7$	370.352
PGPC0020	Aschantin		$C_{22}H_{24}O_7$	400.421
PGPC0021	Sesartemin		$C_{23}H_{26}O_8$	430.448

Lactones				
Product code	Name	Chemical Structure	Chemical Formula	Molecular Weigh
PGPC0022	Arborescin		$C_{15}H_{20}O_3$	248.317