

GREENPHARMA S.A.S.

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Who we are

Greenpharma (<http://www.greenpharma.com>) is a CRO SME of 12 people, specialised in natural compound studies for cosmetic, food and pharmaceutical industries. Built around an innovative technological platform, Greenpharma succeeded to gather expertise in wide and complementary fields such as chemoinformatic, pharmacognosy, medicinal & analytical chemistry, pilot scale extraction and formulation. This has led to a unique know-how in natural compound & extract selection, extract purification, metabolite measurement, homology modelling, virtual screening (e.g. Selnergy™), lead optimisation, ADMET prediction and database building. Greenpharma approach has led to several patents on bioactive (natural or synthetic) molecules and extracts.

What we do

Greenpharma provides natural or synthetic compounds for high throughput screening. It utilises *in silico* tools to select the most relevant molecules (we have access to a database of 20 millions commercial compounds).

We provide the industries of pharmacy, cosmetics and agro-food with innovative bio-active molecules through R&D projects.

Our services include:

- *Phytochemistry*: development of methods for extraction, purification (until pilot scale) and characterisation of metabolites in complex matrices, activity-guided fractionations;
- *Molecular modelling*: ligand and structure-based virtual screening, QSAR, in silico activity identification (eg drug repositioning, identification of activities for natural compounds...) with our proprietary tool Selnergy;
- *Knowledge management*: database design and building.
- *Medicinal chemistry*: synthesis on demand, lead optimisation, natural compound mimics (eg. Pyrazolotriazine...), library design...
- *Pilot extraction*: development of pre-industrial method to produce cosmetic/food ingredients
- *Formulation*: development of formulation for cosmetic and dermocosmetic products

Publications & patents

- Abboud D, Daubeuf F, Do QT, Utard V, Villa P, Haiech J, Bonnet D, Hibert M, Bernard P, Galzi JL, Frossard N. A strategy to discover decoy chemokine ligands with an anti-inflammatory activity. *Sci Rep*. 2015 Oct 7;5:14746.
- Grosse S, Pillard C, Massip S, Marchivie M, Jarry C, Bernard P, Guillaumet G. Ligandless Palladium-Catalyzed Regioselective Direct C-H Arylation of Imidazo[1,2-a]imidazole Derivatives. *J Org Chem*. 2015 Sep 4;80(17):8539-51.
- Bernard P, Scior T, Do QT. Modulating testosterone pathway: a new strategy to tackle male skin aging? *Clin Interv Aging*. 2012;7:351-61.
- Do QT, Medina-Franco JL, Scior T, Bernard P. How to Valorize Biodiversity? Let's Go Hashing, Extracting, Filtering, Mining, Fishing. *Planta Med*. 2015 Apr;81(6):436-49.
- Bernard P, Dufresne-Favetta C, Favetta P, Do QT, Himbert F, Zubrzycki S, Scior T, Lugnier C. Application of drug repositioning strategy to TOFISOPAM. *Curr Med Chem*. 2008;15(30):3196-203.
- Do QT, Lamy C, Renimel I, Sauvan N, André P, Himbert F, Morin-Allory L, Bernard P. Reverse pharmacognosy: identifying biological properties for plants by means of their molecule constituents: application to meranzin. *Planta Med*. 2007 Oct;73(12):1235-40.
- **WO2012175894**: pharmaceutical composition for treating dependency in human beings
- **WO2015140470**: cosmetic and pharmaceutical applications of gallic acid and gallic acid derivatives

Calls of interest

BIOTEC-02-2016: Bioconversion of non-agricultural waste into biomolecules for industrial applications

BIOTEC-03-2016: Microbial chassis platforms with optimized metabolic pathways for industrial innovations through systems biology

BG-08-2017: Innovative sustainable solutions for improving the safety and dietary properties of seafood

SC1-PM-09-2016: New therapies for chronic diseases

SC1-PM-08-2017: New therapies for rare diseases

SC1-PM-16-2017: In-silico trials for developing and assessing biomedical products

SC5-14-2016-2017: Raw materials Innovation actions

SC5-16-2016-2017: Raw materials international co-operation

SFS-09-2016: Spotlight on critical outbreak of pests: the case of *Xylella fastidiosa*

SFS-12-2016: Support for international research on animal health

SFS-14-2016: Understanding host-pathogen-environment interactions

SFS-10-2017: Research and approaches for emerging diseases in plants and terrestrial livestock

SFS-17-2017: Innovations in plant protection