

Research Topics in Pharmaceutical Biology
Natural products from plants and Traditional European Herbal Medicine

Analytics

Elaboration of monographs for the European Pharmacopoeia

- analytics of homeopathic mother tinctures
 - TLC
 - HPLC
 - GC
 - spectrophotometric determination

Development of new analytical methods for the standarization of drugs from plant origin

- application of chemometrical methods
- comparison between HPLC and NIR as analytical tools for identification and quantification of herbal drugs

Natural product pharmacology

Inhibitors of enzymes (amylases, proteases, lipases, ACE, NEP, elastase, etc.)

- plant extracts and natural products as decelerators of the digestion

Saponins as enhancers for drugs and biomolecules

- enhancers for targeted toxins
- enhancers for DNA/RNA transfection
- enhancers for toxic lectin activity

Proteases from plants as PAR activators

- proteases from Euphorbiaceae
- synergism between proteases and diterpenoic compounds from Euphorbiaceae

miRNA as active natural product from plants

Research in the field of bacterial resistance modifiers

- Natural products act synergistically together with antibiotics

Isolation and characterization of natural products

close collaboration with the Botanical Garden Berlin / Dahlem Center for Plant Sciences (DCPS)