

NATPHARMA- Reinforcement of research potential for the realisation of a complete drug development scheme from natural compounds

REFERENTE: prof. Ernesto Fattorusso - Dip. Chimica delle Sostanze Naturali

The aim of NatPharma is the growth and the strengthening of the RTD potential of NeaNat, a multidisciplinary research group based in Campania, one of the EU s convergence regions. NeaNat brings together the experience and the skills of two groups with a proven expertise in the fields of isolation and identification of natural compounds (NeaMARINE) and of computer aided drug design (NeaCADD). Both groups work in the same department (Dipartimento di Chimica delle Sostanze Naturali, University of Naples "Federico II").

The aim of NatPharma is to improve the effective capacities and research potential of NeaNat, granting the group the capacities for the successful realisation of a complete drug development scheme from natural sources to optimized drugs, including the identification, the clarification of the mechanism of action, the optimization and the biotechnological production of bioactive compounds from marine sources. Albeit our worldwide scientific excellence in the fields of research we are involved, we need new expertise in the fields of:

- biotechnology for the identification of genes involved in the biosynthesis of bioactive compounds and
- quantum-mechanical calculations (ab-initio methods) for the investigation of the interactions occurring between organic molecules (drug candidates) and biological targets containing metals.

NatPharma will address these aims by means of

- two-way secondment of staff researchers,
- recruitment of expert researchers,
- participation at workshops and courses,
- organization of seminars.

These actions will be integrated by the upgrading of the research equipment. Moreover, the twinning with other EU-based institutes, and the promotional activities planned will also foster a better integration of NeaNat at the European level, and will therefore foster the participation of our group in European excellence networks.

Coordinator

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