W09 Advances in clinical research of phytopharmaceuticals

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Clinical research in phytopharmaceuticals has improved a great deal especially with regard to complaints with GCP-guidelines and requirements. Phytotherapeuticals are generally used for the treatment of chronic and/or less severe diseases.
Very often – in spite of its reputation –, the demonstration of efficiency is scientifically more demanding than "standard therapeutical agents". Minor pharmacological effects require a high level of sophistication and scientific dedication to be detected in unambiguous way.
Very often completely new human pharmacological models have to be developed for these purposes.

W10 An new developed extract from butterbur (*Petasites hybridus* L.) is clinically efficient in allergic rhinitis (hay fever)

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Butterbur (*Petasites hybridus* L.) has traditionally been used against complains in intestine, urogenital tract, asthma and migraine. The extract (Ze 339) has been developed from leaves instead of roots by means of a new extraction technique. A particular clone is used to highly guarantee identity of the starting material (Petzell). The new, patented extraction procedure with carbon dioxide is twofold of advantage, first the active constituents are highly enriched and second the pyrrolizidine-alkaloids are loss. By the pharmacological action of this extract, the release of the inflammation mediators is blocked and the symptoms of allergic rhinitis (sneezing, rhinorrhoea, itching, nasal congestion) disappear. This action occurs within 30 minutes after oral administration. In addition the arachidonic acid cascade becomes interrupted, i.e. the leukotriene-synthesis is inhibited (1). The petasins are the active constituents in the extract, which modulate the leukotriene (2). The bio-availability of the active constituents is shown in a pharmacokinetic study. In a proof of action study the pharmacodynamic profile has been demonstrated (3). Clinical trials to demonstrate efficacy in allergic rhinitis follow different approaches, either by reduction of symptoms severity or by improvement in quality of life. The symptoms severity has been assessed using two different dosages of Ze 339 vs. placebo. Both arms with the active medication have been superior to placebo. Furthermore, 3 tablets have been superior to 2 tablets, indicating a dose-relationship. In a quality of life study, the efficacy of Ze 339 has been compared with cetericine (Zyrtec). Both active compounds were comparable effective (4). For the benefit risk evaluation, both the safety data from the trials and data from toxicological investigations have been assessed. Taken together, with new developed extract Ze 339 the allergic rhinits (hay fever) can efficiently and safely be treated.

References: 1. Thomet OAR et al. (2001) Clin. Exp. Allergy 31:1310-1320. **2.** Thomet OAR et al. (2001) Biochem. Pharmacol. 61: 1041-1047. **3.** Thomet OAR et al. (2002) Int. Immunopharmacol. 293. **4.** Schapowal A. (2002) BMJ 324: 144-146