of five well-known drug compounds were measured in order to verify the assay.

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P-5
Qualitative and quantitative analysis of the phenazepam tablets 12 years after manufacturing

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Objectives: The public and health authorities are responsible for the drug safety, efficacy and quality as well as everyone patient needs to have confidence in medicines. Therefore, prescription and dispensing of the drugs are strictly regulated. However, some groups of medicines, including psychotropic drugs, have been illegally manufactured, distributed and store in an inappropriate places. This study concerns chemical analysis of the phenazepam tablets that were found in the forest near city Daugavpils in Latvia. The tablets were packed in the sport bag and, according to the label, have been manufactured at factory Moschimpharm preparati, Russia, 12 years before the bag was accidentally found.

Methods: Mass spectrometry and gas chromatography were used to evaluate the identity and quantity of phenazepam and its possible transformation products in these tablets as well as in control samples. The tablets were compared also by weight, by color changes, by dissolving potency and content of the additional compounds. As control samples were used phenazepam in the tablets produced recently in the premises of the pharmacy is decreasing with the number of pharmacies that prepare medicinal preparations.

In the tablets without visible changes, spectral analysis revealed clear phenazepam spectra without presence of the undetectable transformation products. Gas chromatography analysis confirmed that tablets contain phenazepam in the quantity corresponding to that written on the label. Obtained mass spectra corresponded to the phenazepam spectra confirming its identity.

Conclusion: Found phenazepam tablets did not contain by-products therefore might be manufactured in the legal way and have passed quality control, possibly manufacturers labeling was true. However, time how long bag with tablets has been left in the forest was impossible to detect. The main concern is that there are some risk of illegal drug transit in Latvia.

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P-6
Pharmacokinetics of hydroxystilbenes of Rheum rhaponticum L.

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Objective: Hydroxystilbenes are plant polyphenols exerting a number of health-promoting effects. The aim of our work was to investigate the pharmacokinetics of hydroxystilbenes of garden rhubarb (Rheum rhaponticum L.) root in the mural blood.

Method: The ethanolic extract of R. rhaponticum root was administered i.p. to male BALB/c mice and the mice were killed by decapitation in 5, 10, 30 and 45 min and, 1, 2, 3, 4 and 24 h after administration. The blood was collected to study the pharmacokinetics of hydroxystilbenes and their major metabolites by tandem LC-DAD-MS/MS.

Results: After the administration of R. rhaponticum extract, two resveratrol, piceatannol and rhapontigenin glucosides, as well as one deoxyrhapontigenin glucoside, resveratrol, rhapontigenin and deoxyrhapontigenin glucosides glucuronides, as well as piceatannol and rhapontigenin glucoside sulphates were identified and quantified. Most of the hydroxystilbenes found had the maximum concentration at about 10th min after i.p. injection, most of the metabolites around the 15th min, except rhapontigenin glucuronide and especially deoxyrhapontigenin glucuronide, that were remarkably more stable in blood. After 3 h, none of the mentioned hydroxystilbenes or their metabolites were any longer detectable in the blood. No anthraquinones or naphtalenes or their metabolites were detectable in the blood. No anthraquinones or naphtalenes or their metabolites, which also contain in the R. rhaponticum root and in the ethanolic extract, were detectable in the blood of the test animals.

Conclusion: We demonstrate that the bouquet of health-promoting hydroxystilbenes of four main groups – derivatives of trans-resveratrol, trans-piceatannol, trans-rhapontigenin and trans-deoxyrhapontigenin – that has been isolated from the roots of R. rhaponticum is also present in blood after the administration of extract to mice. These compounds are metabolized and removed from the murine blood during 2–3 h after i.p. injection of the extract.

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P-7
Studies on extemporal drug storage and expiration dates

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Objective: The number of pharmacies that prepare medicinal products on the premises of the pharmacy is decreasing with