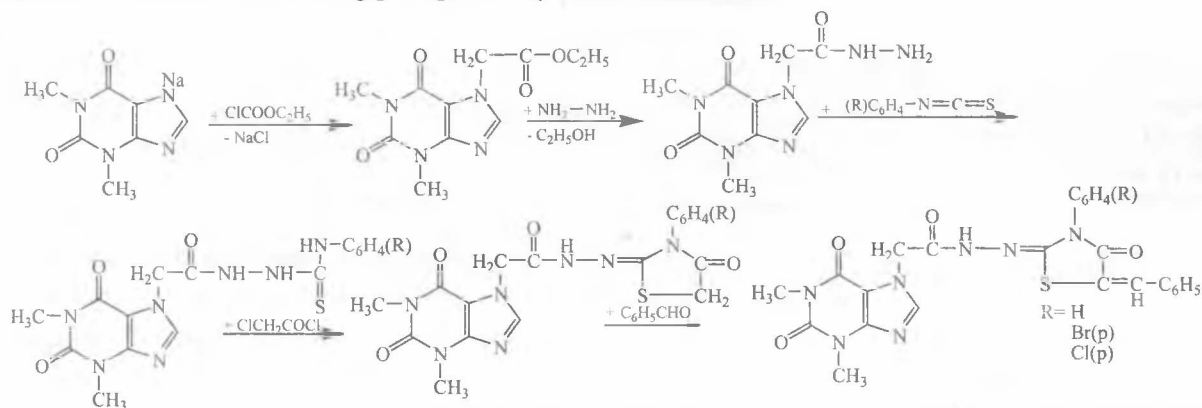


Type 2 is far more common and it is characterized by disorders in insulin secretion and insulin resistance. This type of disease accounts for 90 to 95% of all diabetic patients. Diabetes claims four million lives every year and it is a leading cause of blindness, kidney failure, heart attack, stroke and amputation.

**Motivation and objectives:** The classical therapy of the T2DM mellitus has four categories of pharmacological agents: sulfonylureas and glinides, biguanides, thiazolidinediones and alpha-glucosidase inhibitors. In the development and progression of diabetes and its complications, it is generally accepted that the increased oxidative stress plays a key role too. Diabetes is usually accompanied by an increased production of free radicals or impaired antioxidant defences. The aim and the objectives of this study is synthesis and antioxidant potential evaluation of new benzyliden-thiazolidine-4-one derivatives as potential antidiabetic drugs.

**Materials and methods:** Benzylidine-thiazolidin-4-one derivatives with xanthine structure were obtained in several steps. Starting from 1,3-dimethyl-xanthine by reaction with chloroacetyl chloride the corresponding ester was obtained, that with hydrazine hydrate leads to the hydrazide appropriate. This intermediary by reaction with aryl isothiocyanates (phenyl-, 4-chloro-phenyl- and 4-bromo-phenyl isothiocyanate) lead to the thiosemicarbazides that are cyclised with chloroacetyl chloride. In the last step the obtained thiazolidine-4-ones were condensed with benzaldehyde. The antioxidant potential of the compounds was evaluated using phosphomolybdenum method.



**Results:** By chemical modulation of the 1,3-dimethyl-xanthine at nitrogen from 7 position, new thiazolidine-4-ones and benzylidene-thiazolidine-4-ones were synthesized. The intermediary and final compounds were purified by recrystallization and flash chromatography. In the IR spectra all functional groups were found which is an argument to confirm their structure.

**Conclusions:** Starting from 1,3-dimethyl-xanthine new thiazolidine-4-one derivatives with xanthine structure were obtained. The compounds were physico-chemical characterized and their structure was confirmed by IR spectroscopy. The antioxidant potential was also evaluated.

**Keywords:** xanthine, thiazolidine-2-one, antioxidant potential.

## PHARMACY CUSTOMERS' CONFIDENCE IN PHYTOTHERAPY

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**Introduction:** Phytotherapy is an important part of modern medicine today. It is actively developing and improving while new potentials are constantly being discovered and broadened in scientific as well as in practical uses.

**Goal:** To identify the popularity as well as the level of trust regarding phytotherapy shown by the pharmacy customers in Republic of Moldova.

**Methods:** The study has been realized in one of the community pharmacy chains in Chişinău. During the study, 271 community pharmacy customers were questioned during their visits in pharmacy. The data were collected, processed using SPSS 20.0 statistical tool.

**Results:** According to the results of the analysis, 79,7% of the participants confirmed that they used phytotherapeutic methods frequently. According to the questionnaires, women were more likely than men to trust these methods (62,2% versus 37,8%). More than half of the interviewed consumers (54,2%) actually prefer herbal medicine for some sorts of prophylactic treatments. Only one fifth (20,3%) of the participants, most of which are 20 - 24 (38%) years old, do not use these methods. However, interviewers aged 25 and older start using phytotherapy more and more (95,9%). 62% of all participants stated that phytotherapy should be used with synthetic treatments together in order to achieve better results. However, a quarter of the respondents are confident that herbal medicine treatment can be basic in any case (24,7%).

Searching for the additional information about phytotherapy as well as for methods of treatment using herbal medicine, the majority of the participants (57,6%) use internet sources as means of research while 26,2% prefer to consult a pharmacist, 10% consult a doctor, and the rest of the consumers seek for an advice and information from the television, various literature, and family and friends.

**Conclusion:** Nowadays, modern society trusts phytotherapy and uses herbal medicines as an additional method of treatment. Therefore, there is a need for developing of phytotherapy as a basic method of treatment and to increase pharmacy assortment of herbal medicines.

## EVALUATION OF THE STATE DRUG POLICY IMPLEMENTATION

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**Introduction:** The State drug policy (SDP) approved by the Decision of Parliament, No.1352-XV from 03.10.2002 is an essential element of the national health policy. It serves as a basis for the development of the pharmaceutical system, drugs legislation and pharmaceutical activity.

**The purpose** of this study is to evaluate the degree of the achievements of the State drug policy for the period of 2002-2012.

**Materials and methods:** In order to achieve the established tasks, it was performed an analysis of the medical and pharmaceutical legislation of Republic of Moldova, of the normative acts issued by the Government, as well as interviews with those responsible persons from the Ministry of Health, Medicines Agency, as well as the logical, comparative and situational analysis.

**Results:** For the implementation of SDP, in the studied period, the Government of Republic of Moldova approved 4 schedules (GD No.276/2003; GD No.202/2004; GD No.617 /2005; GD No.103/2008) which cumulatively met 81 actions. 11 items had to be realized until 2003, 8 till 2004, 13 till 2005, 15 till 2006, 6 till 2006 and 28 all the time. The result of the analysis showed that from the total number of