Gradvohl, Edina

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EDINA GRADVOHL
(SEMMELWEIS EGYETEM, BUDAPEST)

HEALING KITCHEN

The paper examines what kind of cooking materials (honey, vinegar wine, garlic etc.) were used in ancient healing as well. Besides, on the basis of the 'pharmacobotanical researches' it investigates whether the ingredients, which can be found in the recipies of Soranus could be effective.

Keywords: Apicius, food, roman cooking, plants, ancient healing, abortion, contraception

The Prodigal Cook

M. Gavius Apicius, who was a gourmand and lived in the 1st century A.D., left us a cookbook, which consists of 10 books. Tacitus writes about him in *Annales* in the following way (Ann. 4. 1.): *"Born at Vulsinii, the son of Seius Strabo, a Roman knight, he attached himself in his early youth to Caius Caesar, grandson of the Divine Augustus, and the story went that he had sold his person to Apicius, a rich debauchee."* Seneca tells us in *Consolation to Helvia* (10. 8) that he squandered an enormous fortune and piled up a considerable amount of debt. As a consequence, he committed suicide as he could not bear the shame of his actions. Both authors condemn him because of his loose life. Despite all, Apicius did serious work as a culinary author (if the writer of this book and the prodigal gourmand were really identical). In the first part of his book he gives advice to cooks and to all who like gastronomy. He divides the other chapters according to the structure of today's cookery books: fixation of ingredients and food, dips, the making of wine, food made with vegetable, mixed food (vegetable and meat), gourmand food, poultry, meat made from four-legged animals, frutti di mare, fishes, and his own recipes. The spices and ingredients we can read about in his recipes are still in use in gastronomy up till today. Nevertheless, there are some plants and vegetables among them that can not be properly identified.

The fact that conserving was known as early as in the ancient times, is clearly revealed by Apicius' book (*De re coquinaria* 1. 12. 19.): *"To keep*

grapes: Take perfect grapes from the wines, place them in a vessel and pour rain water over them that has been boiled down one third of its volume. The vessel must be pitched and sealed with plaster, and must be kept in a cool place to which the sun has no access. Treated in this manner, the grapes will be fresh whenever you need them. You can also serve this water as honey mead to the sick. Also, if you cover the grapes with barley (bran) you will find them sound and uninjured."

The basis of the fixation consisted of vinegar, salt, honey and mustard (sinapis = seed or oil) or it was advised to simply put the food waiting to be conserved into a bowl, which was hermetically closed by gypsum. The effectiveness of the latter method is proved by the fact that seven bronze vases containing honey were found from the 6th century B.C. at the excavation at Paestum. In these vases the honey was still mellow.[1]

Furthermore, many species of spices, e.g. garlic, pepper, caraway, parsley, mint, dill, bay leaf, lovage, ginger, rue, thyme, savory, coriander were already known and used by people in the Antiquity. People liked mixing these spices together or blending them with honey, vinegar, wine and mustard. Let us find an example for this.

Soufflé in the style of Apicius (*De re coquinaria* 4. 2. 141): *"The Apician dish is made thus: Take small pieces of cooked sow's belly [with the paps on it]*[2] *pieces of fish, pieces of chicken, the breasts of figpeckers thrushes [slightly] cooked, [and] whichever is best, mince all this very carefully, particularly the figpeckers [the meat of which is very tender]. Dissolve in oil strictly fresh eggs; crush pepper and lovage, pour over some broth and raisin wine, put it in a saucepan to heat and bind with roux. After you have cut all in regular pieces, let it come to the boiling point. When done, retire [from the fire] with its juice of which you put some in another deep pan with whole pepper and pignolia nuts. Spread [the ragout] out in single layers with thin pancakes in between, put in as many pancakes and layers of meat as is required to fill the dish; put a final cover of pancake on top and sprinkle with pepper after those eggs have been added [which serve] to tie the dish."*

Plants and Trees: Your Health Needs These

Where else can the raw materials used during cooking come handy? For instance, garlic, which comes from Central Asia is not only perfect when

1 BRODERSEN (1999: 140).

2 Words in square brackets are insertions by the translator.

marinating pork, but can also be used for other purposes. This plant, which has a typically strong smell and hot taste, was already known and consumed in Ancient Egypt. Besides, aphrodisiacs and magic potions were also made from it and at the same time it was considered a very important ingredient in the making of various healing remedies. Aristophanes describes in his book, *Plutus* (715–725), what kind of ointment Asclepius, the mythological God, suggests to cure Neoclides' bleary eyes with: *"He first prepared an ointment for Neoclides; he threw three heads of Tenian garlic into the mortar, pounded them with an admixture of verjuice [720] and mastic, moistened the whole with Sphettian vinegar, and, turning back the patient's eyelids, applied his salve to the interior of the eyes, so that the pain might be more excruciating. Neoclides shrieked, howled, sprang towards the foot of his bed and wanted to bolt, but the god laughed and said to him, "Keep where you are with your salve; [725] by doing this you will not go and perjure yourself before the Assembly."*[3]

The same recipe can also be found in another work of Aristophanes, *The Assembly Women* (*Thesmophoriazousae* 404–406), where Blepyrus advises a treatment for Niocleides' eyes: *"Pound together garlic and verjuice, add to this mixture some Laconian spurge*[4]*, and rub it well into the eyelids at night. That's what I should have answered, had I been there.*"[5]

The basic ingredient of both recipes was garlic that had to be crushed and mixed with verjuice and mastic (Ferula assa–foetida) or spurge, and then rubbed into the eyes to cure the inflammation. The former method was

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3 http://classics.mit.edu/Aristophanes/plutus.html. With slight modifications.

4 Tithymallos is the same as the plant called Euphorbia from Euphorbiaceae, about which Theophrastos writes in his work (*HP* 9. 11. 7–9) in details. Dioscorides from the 1st century A.D. and Plinius from the 2nd century A.D. describe tithymallos is further details. In *De materia medica* (3. 82.) Dioscorides presents a plant, euphorbion which is a tree from East Africa and produces spicy juice. He probably writes about a species of Euphoria that grows in the middle and the western part of Africa. If we cut the trunk of this plant, it leaks a milky–white juice, which hardens when contacting air. This resin is very strong, its taste is acid and above all, poisonous. Dioscorides writes that this plant mitigates ophtalmia. In his work, *De materia medica* (4. 164.) he provided connection between tithymallos and member euphorbia (spurge). In this chapter he differentiates between seven different spices of tithymallos (spurge). Plinius describes eight subspecies of tithymallos (*NH* XXVI 8, 39, 62.) See Valderas (1992: 245). Aristophanes could not be acquainted with the term of euphorbian, because this plant was named after the doctor of Juba II., who was called, Euphorbos, and lived in the 1st century A. D. Totlin identifies tithymallos with Euphorbia Peplius L., but according to Dioscorides, it can not cure the eyes (*De materia medica* 4. 167–168).

5 http://classics.mit.edu/Aristophanes/eccles.pl.txt. With slight modifications.

probably extremely painfull as garlic alone is widely known to be hot[6], and if we blend it with vinegar, the result will be even worse.

What is more interesting for us is that in the Ancient Times abortifacients and contraceptives were made from this seasoned spice. Besides, it was a very important healing remedy by itself or at times mixed with other substances to cure various diseases from the time of Hippocrates (5th century B.C.) to that of Soranus and Galenus (2nd century A.D.). Naturally, people thought that garlic had a magic power, which belief was held true even in the Middle Ages when it was used to repel witches, demons and revenants (vampires).

The father of medicine, Hippocrates of Cos (or one of the authors of the Hippocratic Corpus) writes about garlic in the following manner in one of his works, *On Affections* (*De affectionibus* 54.): *"Of vegetables the garlic, both boiled and baked is diuretic and laxative and promotes menstruation. Onions are diuretic because their juice possesses a certain acridness that makes urine flow; use garlic and onions for this purpose, but do not administer them to the ill."* Cato, the Roman writer and politician who lived in Rome in the 3rd and 2nd century B.C., in his book, *On Agriculture* (*De agri cultura* 70.) tells us about the method of making of some food and medicine, (in this book the two categories (food and medicine) often coincide). In these recipes garlic is also present. It is very surprising that he lists it as an ingredient of the medicine that is used in curing oxen: *"Medicine for oxen. If you expect sickness, administer while still healthy: 3 crystals salt, 3 bay leaves, 3 stems leek, 3 cloves Levant garlic, 3 cloves garlic, 3 grains incense, 3 whole plants savin, 3 leaves rue, 3 shoots white bryony, 3 white beans, 3 live coals, 3 pints wine, all to be gathered, chopped together and administered in the open air, and the person administering it should not yet have eaten. Administer this potion to each beast daily for three days, and apportion it so that, with the three doses to each beast, all is used. Ensure that the beast and the person administering are both standing up in the open air. Use a wooden dish."*

We don't know whether this medicine was useful for oxen, but we can establish that the rational treatment was not separated from the magical elements of healing (for instance, the one who gives the remedy to the patient can not eat anything before this action, and he or she has to make this medicine standing aloft).

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6 If the inflammation goes together with secretion, for example conjuctivitis, then this disease was allegedly caused by a virus or a bacteria. Therefore, some kind of antibiotics or anti–virals were needed to treat this disease. In this case, garlic proved to be the best cure. If we squeeze the garlic bulbs, a substance called alicin is released, which provides excellent protection against certain pathogenic microorganisms. On entering the body, alicin can prevent the spreading of bacteria.

Liquid Drugs

The method of making wine and beer were not unknown in the Antiquity. Probably the process of brewing and wine making (and their taste) was the only difference from today's beverages. Both beverages were very important in people's everyday life, because in the absence of clean water they were used as refreshments in hot weather. Furthermore, people believed that out of these two drinks wine had a healing power (it was rare that beer was assigned the same role). A small amount of wine was panacea in that time (opinions differ on the amount that was considered "small"). Wine was used not only for drinking – although it was often drunk and in very large amounts –, but for making different food and as ingredient of medicines. The author of the Hippocratic Corpus describes exactly in one of his books, *Regimen* (*De diaeta* 2. 52) what kind of effect the drinking of different types of wines (sweet, dry, bitter, white and red) have on the human body: *"Harsh white wine heat without drying and they pass better by urine than by stool. New wines pass by stool better than other wines because they are nearer the must, and more nourishing; of wines of the same age, those with bouquet pass better by stool than those without, because they are riper, and the thicker wines better than the thin."*

On the basis of this citation, we can establish that according to the author, wine had diuretic and laxative effect. It should be noted that the most significant part of his recipes was written in the spirit of the age, on the basis of observations, experiences and recital of people.

Cato outlines in his work, *On Agriculture* (*De agricultura* 115), how we can make wine in order to cure constipation: *"When the wines have been trenched round, mark with dye, so as not to mix with ordinary wine. Place three bunches of black hellebore around the roots and cover with earth. At vintage, keep aside what you gather from these wines. Add 1 cyathus to other drink: it will move the bowels, purging you thoroughly on the day after, with no ill effect."*

In addition, Cato advises other recipes made with wine which bring relief not only for those patiens, who suffer from constipation, but also for those suffering from urinary disorder (*Agr*. 114–115.).

In his work, *Use of Liquids* the author of the Hippocratic Corpus tells us in more details about the beneficial effect wine has on diseases (*De humidorum usu* 128. 5.). He regulates how and in what ways we can use the different types of wines to cure diseases more effectively. *"Rules: for the sake of cooling, let wine as cold as the coldest water be applied by affusion, infusion or bathing; as astringent, red wine, and wool soaked in it, as*

beet leaves and linen cloths are often immersed; another astringent, like ivy leaves, is white wine." Accordingly, we can conclude that wine has not only a laxative and diuretic effect, but also plays a very important role in the treatment of other diseases.

Hippocrates, Aristotle, Galen and Soranus – to mention only a few great names – tell us about the beneficial effect of wine. Aristotle writes in his work, *History of Animals* (*Historia Animalium* 603b) that pigs can suffer from three types of diseases. One of them is called anthrax, which attacks the foot, and occasionally the mouth (This is a foot-and-mouth disease). The two other diseases lead to dehydration. One of the two formerly-mentioned diseases causes pain and the feeling of heaviness in the head, and the other induces diarrhoea which leads to dehydration. The latter is incurable, but in case of the former one, we can decrease pain if we pour wine in the nose of the pigs or if we rinse their snouts with wine. Similarly to Aristotle Cato describes, in his work, *On Agriculture* (*De agricultura* 73.), what we must do, if we want to keep oxen healthy: *"Each year at the time when the grapes begin to change colour give the oxen a medicine to keep them healthy. Wherever you see a snakeskin pick it up and keep it so that you will have one when you need it for this. Snakeskin, emmer, salt, mother-of-thyme: chop these all together with wine, and give to all the oxen to drink."*

Soranus also emphasises the importance of wine in his work, *Gynaecology*. He describes in this book that a small amount of wine is beneficial for pregnant women because it eases their pain and helps them to relax. It is surpising that just like the Hippocratic Corpus he mentions wine as being styptic (*Gynaecia* 1. 50.): *"And if because of vomiting there is need of a more vigorous styptic action, one must use plasters, for instance dry dates soaked or boiled in tart wine or in diluted vinegar; apples or quinces boiled similarly, either alone or combinated with the dates, or in addition to one of the cerates mentioned."*

In his work, Soranus also refers to wine as contraceptive and abortifacient (*Gynaecia* 1. 65.): *"**Before the act with moist alumn, or with galbanum together with wine;** or put a lock of fine wool into the orifice of the uterus; or, before sexual relations to use vaginal suppositories which have the power to contract and to condense."*

Abortifacient (*Gynaecia* 1. 61.): An abortive vaginal suppository: *"Of rue leaves 3 drachmas, of myrtle 2 drachmas and the same of sweet bay, mix with wine in the same way, and give her a drink."*

Based on the above-mentioned citations, we could say that wine is not only a styptic, a remedy, a laxative and a diuretic, but it also helps preventing

conception and even has abortifacient properties. In addition, as we have seen above, it is used in treating not only human beings, but also animals.

The Truth is in Vinegar

Vinegar, like wine was also used in all areas of life. Our chef, Apicius mentions vinegar in many of his recipes as a very important ingredient for pickling, curing, and conservation (*De re coquinaria* 1. 12. 11): *"To keep hard–skinned peaches: Selected the best and put them in brine. The next day remove them and rinsing them carefully set them in place in a vessel, sprinkle with salt and satury and immerse in vinegar."*

One of the authors of the Hippocratic Corpus also writes about vinegar. He describes in one of his books, *Use of Liquids* (*De humidorum usu* 128. 4.) that: *"Vinegar has about the same effect on the skin and joints as sea-water; it is more powerful when applied in affusions and vapour-baths."* Besides, he also considers it to be the most effective antidote against leprosy. (*De humidorum usu* 128. 4.)

In his other book, *Epidemics,* he mentions that the best antidote againts the pain in the lower limbs, the hip and the legs is that we make a mixture of sea–water, vinegar and hot water, and then dip a sponge in it to cream our limbs (*De morbis popularibus* 5. 58.). Soranus also often mentions vinegar in his book, *Gynaecology*, which was written for midwives. What is even more interesting for us is that according to him, it could be used to promote menstrual flux (*Gynaecia* 1. 63): *"Of rocket seed one obol, of cow parsnip one–half obol; drink with oxymel.*"

Vinegar is a very important culinary ingredient, and at the same time helps treating joints and promotes menstrual flux.

As Sweet as Honey

Just like the above-mentioned liquids, honey could also be found in all areas of life. In gastronomy, it was used for instance by Cato and Apisius, as a sweetener, a preservative and an ingredient of marinating. Besides, it was also a very important ingredient in healing. It was used in ointments to treat ulcers, as a remedy for coughing and internal organs. In addition, it was used for the expulsion of tapeworms.

It is to be noted that the quality of honey depending on the regions or the flowers visited by the bees, showed a broad variety. One of the most

expensive export goods was the Athenian high-grade honey in Attica. At the same time people also knew a few types of honey which could be dangerous. Xenophon reports about a poisonous honey which was produced by bees in the land of Colchis, near the Black Sea (*Anabasis* 4. 8. 20–21.): *"Here, generally speaking, there was nothing to excite their wonderment, but the numbers of bee-hives were indeed astonishing, and so were certain properties of the honey. The effect upon the soldiers who tasted the combs was, that they all went for the nonce quite off their heads, and suffered from vomiting and diarrhoea, with a total inability to stand steady on their legs. A small dose produced a condition not unlike violent drunkenness, a large one an attack very like a fit of madness, and some dropped down, apparently at death's door. So they lay, hundreds of them, as if there had been a great defeat, a prey to the cruellest despondency. But the next day, none had died; and almost at the same hour of the day at which they had eaten they recovered their senses, and on the third or fourth day got on their legs again like convalescents after a severe course of medical treatment."*

The poisoning was probable caused by the kind of azalea which contains andromedotoxin as its active ingredient.[7]

Aristotle, in his work, *History of Animals* (*Historia animalium* 553, 624–627) wants to know what kind of bees there are, how they live their life inside and outside the hive, how they share the work between themselves in the beehive, how they organize the collection of the pollens, and in which season they produce the finest honey.

Similarly to Aristotle, Varro (2nd and 1st centuries B.C.) tells us about speices of bees, bee–keeping, bee–hives, curing the diseases of bees and about producing and selling various types of honey throughout several chapters in his book, *On Agriculture* (*De re rustica* 3. 16. 4–17.). Besides, he also mentions that (*De re rustica* 3. 16. 23): *"Propolis is the name given to a substance with which they build a protectum (‚gable') over the entrance opening in front of the hive, especially in summer. This substance is used, and under the same name, by physicians in making poultices, and for this reason it brings even a higher price than honey on the Via Sacra."*

Hippocrates, who lived considerably earlier than Varro, noted in his work, *Regimen* that honey is very good for laxative purposes and constipation (*De diaeta* 2. 41.). Naturally, it depends on what kind of patients we give honey to and what other kind of substances we mix it with.

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7 LENDLE (1995: 286–287). This poisonous honey seems to have been obtained from the flower of a kind of azalea, still common in those parts.

In his work, *Gynaecology* Soranus refers to honey as a type of contraceptive (*Gynaecea* 1. 61): *"It is also aids in preventing conception to smear to orifice of the uterus all over before with old olive oil or honey or cedar resin or juice of the balsam tree, alone or together with white lead.*"

If we examine all the citations, we will see that all "ingredients" right from garlic, through wine, vinegar to honey were only used in mixture with other plants, liquids or ingerdients. The most important question of gastronomy is what we should mix together to get the most delicious taste ever. Besides, it is also important that the gourmand can find the right proportions of the ingredients he uses. It is vital how much oil, wine or galic he uses in cooking roast meat. Certainly, there was also a special exception: pepper. Pepper was well known and widespread in the Roman Empire, although it was very expensive. In the Middle Ages, pepper was also a luxury that could only be bought by wealthy people, and because of this the food of the rich contained a lot of pepper to show off their wealth.[8]

Take one drachm of coriander

The question arises as to whether it is always the herb or in some cases the liquid as well (wine, vinegar) which is responsible for the induced effect. In the case of cooking the answer is not that difficult. For example, if a kitchen boy puts too much salt or pours too much vinegar in the pumpkin chowder with dill green on his first exam, then he had better finish his studies. One needs to have a special sense of cooking. This does not hold in the case of making medicines as the answer here is more complex. It was first the midwives, then the physicians and finally the medical women who experimented with what they have to mix with what, in what quantity and especially in what propotion to reach the best effect for healing.[9] Today, what we are most interested in is how we can verify the healing effect of the given plants and recipes. It is also intriguing, because non-medical (herbalist) practitioners like going back to ancient medicinal plants. In the following table, I will show the abortive and contraceptive quality of plants and spices mentioned in Soranus' *Gynaecology (Gynaecea)*, then I will examine how many plants of them can be still used with the similar purpose today, and how many plants of Soranus Hippocrates, who lived 700 years earlier than him, knew.

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8 MONTANARI (1994: 77–83).

9 Midwives as source of medical knowledge see KING (1998: 136, 144, 233).

Abortive and contraceptive quality of herbs and spices mentioned by Soranus[10]

Name of the plant	Latin name	Abortive quality	Contraceptive quality
Marsh–mallow	ALTHAEA OFFICINALIS L.[11]		
Aloe	ALOË VERA L.[12]	+	+
Mugwort	ARTEMISIA VULGARIS L.[13]	+	+
Absinth, absinthium, wormwood	ARTEMISIA ABSINTHIUM L.[14]	+	+

10 On the basis of Farnsworth.

11 The *Greek* verb (althainô) means to "heal". According to Scarborough some people identify marsh–mallow with mallow because of their similarity (Malva rotundifolia L. or Malva sylvestris L.). SCARBOROUGH (2010: I. 148). On the other hand, Theophrastos already makes a distinction between the two species. See THEOPHRASTOS (*HP*, 9. 18. 2). These two species are the members of the Malvaceae. The leaves, the root, and the flower of the herb provide the drug, which is applied all around the world as mucous glaze for catarrhal diseases of the trachea and the digestive organs. See RÁPÓTY – ROMVÁRY (1996: 133–134).

12 The components of aloe are aloin and aloesin A; B, which are toxic. When we *consume them* in *excessive* amounts, it can *cause* diarrhea and colic. Besides, the tea made from the leaves of aloe can cause bleeding and miscarriage. See BORDÁS – TOMPA (2006: 17, 49). Scarborough notes that "aloe" did not appeare in the early Greek studies of medicine. See SCARBOROUGH (2010: VIII. 138). I think, this does not mean, that it was not widely used, but that aloe was thought to be the same as aloe tree. Nevertheless, the two are not identical. According to Farnsworth, it has both abortive and contraceptive qualities. FARNSWORTH (1975: 551, 567).

13 According to Farnsworth, it has both abortive and contraceptive qualities. FARNSWORTH (1975: 549, 559).

14 Dioscorides describes in his work, *De materia medica* that we can use the wormwood as a mixture with other substances. The description reveals that we can use it as poultice and ointment, and besides, we can make drink or food from it. In all cases, they also recommended it for relieving pain (for painful eyes, earache, sore throat). What is even more important for us is that if women drink it or use it mixed with honey, it could cause menstrual bleeding. See DIOSCORIDES (3. 23. 1–6). The drug was used alone or blended with tea in carminative and vermifugal teas that stimulate appetite, digestion and the activity of the bile. See RÁPÓTHY – ROMVÁRY (1996: 137–138). According to Farnsworth, it has both abortive and contraceptive qualities. See FARNSWORTH (1975: 549, 559).

Name of the plant	Latin name	Abortive quality	Contraceptive quality
Sweet–bay, (bay– tree)	LAURUS NOBILIS L. [15]	+	
Squirting cucumber	ECBALLIUM ELATERIUM L. [16]		+
Rocket	ERUCA SATIVA L.		
Ginger	ZINGIBER OFFICINALE L.[17]	+	
Lupine	LUPINUS ALBUS L.[18]	+	
Iris	IRIS FLORENTINA L.[19]	+	
Dried fig	FICUS CARICA L.[20]		
Cress	LEPIDIUM SATIVUM L.[21]	+	

15 Dioscorides describes (*De materia medica*) that due to both the warmth and the softness of the sitting bath, which was made of sweet bay, it could cure the ailments around the bladder and the uterus. See DIOSCORIDES 1. 78. 1 According to Farnsworth, it has abortive quality. See FARNSWORTH (1975: 565).

16 In his work (*Gyn*. 3. 12.), Soranus writes that there are some plants which one must repudiate: *"For such are the remedies which among the ancients had a reputation for bringing blood: e.g. squirting cucumber, blach hellebore, pellitory, panax balm, drugs which women have often used also for abortion.*" Besides, Soranus provides us with an exact recipe about the use of squirting cucumber as an abortifacient. See SORANUS (*Gyn*. 1. 20. 64.) In the third chapter, he warns us that these "prohibited" plants can have serious irritative effect on our body and thus they are to be avoided regardless of the purpose we wanted to use it for. The squirting cucumber can not be eaten, because it is gourd. It is interesting for us as when the squirting cucumber is ripe and we touch it, it shoots its seeds like a rocket. According to Farnsworth, it has contraceptive quality. See FARNSWORTH (1975: 549).

17 According to Farnsworth, it has abortive quality. See FARNSWORTH (1975: 577). See for instance, KAZAY (1900: IV. 382–83).

18 It is a poisonous plant. See BORDÁS – TOMPA (2006: 11). According to Farnsworth, it has abortive quality. See FARNSWORTH (1975: 566).

19 Theophrastos (*HP*. 9. 7. 3) gives a list of those plants which serve as ingredients of perfumes. See TOTLIN (2009: 152). Besides, iris was used as a very important ingredient of pessary to open the womb if it was closed. See TOTLIN (2009: 274). On iris in details SCARBOROUGH (2010: V. 15). According to Farnsworth, it has abortive quality. See FARNSWORTH (1975: 564).

20 Hippocrates suggests as a decoction for treating sore throat and inflamed tongue. See SCARBOROUGH (2010: VI. 79–80). Besides, according to Hippocrates: "*If the mouth of the uterus is closed it becomes hard like a wild fig."* If we want to cure the patient from this disease, he suggests that we use dried fig as an ingredient in healing. TOTLIN (2009: 206–207).

21 See AMIGUES (2006: 109–110). According to Farnsworth, it has abortive quality. See FARNSWORTH (1975: 561).

Name of the plant	Latin name	Abortive quality	Contraceptive quality
Cardamom	ELETTARIA CARDAMOMUM MATON[22]		
Bitter–apple	CITRULLUS COLOCYNTHIS[23]	+	
Juniper berry	JUNIPERUS COMMUNIS L.[24]	+	
Nettle	URTICA DIOICA L.[25]	+	
Coriander	CORIANDRUM SATIVUM L.[26]		
Cyclamen	CYCLAMEN GRAECUM L.[27]	+	
Henna	LAWSONIA INERMIS L.[28]	+	
Gilliflower	MATTHIOLA INCANA L.[29]	+	
Lin (or. linseed)	LINUM USITATISSIMUM L.[30]	+	
Mallow	MALVA SILVESTRIS L.[31]		
Myrtle	MYRTUS COMMUNIS L.[32]	+	

22 See AMIGUES (2006: 109–110).

23 According to Hippocrates (*Mul*. 1. 78.), mixed with Egyptian salt, this plant is highly suitable to expel a dead foetus with. There is also a similar recipe (Hipp. *Mul*. 1. 75). At the same time, King points out that we should not think that all of Hippocrates' purifying methods covered abortion. According to Farnsworth, it has abortive quality. See FARNSWORTH (1975: 561).

24 It can cause bleeding, abortion and acute kidney– and liver failure. See BORDÁS – TOMPA (2006: 18). According to Farnsworth, it has abortive quality. See FARNSWORTH (1975: 562).

25 In the Hippocratic Corpus, nettle is several times mentioned as a laxative, and it is recommended against pains and ulcerations of the uterus. See TOTLIN (2009: 263). According to Farnsworth, it has abortive quality. See FARNSWORTH (1975: 577).

26 Soranus (*Gyn*. 1. 35) describes that: *"He (Diocles) pays the greatest attention to an indication by means of vaginal suppositories made of such substances as resin, rue, garlic, mosesmart, and coriander; for if upon insertion their property is carried up as fa sas the mouth, he declares the women capable of conception; if not, the opposite is the case.*" For determining fertility and pregnancy of ancient women. See BYL (1980: 40). ROWLANDSON (1998: 287); NUNN (1996: 191–192); BLUNDELL (1995: 105).

27 Totlin makes a distinction between Hippokrates' and Theophrastos' use of cyclamen. See TOTLIN (2009:120). According to Farnsworth, it has abortive quality. See FARNSWORTH (1975: 572); TOUWAIDE (2003: 999).

28 According to Farnsworth, it has abortive quality. See FARNSWORTH (1975: 568).

29 According to Farnsworth, it has abortive quality. See FARNSWORTH (1975: 561).

30 On the phytochemy of the plant in details SCARBOROUGH (2010: VI. 75–76). According to Farnsworth, it has abortive quality. See FARNSWORTH (1975: 568).

31 See gilliflower.

32 Myrtle was often mixed with water and then used by women for washing. According

Name of the plant	Latin name	Abortive quality	Contraceptive quality
Balm of Gilead = Juice of the balsam–tree	COMMIPHORA OPOBALSAMUM ENGL.[33]		
Panax balm	GUMMIRESINA OPOPANAX (L.) KOCH, GUMMI RESINA, OPOPANAX [34]		
White pepper	PIPER ALBUM[35]	+	+
Rue	RUTA GRAVEOLENS L.[36]	+	
Pine (pine bark)	PINEUS[37]	+	
Pomegranate	PUNICA GRANATUM L.[38]	+	+

to Totlin: „*The fuction of the myrtle water is most probably to soothe the woman's genitals between two applications of the pessary and sexual intercourse.*" See TOTLIN (2009: 204). According to Farnsworth, it has abortive quality. See FARNSWORTH (1975: 569). However, according to Touwaide, it has styptic and antiseptic quality. TOUWAIDE (2003: 997).

33 Totlin only uses the expression "balsam". Balm of Gilead is already represented in the Old Testament: 1. *Mos*. 37:25; 43:11; *Jer*. 8:22; 46:11; 51:8; *Ezek*. 27:17.

34 See Lane under the headword entry of opopanax.

35 On "peperi" in details TOTLIN (2009: 150–151), SCARBOROUGH (2010: VIII. 137). According to Farnsworth, it has both abortive and contraceptive qualities. See FARNSWORTH (1975: 552, 571).

36 According to Farnsworth, it has abortive quality. See FARNSWORTH (1975: 574). According to Touwaide, it starts menstruation, eases nausea and has cancerodical quality. See TOUWAIDE (2003: 998). Because of its abortive quality it is not recommended for pregnant women. See BREMNESS (1994: 124). On rue in details SCARBOROUGH (2010: VI. 78–78).

37 According to Farnsworth, this family of plants has abortive quality. See FARNSWORTH (1975: 571).

38 Pomegranat is often linked with fertility in the ancient world. This happened allegedly because the fruit has a lot of seeds. Perhaps the seeds could symbolize the ovum. Riddle describes that while it was often prescribed as an abortifacient in classical and medieval medical sources, it is thought to be a contraceptive in modern sciences. See RIDDLE (1992: 25). Besides, in his study he also presents an experiment in which rats and guinea pigs were used. The experiment verified that the skin of the ancient pomegranat had an antifertility agent. See RIDDLE (1992: 25). In contrast, King pointed out several important flaws in Riddle's research. King analyses his flaws in details. See KING (1998: 147–151). See also TOTLIN (2009: 221–224). According to Farnsworth, it has both abortive and contraceptive qualities. See FARNSWORTH (1975: 553, 572). According to Touwaide, it has styptic quality. TOUWADE (2003: 997).

Name of the plant	Latin name	Abortive quality	Contraceptive quality
Tanning sumach	RHUS COTINUS L.[39]	+	
Garlic	ALLIUM SATIVUM L.[40]	+	
Myrrh	COMMIPHORA MYRRHA[41]	+	
Cow parsnip	HERACLEUM SPONDYLIUM L.		
Fenugreek	TRIGONELLA FOENUM–GRAECUM L.[42]	+	
Galbanum	FERULA GALBANIFLUA BOISS. & BUHSE [43]	+	
Celadine	CHELIDONIUM MAJUS L.[44]	+	
Spelt wheat or dehulled emmer wheat grain	TRITICUM SPELTA L. V TRITICUM DICOCCUM L.[45]		

39 Scarborough and Totlin identify tanning sumac (Rhus cotinus L.) with summac (Rhus coriaria L.). Totlin refers to Amigues, who already idetified "rhous" with Rhus coriaria L. in 2006. See TOTLIN (2009: 146 n. 25). I would rather accept the identification of Rápóti–Romváry. See RÁPÓTI – ROMVÁRY (1996: 107–108). According to Farnsworth, it has abortive quality. See FARNSWORTH (1975: 555).

40 It was used – by itself or mixed with other ingredients – to determine fertility According to Rowlandson: *"Clean a clove of garlic, cut off the head, and insert into the vagina, and next day see if she smells it through her mouth. If she smells it, she will conceive, if not, she will not.*" See ROWLANDSON (1998: 287). Besides, it was used as an ingredient of vaginal suppositories and decoctions. According to Farnsworth, it has abortive quality. See FARNSWORTH (1975: 567).

41 On myrrh in details TOTLIN (2009: 148–149, 153). On the phytochemy of the plant in details SCARBOROUGH (2010: V. 15). According to Farnsworth, it has abortive quality. See FARNSWORTH (1975: 557).

42 On fenugreek Theophrastos *HP* 3, 17. 2., Dioscorides *De materia medica* 2. 102. According to Farnsworth, it has abortive quality. See FARNSWORTH (1975: 567).

43 See TOTLIN (2009: 146–147, 146n23). According to Farnsworth, it has abortive quality. See FARNSWORTH (1975: 576).

44 It is a poisonous plant. In large quantities in spite of medical intervention it can lead to death. See SZENTMIHÁLYI – SÁRKÖZI – THEN (2002: 34). Verified effects: anti–viral activity, anti–tumour activity and anti–inflammatory. See SZENTMIHÁLYI – SÁRKÖZI – THEN (2002: 33). According to Farnsworth, it has abortive quality. See FARNSWORTH (1975: 570).

45 Dioscorides exactly tell us about Triticum dicoccum L. (*De materia medica* 2. 89.). He uses the Greek word "zea". Totlin provides us with the correct bothanical name of "zea". It is likely that she worked on the basis of Dioscoride's work. It is more difficult to identify "chondros" used by Soranus, because in many cases Triticum dicoccum is

As we can see it in the chart above, modern pharmacobotanical investigations have verified the abortive quality of the overwhelming majority (73%) of the herbs and spices used by Soranus. In some cases the contraceptive quality has been ascertained. The Hippocratic Corpus mentions 19 out of these plants, 73% of which have showed abortive or contraceptive qualities. We can claim on the basis of the data shown above that the 700 years that passed between the two authors did not bring forth any perceptible changes in this respect. Considerable part of the old recipes is still effective in our days as well. Kitchens have been our best pharmacies right from the Ancient Times up till today.

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used as a Latin name for it. This is incorrect. If we look up the meaning of dicoccum, we will notice that it is a Latin word meaning double seed, thus I would rather idetify it with zea. Temkin correctly identified chondros with spelt (wheat) although the word means seed. TEMKIN (1956: 1, 64). On the history of the species of wheat (Triticum spp.) SALLARES (1991: 333–361).

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