ORIGINAL ARTICLE

DOI: 10.4274/cjms.2022.2021-134 Cyprus J Med Sci 2022;7(4):501-506



Traditional and Local Food Knowledge on the Island of Cyprus

□ Taygun Dayi¹, □ Adile Oniz²

¹Department of Nutrition and Dietetics, Near East University Faculty of Health Sciences, Nicosia, North Cyprus

²Department of Health Management, Near East University Faculty of Health Sciences, Nicosia, North Cyprus

Abstract

BACKGROUND/AIMS: Cyprus is a multi-cultural island in the Mediterranean Sea. In addition to the Cypriots (native islanders), foreigners live in this country because of its location and lifestyle. Nowadays, immigration and emigration rates have increased for this island. At the same time, local production is limited and traditional food production, such as Commandaria, halloumi, olive oil etc., supports the economy. In addition, numerous natural and traditional consumable herbs grow in the local vegetation. This study aimed to determine the traditional and local food knowledge in Cyprus as a Mediterranean Food Model.

MATERIALS AND METHODS: The researchers designed an online questionnaire in five languages using Google Forms. Each questionnaire included a Nutritional Memory Catalog which was developed with a number of traditional and local food photos which were generally speaking not easy to recognize. All data was collected online due to the Coronavirus pandemic conditions.

RESULTS: Only voluntary adults (\geq 19 years) took part in this study. Cypriots (85.6%) and latecomers (14.4%) who had come this island later but had a duration of residence of more than ten years participated voluntarily (n=917). According to the results, traditional and local foods had a recognition rate of between 67.3% and 99.9%. Most of the traditional and local foods, such as vegetables, meat products etc., had a high recognition rate (\geq 99.0%). However, natural consumable herbs which grow in the mountains had the lowest recognition rate (<68.8%).

CONCLUSION: In conclusion, as with so many new trends in food and human behavior, there is a need to highlight traditional and local food consumption and increase awareness for healthy Mediterranean herbs.

Keywords: Traditional foods, Cyprus, Mediterranean region

INTRODUCTION

The Mediterranean region has gained a certain interest for healthy living, not only because of its climate and location but also due to its healthy nutrition and lifestyle. Providing a unique strategical basis, Cyprus is a candidate to study a large spectrum of features in the scope of nutrition and dietetics. This island is literally in the center of Mediterranean Sea where Cypriots, the native islanders, live.¹

Cyprus has hosted different civilizations during its history. Thus, the island possesses multi-cultural traces.² Due to its location and lifestyle, it also includes multicultural background- foreigners who choose to live

on Cyprus.¹ Local food production, such as citrus, grapes, strawberries, olives, vegetables etc., has an important role in the economy of the island while other food items are limited in their production.³.⁴ There are several traditional local products. Halloumi is a traditional cheese of Cyprus and it has different types such as old, fresh and dried. Paphos red wine (*Commandaria*) is a traditional red wine which supports the economy.⁵.⁶ Wild asparagus (*Asparagus acutifolius*), artichoke (*Cynara scolymus*), Molehiya (*Corchorus olitorius*), coriander (*Coriandrum sativum*) and taro (*Colocasia esculanta*) are important seasonal traditional foods.⁻.՞.⁶ At the same time, many natural and traditional consumable herbs, such as common mallow (*Malva sylvestris*), wild

To cite this article: Dayi T, Oniz A. Traditional and Local Food Knowledge on the Island of Cyprus. Cyprus J Med Sci 2022;7(4):501-506

ORCID IDs of the authors: T.D. 0000-0003-2491-7609; A.O. 0000-0002-6619-4106.



Address for Correspondence: Adile Oniz

E-mail: adile.oniz@neu.edu.tr

ORCID ID: orcid.org/0000-0002-6619-4106

Received: 24.05.2021 **Accepted:** 09.01.2022



artichoke (*Cynara cardunculus*), tagarninas (*Scolymus hispanicus*) etc., grow in the local vegetation.^{9,10} In addition, there are many traditional desserts and pickles which are made from the local and traditional foods/products.¹¹

From the broader scope of planet health, traditional foods are very important for food security and local food consumption has important effects in many dimensions. 12,13 In addition, traditional food consumption is important for the economy and for the transfer of cultural heritage to future generations. 14 Furthermore, there are numerous studies showing the beneficial effects of the traditional and local foods of Cyprus on health. 15-17

As seen elsewhere, immigration and emigration rates have increased to and from the island of Cyprus. This can cause cultural traces to be erased or altered.¹⁸ From this point of view, the current study aimed to determine the traditional and local food knowledge of adults, both native islanders or latecomers who have lived on this island for more than ten years, and it also paves the way for the recording of the island's social nutritional memory.

MATERIALS AND METHODS

Place and Time of Study, Sample Selection

This study was conducted on the island of Cyprus between November 2020 and March 2021. The sample size had initially been estimated to be a minimum of 386 adults (95.0% confidence interval, 5.0% confidence level) according to general population (nearly 1.3 million). Due to concerted social calls, the data was collected within five months and with a total population of 917 adults (≥19 years old) who participated voluntarily in this study. Only Cypriots and latecomers who had come to this island later and who had a duration of residency of more than ten years could participate. Living in a country for a long time brings about an adaptation to its nutritional and lifestyle habits regardless of one's original culture.¹9,20 This study had a local ethical compliance (approval number: NEU/2020/85-1198) and the volunteers participated with online consent in accordance.

Data Collection

Data was collected with a questionnaire and by using the Nutritional Memory Catalog which were all developed by the researchers. This was an online research due to the Coronavirus pandemic. The researchers designed an online questionnaire in Turkish, Greek, English, German and Russian using Google Forms. Each questionnaire included the Nutritional Memory Catalog showing some traditional and local foods which may not have been otherwise possible to recognize without their pictures. The questionnaire included two parts, namely the participants' general backgrounds and their traditional and local food knowledge. There were 63 traditional and local foods covered in the questionnaire (Table 1).

Nutritional Memory Catalog

The researchers reviewed numerous traditional and local foods photos which were not easy to recognize. When possible, they took photos of certain food items. In addition, the rest of the food types were placed in the catalog by referring to the source. The names of all foods were made available in five different languages (Turkish/Greek/German/Russian/English) in this catalog.

The current catalog includes 11 groups and 63 foods in order to determine traditional and local Cyprus foods knowledge.

Statistical Analysis

Statistical Package of the Social Science program-version 24.0 (SPPS Inc., Chicago) was used to analyze the data. Descriptive statistics were used to determine the frequencies (n) and percentages (%) of the qualitative data.

RESULTS

The spectrum of local food items is rather wide and it could potentially dissolve as global items overtake. In order to make our efforts stable for the long term, we have created a novel catalog with high resolution photos, Latin botanical counterparts as well as local names in available forms (mostly binomial), and further plotted them across their available and relative locations on the island map (Figure 1). This figure was developed by a team of professional graphic designers and researchers to introduce these traditional and local food items to the outside world properly. This effort was carried out in parallel to the present article. The relevant food items were prepared under similar conditions to enable easier comprehension for a non-expert eye. The numbers represent the names of the food items and respectively match with items in Table 1. To be more specific, items of the Nutritional Memory Catalog numbered 23, 36, 37, 46 and 53 were placed according to their exact geographical production locations. As such, other traditional food productions are not limited to a specific location and are mapped in a broader sense (Figure 1).

There were 917 participants in the current study. 85.6% were native islanders and the rest of the participants (14.4%) had lived on this island for more than 10 years. According to Table 1, traditional and local foods had a recognition rate of between 67.3% and 99.9%. Celery stalk (*Apium graveolens*), Cyprus muffin, "Çakısdez" (green olive), olive bread, wild asparagus (*Asparagus acutifolius*), pickled capari (*Capparis spinosa*) leaves, Zivania, "Seftali kebab", coriander (*Coriandrum sativum*), carob (*Ceratonia siliqua*), *Cyprus pastrami*, Cyprus pita, walnut jam, fresh halloumi, taro (*Colocasia esculanta*), "Pasedembo" (pumpkin seeds), old halloumi, artichoke (*Cynara scolynus*), "Garavolli" (snail), Indian fig



Figure 1. The map of the island of Cyprus and the locations of some traditional/local foods in accordance with the Nutritional Memory Catalog.

Table 1. Participants' local and traditional food recognition rates (n=917)								
Food	Recognition rate		Food	Recognition rate		Food	Recognition rate	
	n	%		n	%		n	%
Fresh halloumi ¹	912	99.5	Wild spinach (Spinacia oleracea)	865	94.3	Pickled capari seeds (Capari; Capparis spinosa) ²⁷	907	98.9
Old halloumi	911	99.3	Louvana (Lathyrus ochrus) ¹³	836	91.2	Pickled Mangolla (Eryngium creticum) ²⁸	858	93.6
Dried halloumi	865	94.3	Gavcar mushroom (Pleurotus fuscus var. ferulae) ¹⁴	903	98.5	Taro (<i>Colocasia esculanta</i>) ²⁹	912	99.5
Fresh curd ²	848	92.5	Celery stalk (Apium graveolens) ¹⁵	916	99.9	Bullez (Colocasia esculantasya)	833	90.8
Dried curd	858	93.6	Zucchini (Cucurbita pepo)16	873	95.2	Cyprus tarhana³0•	904	98.6
Seftali kebab³□	914	99.7	Zucchini <i>blossom</i> ¹⁷	905	98.7	Pirohu <i>(Cyprus ravioli)</i> ³¹	903	98.5
Tsamarela⁴ ■	904	98.6	Purslane (Portulaca oleracea)18	844	92.0	Cyprus pita ³²	913	99.6
Cyprus pastrami⁵	913	99.6	Lapsana (Sinapis alba)19	839	91.5	Cyprus muffin ³³	916	99.9
Dusky spinefoot (Siganus luridus) ⁶	900	98.1	Wild asparagus (Asparagus acutifolius) ²⁰	915	99.8	Olive bread ³⁴	915	99.8
Garavolli (<i>Snail</i>) ⁷	910	99.2	Gavulya (Notobasis syriaca) ²¹	631	68.8	Chickpea bread ³⁵	896	97.7
Coriander (Coriandrum sativum) ⁸	914	99.7	Hawthorn (Crataegus azarolus) ²²	902	98.4	Hackberry rusks ³⁶	891	97.2
Kohlrabi (Brassica oleracea gongylodes) ⁹	905	98.7	Carob (Ceratonia siliqua) ²³	914	99.7	Limassol dessert (Cone dessert) ³⁷	848	92.5
Common mallow (Malva sylvestris)10	904	98.6	Gonnara (Zizyphus lotus) ²⁴	845	92.1	Tavern/crop dessert ³⁸ ■	859	93.7
Tagarninas (Scolymus hispanicus) ¹¹	790	86.2	Jujube (Ziziphus jujuba) ²⁵	846	92.3	Şambali ³⁹⁰	901	98.3
Hostes (Cynara cornigera) ¹²	869	94.8	Indian fig (Opuntia ficus-indica) ²⁶	910	99.1	Gollifa⁴ ^{0‡} (Cyprus Ashura)	909	99.1
Molehiya (Corchorus olitorius 41	878	95.7	Pomelo (Citrus maxima) ⁴⁶	892	97.3	Samsi⁴9 ▲	886	96.6
Bladder campion (Silene vulgaris) ⁴²	843	91.9	Unripe almond (Amygdalus communis)	915	99.8	Gullirikya⁵ ▼	796	86.8
Yellow star-thistle <i>(Centaurea hyalolepis)</i> ⁴³	617	67.3	Cyprus thyme (Thymus capitatus)	897	97.8	Walnut jam ⁵¹	913	99.6
Artichoke (Cynara scolymus) ⁴⁴	910	99.2	Çakısdez (Green olive) ⁴⁷⁰	916	99.9	Hawtorn jam	891	97.2
Wild artichoke <i>(Cynara cardunculus)</i> ⁴⁵	814	88.8	Pasedembo (Pumpkin seeds)48	912	99.5	Pumpkin jam ⁵²	908	99.0
Wild leek (Allium ampeloprasum var. porrum)	855	93.2	Pickled wild asparagus	900	98.1	Paphos red wine (Commandaria) ⁵³	894	97.5
Cinnara/Cinares (leaves of Cynara cardunculus plant)	625	68.2	Pickled capari leaves	915	99.8	Zivania ⁵⁴	914	99.7

☐: grilled spicy meatballs wrapped in lamb/sheep abdominal fat, ■: sun-dried spicy meat, ◊: green olive which served with olive oil, garlic, sumac and coriander seed, ●: a soup made with bulgur, yoghurt and halloumi, ■: a dessert made with curd and cream, served with honey, molasses, walnuts and pomegranates, ○: a sherbet dessert made with semolina, ☆: a dessert which is mixture of wheat, anise, pomegranate, raisin, almond, sesame and made for the New Year celebration, ▲: a fried dessert which made with almonds and cinnamon placed in the dough, ▼: dough boiled in molasses.

(Opuntia ficus-indica), "Gollifa" (*Cyprus Ashura*) and pumpkin jam were the most well-known traditional/local food items with a recognition rate of ≥99.0%.

On the other hand, yellow star-thistle (*Centaurea hyalolepis*), "Cinnara/ Cinares" (leaves of Cynara cardunculus plant) and "Gavulya" (*Notobasis syriaca*), which are all natural indigenous herbs, were the least recognized food items (recognition rates from 67.3% to 68.8%).

DISCUSSION

Nutrition is commonly based on plants and local foods in the Mediterranean region. Most of the Mediterranean countries give enough importance to local production.²¹ Cyprus is a Mediterranean

island and the recognition rates of the local and traditional food items were quite high (up to 99.0%). The vegetation of Cyprus is very suitable for natural consumable herb growth. However, the least recognized three food items were found to be natural indigenous herbs, namely, yellow star-thistle (*Centaurea hyalolepis*), Cınnara/Cinares (leaves of *Cynara cardunculus* tree) and Gavulya (*Notobasis syriaca*). *Centaurea hyalolepis* is an herb that has an important role on human health in terms of anti-cancer, anti-inflammatory and so on. Cynara cardunculus is a flower head which is known as wild artichoke. It is a common part of some traditional Mediterranean dishes. The leaves of this plant are consumable. Table 1 shows that 88.8% of the participants consumed *Cynara cardunculus* and 68.2% consumed the leaves of this plant. Another natural herb which has been shown to have an anti-inflammatory role on rats is *Notobasis syriaca*. Humans

have consumed it for more than 20 thousand years.²⁴ Furthermore, we have reported common recognition rates for common mallow (*Malva sylvestris*), tagarninas (*Scolymus hispanicus*), wild spinach (*Spinacia oleracea*), gavcar mushroom (*Pleurotus fuscus var. ferulae*), bladder campion (*Silene vulgaris*), Lapsana (*Sinapis alba*) and wild leek (*Allium ampeloprasum var. porrum*) (recognition rates are between 98.6% and 86.2%) (Table 1).

Hadjichambis et al.²⁵ designed a study about natural plants in seven Mediterranean countries. According to their results, Cypriots know different plants and different parts of the natural herbs distinctive from other Mediterranean regions. In addition, they use natural foods to make pickles and jam. According to Table 1, pickled capari (*Capparis spinosa*) leaves (99.8%), walnut (99.6%) and pumpkin jams (99.0%) were found to be the most recognized food items in the presented study.

Pickled *Capparis spinosa* seeds, pickled Mangolla (*Eryngium creticum*) and pickled wild asparagus (*Asparagus acutifolius*) had high recognition rate (98.9-93.6%). Pickled vegetables and natural herbs show prebiotic effects on human health and their antioxidant capacities remain a long time after fermentation. Thus, they may show beneficial effects on human health with balanced consumption.²⁶

The land of Cyprus is suitable for citrus production.²⁷ Islanders commonly recognized (97.3%) Pomelo (*Citrus maxima*) (Table 1). In addition, the main source of the public economy is vegetable and fruit production on the island so having a substantial knowledge about them is important.³ There is production of celery stalks, zucchini (*Cucurbita pepo*), zucchini blossoms, purslane (*Portulaca oleraceace*), louvana (*Lathyrus ochrus*), Indian figs (*Opuntia ficus-indica*), unripe almonds, Molehiya (*Corchorus olitorius*), artichoke (*Cynara scolymus*) in Cyprus (recognition rates of 99.9% to 91.2%).

According to our results, Cyprus thyme (*Thymus capitatus*) had a 97.8% recognition rate. It is a spice which grows naturally in the Cyprus mountains. ²⁸ *Opintia ficus-indica* is specific to the Mediterranean region. It includes a high number of anti-oxidants and can play an important role in the prevention of diseases. ²⁹ Cypriots showed a recognition rate of 99.1% (Table 1). At the same time, they generally knew Gonnara (*Zizyphus lotus*) (92.1%). *Zizyphus lotus* grows generally in arid and semiarid countries such as Greece, Cyprus, Spain etc. It is part of the angiosperm *Rhamnaceae* family. ³⁰

Halloumi is known as Cypriot cheese. There is wide production, marketing and serving of halloumi on the island.³¹ It has three types, namely, fresh, old and dried.⁵ Recognition rates of them were 99.5%, 99.3% and 94.3%, respectively (Table 1). Paphos red wine (*Commandaria*) and Zivania are also produced in Cyprus. They are characteristic of Cyprus and have importance to the economy of the island.^{6,32} According to the present study, participants recognized Zivania (99.7%) more than Paphos red wine (97.5%).

Paphos red wine and Zivania are both fermented alcoholic beverages. Fermented beverages play important roles on human's gut microbiota and health.³³ At the same time, red wine is a good source of resveratrol which is a beneficial phenolic compound.³⁴

Although Cyprus is an island in the Mediterranean Sea, Cypriots displayed a preference for red meat compared to fish consumption.³⁵ In the current study, participants recognized Seftali kebab (99.7%), Cyprus

pastrami (99.6%) and Tsamarela (98.6%) more than *Siganus lirudus* (98.1%) which is known as dusky spinefoot (Table 1).

Cyprus tarhana is a fermented dried soup which has probiotic effects. It is made with yoghurt, bulgur and halloumi.³⁶ Most of the participants recognized it (98.6%) (Table 1). Fermented foods which have probiotic contents may show positive effects on human gut microbiota.³⁷

Pita is the most common bakery product in Cyprus culture. Nearly 500,000 pieces/day of Cyprus pita production is reported.³⁸ Participants recognized it with a rate of 99.6%. In addition, the population knew about Cyprus ravioli, Cyprus muffin, olive bread, chickpea bread and hackberry rusks which are some of the traditional bakery products of Cyprus (recognition rates of 99.9% to 97.2%).

Taro (*Colocasia esculanta*) is a tuber similar to a potato. Cyprus plays an important role in taro production all around world along with the United States of America and Canada.³⁹ The recognition rate of taro was found to be 99.5% in this study.

There are many traditional Cyprus desserts which are served in local restaurants and/or made at home. 11 According to Table 1, participants commonly recognized them (99.1-86.8%). High simple carbohydrate intake is related with many chronic diseases such as obesity, diabetes mellitus etc. so people should avoid the regular consumption of them. 40

Study Limitations

The present study was initiated in 2020, which is known as the year of the Corona pandemic. All data were collected with online questionnaires and the Nutritional Memory Catalog. However, the Coronavirus disease-2019 pandemic led to a number of limitations while reaching out to more participants.

The current study was the first research which aimed to determine adults' traditional and local food item knowledge on the island of Cyprus. It has an important role in recording the islanders' data. In addition, the researchers developed the Nutritional Memory Catalog which includes some traditional and local Cyprus food items. Generally, the recognition rates of these food items were found to be more than 90.0%. On the other hand, natural indigenous herbs with health benefits were among the least recognized foods.

CONCLUSION

The modern world is seeking its early roots as human interactions with the planet are increasingly troublesome. This area is open for new research to address planet health, human health, food security, and cultural heritage. Thus, with so many new trends in food and human behavior, there is a need to highlight traditional/local food consumption and increase awareness of healthy Mediterranean herbs.

MAIN POINTS

- The current study is the first aiming to determine comprehensive traditional and local food knowledge on the island of Cyprus. It sheds light on these points as a Mediterranean Food Model:
- The recognition rate of traditional and local foods was found to be between 67.3% and 99.9%. The most recognized foods were vegetables, meat products etc. (recognition rates of ≥99.0%).
- Natural consumable herbs, which grow in the mountains, had the lowest recognition rates (<68.8%).

 There are photos of these traditional and local food items in this manuscript in order to introduce them to the world as a novel approach.

ETHICS

Ethics Committee Approval: This study had a local ethical compliance (approval number: NEU/2020/85-1198).

Informed Consent: The volunteers participated with online consent in accordance.

Peer-review: Externally peer-reviewed.

Authorship Contributions

Concept: T.D., A.O., Design: T.D., A.O., Supervision: T.D., A.O., Materials: T.D., A.O., Data Collection and/or Processing: T.D., A.O., Analysis and/or Interpretation: T.D., A.O., Literature Search: T.D., A.O., Writing: T.D., A.O., Critical Review: A.O.

DISCLOSURES

Conflict of Interest: No conflict of interest was declared by the authors.

Financial Disclosure: The author declared that this study had received no financial support.

REFERENCES

- Delipetrou P, Makhzoumi J, Dimopoulos P, Georghiou K. Chapter 9: Cyprus. Vogiatzakis I, Pungetti G, Mannion AM, editors. Mediterranean island landscapes. United Kingdom: Springer; 2008.p.170-203.
- 2. Hajisoteriou C, Angelides P. The politics of intercultural education in Cyprus, policy-making and challenges. Education Inquiry. 2013; 4(1): 103-23.
- Ministry of Agriculture, Natural Resources and Environment. State of plant genetic resources for food and agriculture in Cyprus. In: Country report on the state of plant genetic resources for food and agriculture. Food and Agriculture Organization. 2009. Available from: http://www.fao.org/ agriculture/crops/thematic-sitemap/theme/seeds. Accessed 17 April 2021.
- 4. Fallah A, Gülcan HO, Gülcan C, Erçetin T, Kabaran S, Kunter i, et al. Traditional techniques applied in olive oil production results in lower quality products in Northern Cyprus. Turk | Pharm Sci. 2018; 15(2): 190-9.
- 5. Papademas P, Robinson RK. Halloumi cheese: The product and its characteristics. Int | Dairy Technol. 1998; 51(3): 98-103.
- Vrontis D, Thrassou A. The renaissance of Commandaria: A strategic branding prescriptive analysis. J Glob Bus Adv. 2011; 4(4): 302-16.
- Yilmaz N, Baktır I, Tozlu I. The most important three vegetables of Cyprus kitchen: Wild asparagus, Molehiya and Kolakas. Proceedings of the V. International Garden Plants Congress; 2007 Sept 4-7; Erzurum/Turkey; 2007. pp. 105-9.
- Gökçebağ M, Özden O. Home garden herbs and medicinal plants of Lefke, Cyprus. Indian | Pharm Educ. 2017; 51(3): 441-4.
- Dokos C, Hadjicosta C, Dokou K, Stephanou N. Ethnopharmacological survey of endemic medicinal plants in Paphos district of Cyprus. Ethnobot Leafl. 2009; 13: 1060-8.
- Della A, Paraskeva-Hadjichambi D, Hadjichambis AC. An ethnobotanical survey of wild edible plants of Paphos and Larnaca countryside of Cyprus. J Ethnobiol Ethnomed. 2006; 2: 34.
- Ankut Z. A comparison study of turkish Cypriot and Greek cuisine. Near East University Institute of Educational Sciences, MSc Thesis. 2007.

- 12. Voinea L, Popescu DV, Bucur M, Negrea TM, Dina R, Enache C. Reshaping the traditional pattern of food consumption in Romania through the integration of sustainable diet principles. A qualitative study. Sustainability. 2020; 12(14): 1-25.
- Grosso G, Fresán U, Bes-Rastrollo M, Marventano S, Galvano F. Environmental impact of dietary choices: Role of the Mediterranean and Other dietary patterns in an Italian cohort. Int J Environ Res Public Health. 2020; 17(5): 1468
- 14. Albayrak M, Gunes E. Traditional foods: Interaction between local and global foods in Turkey. Afr J Bus Manage. 2010; 4(4): 555-61.
- Soykut G, Becer E, Calis I, Yucecan S, Vatansever S. Apoptotic effects of Corchorus olitorius L. leaf extracts in colon adenocarcinoma cell lines. Prog Nutr. 2018; 20(4): 689-98.
- Becer E, Kabadayı H, Meriçli F, Meriçli AH, Kıvançlı B, Vatansever S. Apoptotic
 effects of Opuntia ficus indica L. seeds oils on colon adenocarcinoma cell
 lines. Proceedings. 2018; 2(25): 1566.
- 17. Velez Z, Campinho MA, Guerra ÂR, García L, Ramos P, Guerreiro O, et al. Biological characterization of Cynara cardunculus L. methanolic extracts: Antioxidant, anti-proliferative, anti-migratory and anti-angiogenic activities. Agriculture. 2012; 2(4): 472-92.
- 18. Gregoriou P, Kontolemis Z, Matsi M. Immigration in Cyprus: An analysis of the determinants. Cyprus Economic Policy Review. 2010; 4(1): 63-88.
- Hoffman R, Gerber M. Evaluating and adapting the Mediterranean diet for non-Mediterranean populations: A critical appraisal. Nutr Rev. 2013; 71(9): 573-84.
- 20. Ball K, Timperio AF, Crawford DA. Understanding environmental influences on nutrition and physical activity behaviors: Where should we look and what should we count?. Int | Behav Nutr Phys Aact. 2006; 3: 33.
- Medina FX. Food consumption and civil society: Mediterranean diet as a sustainable resource for the Mediterranean area. Public Health Nutr. 2011; 14(12A): 2346-9.
- Erel SB, Demir S, Nalbantsoy A, Ballar P, Khan S, Yavasoglu NU, et al. Bioactivity screening of five Centaurea species and in vivo anti-inflammatory activity of C. athoa. Pharm Biol. 2014; 52(6): 775-81.
- Zayed A, Serag A, Farag MA. Cynara cardunculus L.: Outgoing and potential trends of phytochemical, industrial, nutritive and medicinal merits. J Funct Foods. 2020; 69: 103937.
- 24. Azab A, Nassar A, Kaplanski J, Mahajneh R, Agam G, Azab AN. Effects of aqueous exract of Notobasis syriaca on lipopolysaccharide induced inflammation in rats. Asian Pac J Trop Med. 2018; 11(1): 48-52.
- Hadjichambis ACh, Paraskeva-Hadjichambi D, Della A, Giusti ME, De Pasquale C, Lenzarini C, et al. Wild and semi-domesticated food plant consumption in seven circum-Mediterranean areas. Int J Food Sci Nutr. 2008; 59(5): 383-414.
- 26. Sayın FK, Alkan S. The effect of pickling on total phenolic contents and antioxidant activity of 10 vegetables. J Food Health Sci. 2015; 1(3): 135-41.
- 27. Akcay YE. Transition of the life of Cyprus in the Roman period. Istanbul Gelisim University Journal of Social Sciences. 2018; 5(2): 137-48.
- 28. Yavuz Özkum D, Özalp Y, Tuncay B, Altanlar N, Şimşek D. Antimicrobial effect of essential oil of Thymus capitatus from Northern Cyprus and its gargle preformulation. J Pharm Res Int. 2020; 32(5): 66-76.
- El-Mostafa K, El Kharrassi Y, Badreddine A, Andreoletti P, Vamecq J, El Kebbaj MS, et al. Nopal Cactus (Opuntia ficus-indica) as a source of bioactive compounds for nutrition, health and disease. Molecules. 2014; 19(9): 14879-901.
- Abdoul-Azize S. Potential benefits of jujube (Zizyphus Lotus L.) bioactive compounds for nutrition and health. J Nutr Metab. 2016; 2016: 2867470.

- 31. Öztürk B, Çelik F, Çelik Y, Kabaran S, Ziver T. To determine the occurrence of Afatoxin M1 (AFM1) in samples of Cyprus traditional cheese (Halloumi): A cross-sectional study. Kafkas Univ Vet Fak Derg. 2014; 20(5): 773-8.
- Petrakis P, Touris I, Liouni M, Zervou M, Kyrikou I, Kokkinofta R, et al. Authenticity of the traditional Cypriot spirit 'Zivania' on the basis of 1h NMR spectroscopy diagnostic parameters and statistical analysis. J Agric Food Chem. 2005; 53(13): 5293-303.
- 33. de Carvalho NM, Costa EM, Silva S, Pimentel L, Fernandes TH, Pintado ME. Fermented foods and beverages in human diet and their influence on gut microbiota and health. Fermentation. 2018; 4(4): 1-13.
- Tzanova M, Atanassova S, Atanassov V, Grozeva N. Content of polyphenolic compounds and antioxidant potential of some Bulgarian red grape varieties and red wines, determined by HPLC, UV and NIR spectroscopy. Agriculture. 2020; 10(6): 193.
- 35. Akbora HD. General status and growth potential of fishers sector in Northern Cyprus. NESciences. 2020; 5(2): 73-81.

- 36. Tsafrakidou P, Michaelidou AM, G Biliaderis C. Fermented cereal-based products: Nutritional aspects, possible impact on gut microbiota and health implications. Foods. 2020; 9(6): 7-34.
- 37. Divya JB, Varsha KK, Nampoothiri KM, Ismail B, Pandey A. Probiotic fermented foods for health benefits. Eng Life Sci. 2012; 12(4): 377-90.
- 38. Zorpas AA, Pociovălișteanu DM, Inglezakis VJ, Voukalli I. Total quality management system (TQMS) in small winery and bakery in Cyprus. A case study. Annals of the 'Constantin Brâncuşi' University of Târgu Jiu. 2012; 2: 17-26.
- 39. Ribeiro Pereira P, Bertozzi de Aquino Mattos É, Nitzsche Teixeira Fernandes Corrêa AC, Afonso Vericimo M, Margaret Flosi Paschoalin V. Anticancer and immunomodulatory benefits of Taro (Colocasia esculanta) corms, an underexploited tuber crop. Int J Mol Sci. 2021; 22(1): 265.
- 40. Ferretti F, Mariani M. Simple vs. complex carbohydrate dietary patterns and the global overweight and obesity pandemic. Int J Environ Res Public Health. 2017; 14(10): 1174.