Nutraceutical Based on The Qur'an and The Sunnah

By:

Abdul Aziz Mohamad dan Aminuddin Ruskam Faculty of Islamic Civilization Universiti Teknologi Malaysia

ABSTRACT

The world is witnessing a return to what is natural, both environmentally and back to fitrah, our innate nature. This does not apply to food, and cosmetic sector only, but also the health and Nutraceutical sectors. One of the evidences is the fastest growing sectors in the Global personal care market and Nutraceutical market as dictated by consumer lifestyle and awareness. Second, the tendency is for a move towards what is ethical, fair traded and Green healthy lifestyle. Halal Nutraceutical consumer are now starting to question the authenticity and integrity of the Halal nutraceuticals that they consumed, especially that came from the non-Muslim manufacturers and distributors in Singapore. Islamic Arabic medicine, Arab-Islamic medicine or Greco-Arab refers to medicine developed in the Golden Age of the Islamic Civilization. It is extended from Spain in the west to Central Asia and India in the East. 'Prophetic Medicine' although popular amongst the masses of Muslims because of its doctrinal and theological contents was considered by most Muslim historians and physicians as distinct from scientific and analytical Islamic Medicine. Medicine of the Prophet is a combination of religious and medical information, providing advice and guidance on the two aims of medicine. First the preservation of health and second the restoration of health based on the Qur'anic guidance and the Prophetic traditions.

Keywords: Halal Nutraceutical products, The Quran and the Sunnah ,Arab herbal medicine,rayhan, figs, dates, honey, olive oil, and black seeds.

1.0 Introduction

Throughout the history of mankind, man has been searching for those medicines which will heal his many ailments. Prophet Mohammed was sent as a guide, and mercy for all mankind, and as such was given wisdom by Allah that benefits man. Nutraceutical and functional foods provide means to address the increasing burden on the health care system by promoting health prevention rather than treatment. Herbal medicine has been used worldwide as traditional medicines for thousands of years to treat various forms of diseases.

Islamic Arabic medicine, Arab-Islamic medicine or Greco-Arab refers to medicine developed in the Golden Age of the Islamic Civilization. It is extended from Spain in the west to Central Asia and India in the East. 'Prophetic Medicine' although popular amongst the masses of Muslims because of its doctrinal and theological contents was considered by most Muslim historians and physicians as distinct from scientific and analytical Islamic Medicine. Medicine of the Prophet is a combination of religious and medical information, providing advice and guidance on the two aims of medicine. First the preservation of health and second the restoration of health based on the Qur'anic guidance and the Prophetic traditions.

2.0 The definition of Islamic Medicine

Islamic Medicine in its true context, can thus be defined as a body of knowledge of Medicine that was inherited by the Muslims in the early phase of Islamic History (40-247 AH/661 -861 AD) from mostly Greek sources, but to which became added medical knowledge from, Persia, Syria, India and Byzantine. This knowledge was not only to become translated into Arabic, the literary and scientific lingua franca of the time, but was to be expounded, assimilated, exhaustively added to and subsequently codified, and 'islamicized'.

Medical teachings were inherited mainly from the Greeks. At the same time, in India, Egypt, China and elsewhere, Islam came into contact with medical teachings of those civilizations and incorporated much from their traditions. Ibn Qayyim is aware of all this, but considers it secondary to his theme. This become apparent at the outset of his work, where reference to the Qur'anic description of 'these in whose hearts sickness' is intended to show a difference division of illness and medicine: that of the body and the heart. (Penelope Johnstone, 1998) The Physicians of the times both Muslim and Non-Muslim were then to add to this, their own observations and experimentation and convert it into a flourishing and practical science, thus helping in not only in curing the ailments of the masses, but increasing their standards of health. The effects of its domineering influence extending not only in the vast stretches of the Islamic lands, but also in all adjoining nations including Europe, Asia, China, and the Far East. The span was measurable not only for few centuries, but also perhaps for an entire millennium, 610 to 1610 AD. During which time, Europe and rest of the extant civilized nations of the world were in grips of the 'dark ages'. It also to set the standards of hygiene, and preventative medicine and thus was responsible for the improvement of the general health of the masses. It was to hold sway until decadence finally set in, concomitant with the political decline of the Islamic nation. With the advent of Renaissance in Europe, at the beginning of the 17th Century AD, it was finally challenged by the new and emerging science of modern medicine, which was to finally replace it in most of the countries, including the countries of its birth! (Husain Nagamia F., 2003)

3.0 Meaning of Nutraceuticals

Nutraceuticals is term coined in 1979 by DeFelice SL (1992) According to Defelice, it is defined "as a food or parts of food, that provide medical or health benefits, including the prevention and treatment of disease." Subsequently, several other terms (medical food, functional food and nutritional supplements) were used.

Nutraceutical may range from isolated nutrients, dietary supplements and diets to genetically engineered "designer" foods herbal products, and processed products, such as cereals, soups, and beverages. The increasing interest in Nutraceuticals reflects the fact that consumers hear about epidemiological studies indicating that a specific diet or component of diet is associated with a lower risk for a certain disease. (Hans K. Biesalski, 1992) University of Hohenheim, Stuttgart, Germany

The *Nutrition Business Journal* states that it uses the term nutraceutical for anything that is consumed primarily or particularly for health reasons. Based on that definition, a functional food would be a kind of nutraceutical.(Wildmen,R.E.,2007). On the other hand, Health Canada states that nutraceuticals are a product isolated from foods but sold in the form of pills or powders (potions) or in other medicinal forms not usually associated with foods. A nutraceutical is demonstrated to have physiological benefits or provide protection against chronic diseases. (Health Canada, 1998)

4.0 Nutraceutical based on the Holy Qur'an

Allah said in surah al-Rahman: 12 وَالنَّخْلُ ذَاتُ الأَكْمَ إِللَّهُ النَّخْلُ ذَاتُ الأَكْمَامِ (and date palms producing Akmam.)

Allah mentioned the date tree here specifically because of its benefit, both fresh and dry. Ibn Jurayj reported that Ibn `Abbas said said Al-Akmam, means sheathed fruit stalks. Similar was said by more than one of the scholars of Tafsir, it refers to the stalks that the seeds grow in to become a cluster of dates, unripe green dates then they ripen and ripen more.

Dates are mentioned in twenty places in the Quran. Prophet (PBUH) is reported to have said: "if anyone of you is fasting, let him break his fast with dates. In case he does not have them, then with water. Verily water is a purifier". (Ibn Qayyim al-Jauziyah, 2003)

4.1 Rayhan or myrtle

Allah said,

(And also corn, with (its) `Asf, and Rayhan.) `Ali bin Abi Talhah said that Ibn `Abbas said that in,

(And also corn, with (its) `Asf), `Asf means straw." Al-`Awfi reported from Ibn `Abbas, `Asf refers to green leaves cut from the stem, so it is called `Asf when it dries out.' Similarly, Qatadah, Ad-Dahhak and Abu Malik said that `Asf means straw. Ibn `Abbas, Mujahid and others said that *rayhan* means leaves, while Al-Hasan said that it means sweet-scented plants. `Ali bin Abi Talhah reported that Ibn `Abbas said that *rayhan* means green leaves.

The meanings here, and Allah knows best, are the various crops that produce straw, such as wheat and barley, and *rayha*n are the leaves that grow on the stems. (surah al-Rahman : 12) (Tafsir Ibnu Kathir, 2003)

Muslim narrated that the Prophet (Pbuh.) said:

Whoever was presented with Rayhan should not refuse it, because it is easy to wear and has good scent.

Every plant that has good scent is called *Rayhan*. Therefore, every area gives a certain plant that name. For instance, the people to the west, as well as, the Arabs call the aromatic plants *Rayhan*. The people in Iraq and Sham call the Hibk (a type of mint) *a Rayhan*.

Rayhan or myrtle is cold in the first degree and dry in the second degree. Yet, it is a compound of several qualities, most of which consist of earthly cold essence. Myrtle also consists of a soft hot substance. Myrtle dries the head nicely and is effective as a constipating agent.

Myrtle prevents bile diarrhea hot and wet vapor when one smells its scent. Its scent also brings relief to the heart and prevents various ailments, especially when the plant is spread around the house. (Imam Ibn Qayyim, 2003)

Myrtle also heals the tumors that occur in the two ureters when it is coated on them. When fresh myrtle leaves are ground and blended with vinegar and placed on the head, they will stop nose bleeding. When dried myrtle leaves are crushed and the powder is sprinkled on wet ulcers it will heal them and will heal spots and the ulcers on the hands and feet.

When myrtle is used to rub the body it eliminates sweat, dries the excess wetness and dissipates underarm odor. When one sits in the water that myrtle was cooked in, it will help against infections on the buttocks and vagina and will heal weak joints and broken bones, when it is poured on the wound. (Imam Ibn Qayyim, 2003)

Also, myrtle helps eliminate dandruff and the wet ulcers and the spots that appear on the head. It also helps the hair against falling and gives it a black color. When myrtle leaves are ground with a little water and then blended with some oil or rose grease and then used as a bandage, it will be suitable against fresh (or humid) ulcers, canker sores, erysipelas (skin infection), acute tumors, urticaria (hives) and hemorrhoids.

Myrtle seeds also help against hemoptysis (spiting up blood) of the chest and lungs. It also coats the stomach and does not harm the chest or the stomach and cleanses them. It also helps against diarrhea and coughing, and this is a special quality for myrtle that is rarely found in other medications. Myrtle seeds also help urine production and heal (bladder) infections, spider bites and scorpion stings. Using myrtle roots to clean between the teeth is harmful, though. The seeds of Persian myrtle relieve diarrhea of the bile, stomach, strengthen the heart and help against black bile ailments. (Imam Ibn Qayyim, 2003)

Nutraceutical and functional foods provide means to address the increasing burden on the health care system by promoting health prevention rather than treatment.

Herbal medicine has been used worldwide as traditional medicines for thousands of years to treat various forms of diseases including cancer. Chemoprevention, a novel approach for controlling cancer, involves the use of specific natural products or synthetic chemical agents to reverse suppress or prevent pre-malignancy before the development of invasive cancer. Several natural products, such as, grains, nuts, fruits, vegetables and medicinal plants confer protective effects against wide range of cancers. Since diet has an important role in the body health, dietary chemoprevention received attention in the Arab-Islamic treatment of diseases including cancer. (Zaid et al. The Open Nutraceutical Journals, 2010)

4.2 Figs and Olive oil

The holy Quran mentions many plants as well as animal products among the foods Muslims can enjoy and benefit from their nutritional and health values. Among some of the foods mentioned in the holy Quran and Hadis by the Prophet (PBUH) are grapes, citrus, melon, squash, Figs dates, honey, olive oil, and black seeds.

The Prophet (PBUH) mentioned Figs and then stated,

"If I had to mention a fruit that descended from paradise I would say this is it because the paradisiacal fruits do not have pits...eat from these fruits for they prevent hemorrhoids, prevent piles and help gout."

Figs are a top source of fibre, as well as potassium and vitamin B6. Fibre results in bulkier stools, which lessen the incidence of constipation, hemorrhoids and colon cancer. Melon was among one of the fruits most often eaten by the Prophet. In fact, melon is one of the best recommendations for health the Prophet has given us. Melon is one of the few fruits and vegetables rich in vitamin C, Beta- Carotene, and potassium. He recommended the use of olive oil, by a statement "Eat olive oil and massage it over your bodies since it is a holy (Mubarak) tree". (Zaid et al. The Open Nutraceutical Jounals, 2010)

Further mentioned of fig in Al-Quran

Allah has sworn by the Tin and the Zaitun in the Holy Quran because of its tremendous benefits and uses.

Mujahid said, "It is this fig that you have."

By Az-Zaytun. Ka'b Al-Ahbar, Qatadah, Ibn Zayd and others have said, "It is the Masjid of Jerusalem (Bayt Al-Maqdis)." Mujahid and 'Ikrimah said, "It is this olive which you press (to extract the oil)."

The mentioned of fig and olive in al-Quran signifies the importance it has in human life and as one of the chosen fruits by Allah swt for human consumption that provides both nutrition and tastes delicious. In this manner Allah swears in the beginning of the verse of surah at-Tin, by the fig and olive shows beside the locality of the trees – that accordingly to Muhammad Asad, the fig and the olive symbolize, in this context, the *lands* in which these trees predominate: ie.,the countries bordering on the eastern part of the Mediterranean, especially Palestine and Syria and on the other which emphasis the important of the place near Mount Sinai, stresses specifically the apostleship of Moses, in as much as the religious law valid before, and up to, the advent of Muhammad (Pbuh) (Mohammad Asad,1980) but most pertinent is the nature of food for mankind that is easily accessible and healthy.

According to Dr Wahba Zuhayli, Allah begins the verse by swearing upon the fruit known as al-Tin, which is the daily dietary food for the Arabs and upon the fruit of al-Zaytun for its rich mineral oil content. The fruit al-Tin also known as figs is a preferable source of food because of its palatable nature and is easily digested and it does not stress the stomach. It too is beneficial to reduce high body temperature. Further he reiterated, it cleanses the kidney, removes gall-stone and refreshes the body. Al-Tin is the best of fruits as it is considered as a nature cure to our sickness and it expiates disease from our body naturally.

In a hadis Hasan related by Ibn Sani from Abu Dzar: "Indeed al-Tin cures hemorrhoids, and it too cures leg rashes, white spot and gout."

According to Imam Ibn Qayyim, Tin is hot and either dry or wet. The best type of figs is the white kind when they are ripe, as they cleanse the sand that accumulates in the liver and prostate and serve as a preventive substance against poisons. Figs are more nutritious than other type of fruit, and help relieve the roughness in the chest, throat and trachea. It cleanses the liver and the spleen, purifies the phlegm that accumulates in the stomach and provides good nourishment for the body. Yet, it makes one more susceptible to lice if eaten excessively. (Ibn Qayyim, 2003)

While Az-Zaytun or olive is considered as fruit, it is simultaneously also categorises as functional food, when it is cooked. It too functions as medicine. Olive oil is an ingredient for some medicines. (Wahbah al-Zuhaily, 2001)

5. Nutraceutical based on as-Sunnah

The prophet s.a.w used to drink some honey mixed with water on an empty stomach. There is a wonderful secret behind this practice regarding preserving the health. Only those whom enjoy sound comprehension will be able to recognize such a secret. (Ibnu Qayyim, 2003)

Black seeds were regarded as a medicine for that cures all types of diseases. The Prophet once stated, "The black seed can heal every disease, except death".

Dates are mentioned in twenty places in the Quran. Prophet (PBUH) is reported to have said: "if anyone of you is fasting, let him break his fast with dates. In case he does not have them, then with water. Verily water is a purifier".

As stated above, Avicenna had described four approaches to treat cancer, he had also mentioned that:

"It (cancer) can be reached by controlling the material (atrabile), improving the diet and reinforcing the involved organ by the known effective medicines, and by using mineral smears like those containing millstone dust and whet-stone dust and from smears taken from a mixture between the stone pounder for aromatics and black head stone moisturized with rose oil and coriander water poured on pounder. And also a dressing with well pounded verjuice is good and useful".

The Prophet s.a.w said:

"When Allah loves a slave, He helps him observe a diet from the life of this world, just as one puts his patient on a diet from food and drink. Allah puts His believing slave on a diet from the life of the world."

The famous statement that "diet is the top medicine; and the stomach is the home of disease; give each person what he is used to (of food and medicine)," This is not a hadis, according to the scholars of hadis. Rather, it is the words of Harith bin Kaladah, the renowned Arab doctor. (Ibnu Qayyim, 2003)

Al-Harith stated that "Diet is the head of medicine". To doctors, observing a diet by healthy people is as harmful as unhealthy eating habits for patients. Consequently, the best type of diet is that observed by those recovering from an illness, because until then, their body organs would not have regained their normal strength and wellbeing. In this condition, the digestion process would not be at its normal efficiency while the various organs of the body would be still be prone to sickness. At this time unhealthy eating habits might cause the disease to come back stronger than it was before.

Know that the Prophet's disallowing 'Ali r.a from eating the hanging clusters of dates while still recuperating from an illness is one of the best preventive measures. (Imam Ibn Qayyim, 2003)

5.1 The prophet's guidance on observing a diet as part of the cure

The most effective way for illness prevention in Islam is healthy diet. Prophet Mohammad, (PBUH) said: "Food is the source of illness; however the diet program is the source of health"

Avicenna also had discussed the diet effect on cancer progression. In regard of cancer prevention he said: *As to preventing its (cancer) progress, it can be achieved by, improving the diet and reinforcing the involved organ by the effective medications,*"

It is well known nowadays that several chemicals are carcinogenic and that obesity is a cause of various diseases including cancer. (Zaid et al.The Open Nutraceutical Journals, 2010)

All types of cures and medicine contain either a certain diet or preventive measures. When on feels ill, he will need to get rid the body from harmful substances and bodily wastes. These three elements are what medicine is all about.

There are two types of diet, a diet from what bring illness and a diet from what might intensify the illness. The first type of diet is for the healthy and the second type is for those with an illness. When the patient observes a certain diet, the illness will not progress and thus the powers contained in the body will cooperate and collaborate towards ridding the body of the ailment. (Imam Ibn Qayyim, 2003)

5.2 Black Seeds (*Nigella Sativa*)

Nigella sativa is one the most revered medicinal seeds in history. In civilizations around the world, herbal spice *Nigella Sativa* referred to as Habbat-el-barakah (literally seeds of blessing in Arabic), Kalonji (Hindi), Kezah (Hebrew), Sijah Daneh (Persian) and in English called Black Caraway. The famous Greek physician Dioscorides (40-90 AC) used black cumin seeds to treat headaches and toothaches. *Nigella sativa* seeds and oil extracts has been used widely for centuries to treat interruptions in the respiratory system, stomach, kidney and liver function, circulatory, the immune system as well as cancer. In Islam, it is regarded as one of the greatest forms of healing medicine available (Zohary D, Hopf M.,3rd Ed. Oxford University Press, 2007)

The Black Seed has many benefits, as indicated by the Prophet's statement:

عَبْدُ اللَّهِ بْنُ أَبِي شَيْبَةَ حَدَّتَنَا عُبَيْدُ اللَّهِ حَدَّثَنَا إِسْرَائِيلُ عَنْ مَنْصُورِ عَنْ حَالِدِ بْنِ سَعْدٍ قَالَ خَرَجْنَا وَمَعَنَا غَالِبُ بْنُ أَبْجَرَ فَمَرِضَ فِي الطَّرِيقِ فَقَدِمْنَا الْمَدِينَةَ وَهُوَ مَرِيضٌ فَعَادَهُ ابْنُ أَبِي عَتِيقٍ فَقَالَ لَنَا: عَلَيْكُمْ بِهَذِهِ الْحُبَيْبَةِ السَّوْدَاءِ فَخُذُوا مِنْهَا خَمْسًا أَوْ سَبْعًا فَاسْحَقُوهَا تُسَمَّ اقْطُرُوهَا فِي أَنْفِهِ بِقَطَرَاتِ زَيْتٍ فِي هَذَا الْجَانِبِ وَفِي هَذَا الْجَانِبِ فَإِنَّ عَائِشَةَ حَدَّتَنْنِي

َّأَنَّهَا سَمِعَتْ النَّبِيَّ صَلَّى اللَّهُ عَلَيْهِ وَسَلَّمَ يَقُولُ إِنَّ هَذِهِ الْحَبَّةَ السَّوْدَاءَ شِفَاءٌ مِنْ كُلِّ دَاءٍ إِلَّا مِنْ السَّامُ قُالَ الْمَوْتُ (رواه البخاري :5255)

Use the Black Seed, because it contains a cure for every type of ailment, except death. (At-Tirmidhi:1964,& Ahmad: 6986)

"It is a cure for every type of disease." This statement is just like what Allah said:

"Destroying everything by the command of its Lord." (46:25)

Its means destroys everything that is prone to destruction. (Ibn Qayyim, 2003)

Avicenna refers to black seed in his *Canon of Medicine*, as the seed that stimulates the body's energy and helps recovery from fatigue and dispiritedness. In the Unani Tibb system of medicine, seeds are regarded as a valuable remedy for a number of diseases. The seed's oil has been used to treat skin conditions such as eczema and boils and to treat cold symptoms. The modern research confers that *Nigella sativa* seeds ethanol extract possess antitumor activity in mice tumor primary cells *Nigella sativa* seeds extracts contains amino acids, proteins, carbohydrates, alkaloids, saponins, fixed and volatile oils, and many others. (The Open Nutraceutical Journal, 2010)

The Black Seed helps against all types of cold ailments. Also, it helps introduce the effective ingredients of cold medications to the areas affected by hot and dry ailments, as it helps absorb the medicine quickly when taken in small dosage.

The author of *Canon of Medicine* and other people stated that saffron blended with camphor has similar effects, because saffron helps the camphor reach the affected area quickly. There several types plants that have similar effects as saffron. It is possible that the hot substance benefits in cases of hot diseases. For instance, the Anzarut, which is a type eyeliners, is mixed with other remedies for Ophthalmia, conjunctivitis and so forth. Ophthalmia is a hot tumour as the doctors agree. Also, sulphur is remedy for hot mange.

When the Black Seed is ground, blended with honey and drunk with some warm water, it will dissolve the stones that appear in the kidney and the prostate, and it also diuretic, It increase the flow during menstruation and the production of milk if it is drunk for several days. When it is heated with vinegar and placed on the stomach, it will eliminate helminthes (worms). When it is blended with wet or cooked colorynth water, it is more effective in removing helminthes (worms). It also clears up, decomposes and relieves cold symptoms

when it is ground in a rag and inhaled through the nose on a regular basis until the ailment is cured. Black seed oil helps against snakebites, haemorrhoids and spots. When around 25 grams of it drunk with water it will help against gasping and hard breathing. (Ibn Qayyim, 2003)

5.3 Dry Dates / Tamr

In the Sahih it is narrated that the prophet (pbuh) said:

"Whoever ate seven dates in the morning from the area of "Aaliyah will not be harmed by poison or magic the rest of that day."

He also said:

"The people of a house where there are no dates are hungry"

Also the prophet (Pbuh) ate dried dates with butter, with bread and alone. *Tamr* is hot in the second degree and either wet or dry in the second degree. Dried dates are a fruit, a type of food, a cure, a drink and a sweet. Dried dates strengthen the liver, relax the bowels increase semen production, especially when taken with pine and relief sore throat. As for those who are used to eating dried dates, such as the residents of cold areas, dried dates cause clogs, harm the teeth and cause headaches, unless they are eaten with almonds and poppy.

Dried dates are among the most nutritious fruits, their essence is hot and wet. Especially when one eats dates in the beginning of the day, they help kill worms. Although dried dates are hot, yet they have the strength of an antidote against worm, killing or at least decreasing their numbers, especially when dried dates are taken frequently on an empty stomach. (Ibn Qayyim, 2003)

5.4 The miracle of Vinegar / (Khal)

Muslim narrated in his Sahih that Jabir bin 'Abdullah r.a said, The Messenger of Allah (Pbuh) asked his wife for food and she said that, "I have vinegar". He asked for some of it and started eating it while saying:

"What an excellent food is vinegar. (He ate it with bread)

Khal is a substance that is both hot and cold, although coldness is usually more apparent. It is also dry in the third degree and a strong drying agent. Vinegar also soothes the body and softens the nature.

Wine vinegar helps against gastric inflammation and bile and prevents the toxic medications. It also decomposes milk and the blood when coagulated, and helps the spleen, coats the stomach, constipates, quenches the thirst and prevents tumors from occurring. It also helps the digestion process, works against phlegm, softens thick food and softens the consistency of the blood.

When vinegar is drunk with salt, it will help against poisonous mushrooms. When vinegar is sipped, it will dissolve the clogs that occur in the blood in the lower jaw. When one rinses his mouth with warm vinegar, it relieves toothache and strengthens the gingival.

Vinegar also helps against a septic finger when it is anointed with it, and also relieves pustules, hot tumors and fire burns. Vinegar is an appetite stimulant, soften the stomach, and favorable for young people and for those who live in warm areas. (Imam Ibn Qayyim, 2003)

6. Conclusion

Halal product has assimilated into Muslim life in more than one way – thus making it more comfortable and reachable to most Muslims day by day. However, most Muslims take the halal logo or assurance at face value, meaning as long as a product carries a halal logo and certified by a competence authority Muslims has no qualm about it. Hence, the product's ingredients need to be inspected and tested for permissibility to meet the halal requirement and standard. Unfortunately, some of the ingredients are unable or difficult to be identified through its source, which can be categorized as *shubhah* or doubtful. These ingredients should be avoided. Halal Nutraceutical consumer are now starting to question the authenticity and integrity of the Halal nutraceuticals that they consumed, especially that came from the non-Muslim manufacturers and distributors in Singapore.

In halal products, the scientific processes are needed to monitor the industry as a whole such as in production of the health and nutraceuticals products without any questionable health and religious implication. Whether or not one needs a prescription to access them, the issues at hand (for those who are aware and concerned) are how and where they are prepared, the effectiveness of the drug/medicine/supplement, and the compounds / ingredients used. The latter is where the pigs come in. To date, porcine-based ingredients have been widely used in pharmaceutical industry for various reasons. So, one may be consuming herbal supplements,

but if they're in capsules, chances are, the capsules may possible be made of porcine-based gelatine!

References

- Ahmad Sonhadji Mohammad, (1990), Tafsir al Qur'an Ibnu al Athir, Kuala Lumpur: Pustaka Mizan. 47-48
- Albakri, Ahmad (2007), *Increased Religiosity within a Secular Society*: The Experience of Singapore Muslim Community, (MUIS), not published.
- Al-Qaradawi, Yusuf, (2010) *The Lawful and the Prohibited in Islam*. Petaling Jaya, Selangor, Malaysia, Islamic Book Trust.10
- Al-Qur'an- A summarized version of At-Tabari, Al- Qurtubi (1995) Dr.Muhammad Muhsin Khan,Islamic University,Al-Madina Al- Munawwara, Riyadh, K.S.A.,Darus-Salam Publications. 66
- Chaudry, M.M. (1994). Is kosher gelatin really halal? Islam Perspectif., XI(1), Riaz, M.N. (2004) Halal Food Production, CRC PRESS, Boca Raton FL.
- Chua Yan Piaw, (2012) Mastering Research Methods, Shah Alam, Selangor, Malaysia, McGraw Hill.
- Creswell, J. (2012). *Educational Research Planning, conducting: Qualitative & Quantitative Approaches*. (2nd Edition),pg 21-22 Publisher Pearson Education, Inc Boylon Street, Boston.
- Creswell, J. (2014). *Educational Research Planning, conducting: Qualitative & Quantitative Approaches*. (4th Edition),pg 231 Publisher Pearson Education, Edinburgh Gate, Harlow, Essex CM20 2JE.
- Dewi Hartaty Suratty, (2012/2013) Halal Certification Strategic Unit, (MUIS), Singapore Halal Directory, Publisher Marshall Cavendish Business Information Pte. Ltd. Singapore. 12
- DeFelice SL. Nutraceuticals (1992): Opportunities in an Emerging Market. Scrip Mag 9
- Fatwa of the State Mufti. (2009), *Issues on Halal Product*, Brunei Darussalam. Publisher: State Mufti's Office, Prime Minister's Office, pg. 7-9, & 98-99
- Hans K. Biesalski, (2001) *Nutraceutical: The Link Between Nutrition and Medicine*, The University of Hohenheim, Stuttgart, Germany, Marcel Dekker, Inc. New York, NY 10016, pg.23
- Hussaini, M.M and Sakr, A.H. (1983) *Islamic Dietary Laws and Practices, Islamic Food and Nutrition Council of America*. Bedford Park. IL.

- Ibn Rajab, Abd ar Rahman ibn Ahmad, 1980, *Jami' al Ulum wa al Hikam, fi Syarh Khamsina Hadithan min Jawami' al Kalam*, Qaherah, Dar al Hadith.
- Ibnu Kathir, (2003), Tafsir Ibnu Kathir (Abridged) volume 1,(2nd Edition),Darussalam Publisher and Distributors. Riyadh, K.S.A.
- Ibn Qayyim al-Jawziyyah, Shams al-Din Abu 'Abd Allah Muhammad bin Abi Bakr al-Zur'i al-Dimashqi. (1987). *alFawa'id*. (4th Ed.) Beirut Dar al-Kutub al-'Ilmiyyah.
- ______. (2003). Translated by Jalal Abual Rub (2nd Edition), Darussalam Publisher and Distributors. Riyadh, K.S.A
- ______. (1998). *Medicine of the Prophet*. Translated by Johnstone, Penelope. The Islamic Texts Society. Cambridge; U.K
- ______. (1957) *Al-Tibb al-Nabawi*. ed. Abdul Ghani Abdul Khaliq. Riyadh, K.S.A. Maktabah al-Riyadh al-Hadithah.
- _____. (2008) al-Jawab al-Kaafi li-man saala 'an al-Dawa' al-Shafi. Al-Manshurah, Egypt, Darul Yaqin.
- Krejcie, R. V and Morgan, D.W, (1970). 'Determining Sample Size for Research Educational and Psychological Measurement' 30. 607-610
- L.D Edwards. A.W. Foz, P.D Stonier.(2011) *Principles and Practice of Pharmaceutical Medicine*, (3rd Ed) Blackwell Publishing Ltd. Pg.6-7
- Lester Packer.(2001) *The Role of Vitamin E in the Emerging Field of Nutraceuticals*, University of Southern California School of Pharmacy, Los Angeles, California.
- Lim Gim Noi, (2010) *The Amazing Black Garlic*, (3rd Ed) PCL Publisher Pte. Ltd.
- Malaysian Standard for Halal Pharmaceuticals General Guidelines) (World Halal Research Summit 2010)
- M.Yunus, A., W.Chik. W.M., Yusof and Mohamad. M. (2010). The concept of *Halalan tayibba* and its application in products marketing: A case study at Sabasun HyperRuncit Kuala Terengganu Malaysia. *International Journal of Business and Social Science*.(1) 3
- Muhamad Asad, (1980) *The Message of Al-Quran* E.J. Brill-London publisher and booksellers,41 Museum Street, London WCIA ILX pg. 961)
- Muslim, (1996), *Sahih Muslim bi Syarh al-Nawawi*, Makkah al-Mukarramah, Publisher Maktabah Nazaar Mustafa al-Baaz. Chapter (19), Vol. 4/2797
- Nurazmallail Marni, (2012) *Medical Epistemology of Ibn Qayyim al-Jawziyyah in Al-Tibb Al-Nabawi* PhD Thesis presented to Senate of Universiti Putra Malaysia.

- Patton, Michael Quinn, (2002) *Qualitative Evaluation and research Methods* (3rd Ed.) Thousand Oaks: London, Sage Publications. Inc. pp 352-354
- Riaz, M.N. & Chaudry, M.M (2004) *Halal Food Production*. CRC Press, Boca Raton, FL. 98-101
- Radhiahtul Raehan Mustafa, (2012) *Identification of porcine-based source in capsule by using FTIR-ATR*, Master Thesis, pp 2 (Not Published)
- Robson, C. (2002). Real Word Research (2nd Ed.). Blackwell Publishers. Oxford, UK.
- Rudy Bruil (2010) *Halal Logistics and the impact of consumer perceptions*. Master Thesis. University of Twente. The Netherlands. pp. 58
- Stake, R. (1994). Case Studies. In N. Denzin & Y. Lincoln (Eds.), *The Handbook of Quantitative Research* Thousand Oaks Publications.
- Shibamoto, Takayuki; Kanazawa, Kazuki; Shahidi, Fereidoon et al., eds. (2008). Functional Food and Health. ACS Symposium. p. 993
- The 3rd Industrial master Plan (IMP3), 2006-2020, *Development of the Halal Industry Chapter 21*, pp 593-594
- Yaseen Ibrahim al-Sheikh, (2004) *The Translation of The Meaning of the Fifty Hadith of Jami' al-Ulum Wal-Hikam*, Dar Al-Manarah for Publishing & Distribution El-Mansoura-Egypt, (3rd Ed), Vol. 1, pp 65-66
- Wahbah al-Zuhaily,(2001), *Tafsir al-Munir*, Intel Multimedia and Publication. Petaling Jaya, Selangor.
- Wildman, Robert E., (2001). Handbook of Nutraceuticals and Functional Foods (2nd ed.). CRC Series in Modern Nutrition
- Yin, R. (1994). Case Study Research (2nd Ed.). Thousand Oaks, Ca: Sage Publications.
- Zhari, Ismail (2011), 'The Halal Index, book on pharmaceuticals, published by Pytorex Press Sdn. Bhd, Kuala Lumpur, Malaysia: Vol. 1, pp xvi, pp 42
- Zaahira Muhammad, (2009) First FTA between Singapore and the GCC signed. *The Halal Journal*, Jan-Feb 2009, pp. 52
- Zohary D, Hopf M., (2007) 3rd Ed. Oxford University Press,

Document, Report and Conference Paper

Halal Development Council, (2012) 2ndInternational Conference & Expo on Halal Industry, 16th -17th January 2012, Lahore, Pakistan.

- Hj Mohd Ariff Mohd Salleh, (2002) Halal Certification Section(MUIS), *Halal Certification:* The Singapore Experience ,The 4th International Halal Food Conference Canada, organized by Ifanca International, 22nd &-23rd April 2002 in Toronto, Canada.
- International Conference & Expo on Halal Industry, *The Global Market Potential of Halal*, held on 9th August 2010, at Lahore, Pakistan.
- Roziatul Akmam Osman, CCM., (2012)- HDC., Halal Industry Development Corporation
- Shahlan Hairalah, Head, Halal Certification Unit(MUIS), Factors Contributing to the Growth of the Singapore Halal Industry, The 9th International Halal Food Conference in Chicago, organized by IFANCA International on 23rd & 24th April 2007
- Takayuki, S., K. Kazuki and S. Fereidoon, (2006). *Functional Food and Health*. In the proceedings of the ACS Symposium, pp: 993.

Journal, and Newspaper

Berita Harian, Singapore, 26th May (2013)

Brown KA, Simpson ER, Obesity and breast cancer: progress to understanding the relationship. Cancer Res, 2010; 70(1) 4-7)

Journal of Indonesian Social Sciences and Humanities, (2010) Vol. 3, pp. 154-155

Joy Abdullah.(2010) The Halal Journal, issue 37,(Nov-Dec 2010) pp. 25

- Ismail Mohd Hanif and Sulaiman Syarina, *Halal the next big thing?*, SME, May 2012,pg 28, Business Media International, Singapore Edition.
- International Journal of Educational Research and Development (2013) Vol. 2(8) Saleha Sadeeqa,16th August, 2013) Knowledge, attitude and perception regarding Pharmaceuticals. Among academicians)
- Islamic Medicine History and Current Practice, Journal of Islamic Medical Association, (JIMA) (1998)
- Ruzanna Muhammad, (2011). Pigs in your meds. The Halal Journal. 2011, (40) pg 26-31
- Kenny Peng, News Halal Pharmaceutical, Features/Posted 6th Nov 2012 (<u>www.news</u> Halal Pharmaceutical)

Lee Yen Nee, Today Paper 3rd June (2013)

Lavanda Lingan and Hariz Mohd., New Straits Time,(5th June13) *Halalfocus.net/Malaysia-drug-firms-eye-halal-certification*.

The Halal Journal, July-Aug, 2010

Today Paper, Singapore 6th August (2001)

Internet:

Gurib-Fakim, Ameenah, *Halal Cosmetic & Personal care seminar*, afakim@cephyrrecherche.com, Ebene, Mauritius.

Islmedin.doc 4/30/95, Revised 10/1998, *Islamic Medicine History and Current Practice*, Journal of Islamic Medical Association, (1998)

Ministry of Education (2011), Education Statistics Digest August 2011, Singapore, pg50-52, www.moe.gov.sg/education-statistics-digest/files/esd-2011 pdf (accessed May 2013)

Forum on Religion Public Life. www.pewforum.org/mapping-the-Global-Muslim-Population.aspx (accessed 12th May 2013)

Singapore Department of Statistics, "Singapore Population Census 2010, Statistical Release 1," http://www.singstat.gov.sg/pubn/census2010.html pdf. (accessed 29th December 2012) http://www.uhv.edu/ac/research/write/pdf/draftintroduction.pdf (accessed 27th May 2013)

http://www.nutraceuticalsworld.com/contents/view_breaking-news/2013-06-26/nutraceuticals-product-market-forecast-to-reach-2048-billion-by-2017/#sthash.zYcIpKGH.dpuf (accessed 24th Nov 2013)