



Dr. N.G.P. ARTS AND SCIENCE COLLEGE

An Autonomous Institution Affiliated to Bharathiar University

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COIMBATORE - 641 048

News Letter 2016 - 2017

Department of Nutrition & Dietetics

Editors Note :

We take immense pleasure in releasing the News Letter for the academic year 2016-2017. The Department of Nutrition and Dietetics has performed various activities in this academic year with an aim to render nutritional services to the community. Various extension activities were organized to create awareness on the importance of nutrition among various sectors of people in the community. The students were given opportunities to improve their knowledge about the current trends in this field through various Guest Lectures, Conference, Workshops and Seminars conducted by the department. They were also motivated to participate in National and International Conferences and Workshops conducted by other institutions.

History of the Department

The Department of Nutrition and Dietetics was started in the year 2003 offering the course B.Sc in Food Science and Nutrition with well - equipped laboratories. Post Graduate course in Food and Nutrition was started in the year 2004. The department also extends the activities of research by offering Master of Philosophy in Food and Nutrition from the year 2005 and Doctorate of Philosophy from the year 2016 onwards. The Department has qualified and well experienced faculties.

Vision

To educate and to mould more scholars in the field of Nutrition and Dietetics with its vast scope and versatile applications in the field of study.

Mission

To enhance the overall personality of our students by providing quality education, internship training and research facilities.

Objectives

- » To inculcate healthy lifestyle aspects in the minds of the students and explore them to become good nutritionists
- » To motivate students in developing highly affordable therapeutic food products.
- » To create awareness and render nutrition service to the community.

EDITORIAL

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Department of Nutrition and Dietetics

MS. B. Premagowri

Assistant Professor

Department of Nutrition and Dietetics

Activities of the Department

- » National Conference
- » Five Guest Lectures
- » Four Webinars
- » Workshops
- » External Visits
- » Nine Extension Activities
- » Career Guidance Program
- » Alumni Interactive Sessions

One day National Conference

The department has organized a One Day National Level Conference on “Food Processing and Technology (Igniting India) – Towards Entrepreneurship” on 17th August 2016. The invited lead speakers were Dr. Bhaskarachary, Assistant Director, NIN, Hyderabad Dr. Suresh Sahare, Scientist, CFTRI, Mysore and Dr. Wadikar, Scientist, DFRL, Mysore. Around 400 members were the participants. Nearly 180 members from various colleges were the beneficiaries. Power panel session with entrepreneurs Dr. Sarawathi Eashwaran, Ramasamy Chinnammal Trust, Coimbatore and Dr. Sathiyamoorthy, Moon foods, Thiruchengode were also conducted on the theme of the conference. Mr. Narasiman, Coordinator, Entrepreneur Development Cell, Dr. N.G.P.Arts and Science College took over the session. Paper and poster presentations were conducted on this occasion and prizes were distributed to the winners.



Guest lectures

The department has taken initiatives in enhancing the knowledge of the students by inviting experts from the industries and reputed institutions to share their knowledge through their presentations. Department has conducted five guest lectures in this academic year and four webinars.

- » “Processed Indian Traditional Foods” by Mr. K. Sivaganesan, Research Analyst from GIRACT, Coimbatore. Ms. Vishnupriya, Research Analyst from GIRACT, initiated our students on research analysis and entrepreneurship development on 07.06.2016



- » “Commercial food products in Enteral Nutrition” by Mr. Aravindhkumar, Marketing Executive from FRESINIUS, Coimbatore on 01.07.2016.
- » “Nutrition concerns of the next generation” by Dr. Jemima Beryl Mohankumar, Emeritus Professor, Department of Nutrition and Dietetics, PSG College of Arts and Science College, Coimbatore on 06.09.2016.
- » “Personalized Nutrition Concepts” by Ms. Janani Tamilvannan, CEO, Geneobe Wellness Clinic, Coimbatore on 20.02.2017.
- » “Yoga- Importance and Benefits” by Mr. Sukandhan, Yoga master, Unique Yogalayam (School of yoga Pranayama therapy and healing) Coimbatore on 25.02.2017.

Webinar sessions

- » On 21.07.16 our department had arranged the online session conducted by Confederation of Indian Industry, Chennai on "Common Misconceptions regarding Fat and Cholesterol". Our department undergraduate and postgraduate students with the undergraduates of Clinical Lab Technology, postgraduates of Microbiology and Biochemistry department students were the beneficiaries of this online session.
- » Our department had systematized two online sessions collaborated with CII Indian Women Network (IWN) Tamil Nadu Online Sessions on 15.09.2016 about 'When to worry about common gynaecological issues' at morning session of the day and 'Heart disease in women - Is it different from men' at afternoon session. Our department UG and PG students were the beneficiaries.
- » Our department with Women's Forum and Confederation of Indian Industry, Chennai conducted a faculty development program as Online Session on 'Balancing Work & Family as a Career Woman' on 29.09.2016.

- » Webinar was organized for II UG students on "Time management is Life management" by Mr. Muthiah Ramanathan, Director, Mind Dynamic Centre, CII, Chennai on 06.03.17.

Workshop

- » Hands on workshop on "Fruit and Vegetable preservation" organized by our department from 19-9-2016 to 23-9-16 in our food lab, collaboration with Ministry of Women and Child Development, Government of India, Madurai Mrs. V.Usharani, Program Officer with two assistants involved in this program to train our final year UG students (48 No) in the morning session and SC/ST students (30 No) of various departments of our college in the afternoon session. The candidate, were trained on the preparation of Jams, Jelly, Murabah, Squashes, Tutty Fruity and various types of Pickles. They trained them about the usage of preservations and nutritional labeling.
- » Another workshop for our Postgraduate students about "Nutrition and Genetics: The Coming Age of Personalized Nutrition" on 07.02.2017. Around thirty four PG students attended this program and gained knowledge on nutrigenomics and nutrigenetics and its application in personalized nutrition. They trained to work out the personalized nutrition in various deficiency and therapeutic conditions

External Visits

MEDI-SCENE 2016

On 21.06.16 our department undergraduate and postgraduate students were taken to Coimbatore Medical College exhibition "MEDI-SCENE 2016" to visit the models, exhibits and posters explaining on human physiology, anatomy, pharmacology, oncology nursing, radiology, obstetrics and Gynecology. All our students were benefited by this visit. They gained more information about the complete profile of medical science.

Visit to Bakers Forum

On 25.07.16 our department undergraduate and

postgraduate students were taken to "Bakers Forum" at CODISSIA, Coimbatore, to visit the exhibition and knowledge sharing session. Our students gained information on new baking technologies, types of oven, other equipments used for baking, molding machineries, scientific food testing services and on quality checks. All our students were benefited by attending this forum to extend their knowledge on this area.

Industrial Visit to Salem Nandhi Dhal Mill

Our final year students were taken to Nandi Dhal Mill, Salem on 24.08.2016 for Industrial Visit which is included in the curriculum. They were lead by three faculty members. The pulse processing industry, an ISO 9001:2000 certified company organization, was one of the best in India and they are also a good exporter to UK and Canada. The best products are gram flour, jelabi flour, urad dhal, green gram flour, veg and non-veg biriyani mixes. Industrial experts explained about the pulse processing techniques, grading and packaging methods to our students. They have publicized their products (ready to cook chapatti unit) to our students. This industrial visit was more useful to the students and hopefully this visit also helped the students to support their subject knowledge for both postharvest technology and food processing papers.

Extension Activities

The Department and Entrepreneurship Development Cell of Dr. N.G.P. Arts and Science College (Autonomous), Coimbatore has organized 2 - Day Hands-on Workshop on "Fruit and Vegetable Preservation" on 4th and 5th July 2016 for the 35 Women Self - Help Group members of Coimbatore district. The objective of this workshop was to increase the number of small scale industries and encouraged to become successful entrepreneurs. Faculty members and students of the Department trained Women Self Help Group members on fruits and vegetables preservation in the form of jams, sauces, squashes, cookies, cakes and weaning foods. The training has been provided at the Food Science Laboratory of the department.



Hands-on Workshop on Fruit and Vegetable Preservation on 4th and 5th July 2016 organized by Department of Nutrition and Dietetics jointly with Entrepreneurship Development Cell of Dr. N.G.P. Arts and Science College. (Left) Certificate Distribution by Dr. P.R. Muthuswamy - Principal, Dr.N.G.P. Arts and Science College, (Right) Participants with Certificates.

- » The Department conducted a programme under the title “Breast Feeding-A Key to Sustainable Development” “to spread the awareness of breast feeding among the adolescent girls of our college students. About 7 teams from various departments were participated in poster competition and 5 groups for cookery competition. On the third day a lecture session entitled “Breastfeeding-A Key to Sustainable Development” presented by Dr.Silumbuchelvi M.D., D.G.O., D.N.B, was organized the I year postgraduate students of all the disciplines on 5th August 2016. She explained the importance of breastfeeding and nutritional composition of breast milk and the complications occur during lactation period to the students.



- » Awareness on World Food Day was created to our college students by displaying the World Food Day poster with the theme on “Climate is changing. Food and Agriculture must too” on the notice boards for all the students. The program was organised by Mr. S.Daniel Robert, Assistant professor.
- » The health camp - 2016 was organized by KMCH College of Nursing jointly by Nutrition and Biochemistry department to assess the nutritional status of the first year UG and PG students of all the disciplines from our college. The student volunteers of nutrition and dietetics assessed anthropometric parameters especially Body Mass Index and nutritional counseling were provided to maintain their health status after assessing hemoglobin with the help of Biochemistry student volunteers.

Extension activity in schools

- » The campaign was organized in PSGG Kanya Gurukulam, Coimbatore. It was an awareness programme for the school students about the consumption and consumer attitudes of junk foods and street foods. About 20 girls were assessed by using a questionnaire, we have studied the impact of their consumer attitude pattern of both junk foods and street foods. About 14 students of our III B.Sc Food Science and Nutrition delivered talks on the hazardous effect of the junk foods, street foods, processed foods. They have also given the talks on food hygienic practices and the importance of healthy foods.



- » In collaboration with G-18, a public charitable trust along with Gandhian department, PSGR Krishnammal college are jointly conducting a workshop “Paarvai” on 21st Feb 2017. Our I UG students participated in organizing a field work on Recent Nutritional moves and Transition. They have also engaged in helping orphans and mentally challenged people in psycho development characteristics.



- » The campaign was organized in suburban school, Coimbatore. The campaign was an awareness program for the school students about the consumption and consumer attitudes of junk foods and street foods. About 40 students were assessed by using a questionnaire, we have studied the impact of their consumer attitude pattern of both junk foods and street foods. About 14 students of our department delivered the importance of junk foods, street foods, and processed foods. They have also given the food hygienic practices and the importance of healthy foods.



- » An demonstration program on Fruit and Vegetable Preservation on 17th march 2017 for the 60 NMEC students . The faculty incharge and III UG students oriented the program on fruits and vegetables preservation in the form of jams, sauces and squashes. The training has been provided at the Food Science Laboratory of the department.



- » Mr. Manikandan from Jeyendra Saraswathi School, Coimbatore has given an information regarding the importance of horticulture and home gardening, waste management, growth promoting factors of plants, land restoration, soil fertility and its biological property, usage of bio fertilizers and vermi composting on 23.03.2017. Our students gained knowledge on horticulture and home gardening and we have tried the experiment in the terrace behind the department.

Career Guidance Program

- » Our department had conducted a career guidance program for interested students (34) from PG and final year UG students on HACCP Level-3 by Mr. Sameer Babu, Food Quality Controller from Kazakhstan arranged by signature solutions on 21.03.17 & 22.03.17.

Achievements of the department

Students Achievements:

University Rank Holders:

Undergraduate (2013-2015):

I Rank : Faheema Afsin.K

II Rank: Deeraja Devi.V

III Rank: Rekha Krishna

Postgraduate (2014-2016):

II Rank: Navya Ganga.K

Winners of Interdepartmental and Inter Collegiate Events :

- » Subash.S and Gilbert Zass of Final year UG awarded first prize in cookery and I MSc FN, T.P. Arjunraj and M.Rajeshwari awarded first prize in poster presentation and Sushmi Satheesh and Janani awarded second prize in Quiz conducted by Karunya Univesity on 16.12.2016.
- » T.P.Arjun (I MSc FN) awarded first prize in cartooning, Sushmi Satheesh (I MSc FN) and S.Sreya (III BSc FSN) third prize in Paper art, K.karthigeyan and P.Gautham of (I BSc FSN) awarded second prize in Quiz at NGP FEST 2016 (23.12.2016).
- » T.P. Arjunraj and P.Ramya (I MSc FN) awarded first prize in model making and T.P. Arjunraj and A.Nitin awarded first prize in face painting conducted in our college by the department of Microbiology on 06.01.2017
- » T.P.Arjun and S.Akshaya (I MSc FN) awarded second prize in poster presentation as a part of Dr.Purani Endowment Lecture by MHM department on 18.01.2017
- » T.Rekhakrishna and Susmi Satheeshkumar (I MSc FN) awarded first in fireless cooking competition held at inter collegiate meet Hillario 2017 on 27th and 28th January 2017 at Nandha Arts and Science College, Erode.
- » L.Aishwarya (I BSc FSN) won second prize in Kumite karate in Tamilnadu State Karate Championship - 2017 held on 7th and 8th January 2017 at Trichy.
- » P.O.Varun, Bibin Mathew, Shilpa Joy and Akshay.K.Chandran (II MSc FN) were participated in poster presentation at UGC sponsored national level seminar on Emerging Trends in Food technology on 28.01.2017, organized by Arulanandar College at Madurai. P.O.Varun awarded first prize in poster presentation.
- » Geetha.S and Ramya.p (I MSc FN) awarded first prize in cookery competition intercollegiate meet on 24.02.2017 at Sri Jeyendra Sarawathi Maha vidhyalaya College of Arts and science, Coimbatore.
- » L.Aishwarya (I BSc FSN) participated in Senior National Karate Championship -2017 organized by Government of India held on 22nd to 27th February 2017 at (Panaji) Goa.
- » Anusha Elasa Babu and Sowmiya (II BSc FSN) awarded third prize in Quiz program intercollegiate meet conducted at Avinashilingam University, Coimbatore on 23.02.2017.
- » Sathiyapriya and Rehashree (III BSc FSN) awarded first prize in Cookery competition conducted by Inter
- » Geetha.S and Ramya.p (I MSc FN) awarded second prize in paper presentation and Rekha.K and Susmi satheesh (I MSc FN) in National Conference on "Changing disease profile; Challenges facing Basic& Transitional research in India" at Dr. NGP Arts and Science college (Autonomous) on 05.10.2016-06.10.2016

department competition conducted by the department of IT, Dr.N.G.P Arts and science College (Autonomous) on 24.02.2017

- » Students of II MSC and II BSC participated in a National Seminar on “Recent Trends in Food Processing & Technology” at PSG CAS on 27.03.17 and Varun.P.O. and Akchay.K.Chandran awarded first prize, N.Mini and Shilpa Joy second prize and K.Preethi and Radhika third prize of II MSC awarded first prize in quiz competition.

Faculty Achievements :

- » Mrs.V.Krishnaprabha awarded first prize in poster presentation at UGC sponsored national level seminar on Emerging Trends in Food technology on 28.01.2017, organized by Arulanandar College at Madurai.
- » Dr.M.Sivasakthi attended a UGC sponsored International seminar on “Pulses for Life” at Avinashilingam University, participated in Poster presentation and awarded second prize in poster presentation.

Faculties as Invited Speakers

Name of the Staff	Date	Venue	Title of the session
Mrs. V. Krishnaprabha	21.06.2016	District project Centre, Pongalur	Milestones of Child Development
Mr. S. Daniel Robert	18.07.2016	Kovai Medical Centre and Hospital, Coimbatore	Nutrition care Process
Dr. D. Sridevi	10.08.2016	Department of Clinical lab Technology, Dr. NGP Arts and Science College, Coimbatore	Healthy Life Style Behavior and Personal Hygienic Practices
B. Premagowri	10.08.2016	Department of Clinical lab Technology, Dr. NGP Arts and Science College, Coimbatore	Healthy Life Style Behavior and Personal Hygienic Practices
B. Premagowri	21.02.2017	Diet and Diabetic Clinic, Coimbatore	Patient Counseling techniques
Mr. S. DanielRobert	08.03.2017	PSG College of Arts and science, Coimbatore	Nutrition care Process

Faculty Awards

1. Dr. D.Sridevi received "Young Science Award" by National Federation for Entrepreneur Development.
2. Dr. D.Sridevi received "Young Educator Award" by Venus International Foundation, Chennai.

Faculty Publication Details

Mrs.V.Krishna Prabha, Development and analysis of nutrients, antioxidant in muskmelon seed powder incorporated value added products, International Journal of Scientific Research, 2016, volume:5, issue:4

Mr.S.Daniel Robert, Ismail and Wan Rosli. Reduction of postprandial blood glucose in healthy subjects by buns and flat breads incorporated with fenugreek seed powder, European Journal of Nutrition, ISSN 1436-6207, 2016. Vol 55, 2275-2280 Impact factor 3.2.

Mr.S.Daniel Robert, Assistant professor published an article on "Reduction of Postprandial blood Glucose in healthy subjects by buns and flat breads incorporated with fenugreek seed powder" in European Journal of Nutrition (October 2016 Volume: 55). IF:3.23

Mr.S.Daniel Robert, Assistant professor published an article

on "Incorporation of dietary fibre rich oyster mushroom powder improves postprandial glycemic response by interfering with starch granule structure and starch digestibility of biscuit" in the Journal Food Chemistry (Jan 2017, Volume: 227).IF:3.39

Dr.S.Umamaheswari, Effect of kidney bean (Phaseolus vulgaris) on textural, sensorial and nutritional quality of Idli-a cereal and legume based fermented food, Advanced Research in Food Science and Nutrition, 2016, Volume:2, issue:4

Dr.M.Sivasakthi , Effect of process parameter on the physico-chemical and nutritional characteristics of osmotically dehydrated coconut (cocos nucifera) based snack at Journal of Advanced Research in Food Science and Nutrition 2016, Volume:2, issue:4

Mrs.B.Premagowri, Overweight and Type 2 Diabetes, Journal of Advanced Research in Food Science and Nutrition, December 2016, Volume:2, issue:4

Mrs. B.Premagowri published an article on "Anthropometry and Type-2 Diabetes" in Paripex -Indian Journal of Research (Volume:6, Issue:2; February 2017).IF:5.76

PLACEMENT DETAILS UNDER GRADUATE-BATCH (2013-2016)

Name	Occupation
BhuvanasankarinD	Dietitian, Kovai Medical Centre Hospital, Coimbatore
Swaranalakshmi S	Dietitian, Pink Fitness, Coimbatore
Favas Yadish Tc	Quality Supervisor, Lazza Ice Cream, Ernakulam, Kerala.
Sanjeed. S	Quality Supervisor, Lazza Ice Cream, Ernakulam, Kerala.

POST GRADUATE-BATCH (2013-2015)

Name	Occupation
Bengia Nipong	Dietitian, Heema Hospital, Arunachal Pradesh.
Dhivya.K.D.	Dietitian, Kg Hospital, Coimbatore
Navya Ganga K	Lecturer, Department of Microbiology, Sri Krishna Arts And Science College, Kerala.
Premalatha .P	Dietitian, M.V. Diabetes Specialities Centre, Chennai
Sruthi Manoj.P.P	Dietitian, KG Hospital, Coimbatore
Surabhi R S.	Teacher, Vocational Course (Nutrition) Government Higher Secondary School, Kasargod, Kerala.
Uthaya K.	Dietitian, V.G. Hospital, Mettupalayam.

Alumni Interactive Session

Alumni Interaction Session on Entrepreneurship

- » Our alumni Ms. Rekha Krishna a passed out undergraduate student (2013-2016) who joined as Dietitian in PINK Fitness, Coimbatore invited to the department to give an interactive session for our second and third year undergraduate students about "New trends in Diet Counseling" on 05.07.2016.



- » Our alumni student of 2013-2016 batch Ms. Ramya an entrepreneur, who started an Ice cream production unit, Grandkey Cream pvt. Ltd. and ISO 9001 2000 certified unit. She was invited for an interactive session on 06.07.2016 with our final year undergraduate and postgraduate students to develop the ideas and skills of



entrepreneurship among the students. Ms. Ramya has also persuing her post graduation (Food and Nutrition) in our institution. She explained about her manufacturing unit, production techniques, marketing strategies and sales. She briefed the procedures for applying FSSAI license and ISO certification. She assured to give opportunities for our students in production unit and outlet units.

- » Our department passed out student 2012-2015 batch, Mr. Waseem, Research Scholar, FSMS was invited for an interactive session with our final year undergraduate students about Food Safety Management System on 28.12.2016



- » Our department passed out student 2013-2016 batch, Mr. Niyas, who had undergone HACCP training in FSMS was invited for an interactive session with our final year undergraduate students about HACCP levels of training sessions on 28.12.2016
- » S.Ganamoorthy from British Biologicals, Trivandram gave an interactive session on Nutrition supplements to our final year UG students on 23.02.17



Students Corner

SUJATHA.S

III BSc FOOD SCIENCE & NUTRITION

DIET THERAPY



Since early days people have looked at food as a source of healing. For certain diseases, dietary modification is more important than medical treatment. In certain diseases, diet therapy goes hand in hand with medical care.

Diet therapy involves the use of appropriate food which serves as a tool in the recovery from illness. To maintain good nutritional status of a sick person, to correct deficiencies (if any), to restrict some nutrients, to change the cooking methods so as to give rest to certain organs in the body, to reduce or increase the body weight etc are some of the objectives of diet therapy.

Careful selection of food, their preparation and ensuring that it is properly consumed by the patient is very essential in diet therapy because food is an integral part of patient care and is a major contributor to recovery. There are a number of diet models that are intended to promote greater resistance to specific conditions. There are three main aspects in which

the diets are prescribed for patients. The first refers to the composition of the diet. For example low calorie diet, low fat diet. Second aspect refers to the consistency of the diet. Examples are normal diet, liquid diet. Thirdly, it is important to indicate the manner and route of feeding the diet to the patients such as by mouth or by nasogastric tube etc., depending on the condition of the patient.

Therapeutic diet with modifications in the composition includes:

High calorie diet: These diets are prescribed for weight gain, fever, burns. This is a normal diet with an increase in the calorie level to 3000 or more.

Low calorie diet: These diets are prescribed for weight reduction in Cardiovascular Diseases, Diabetes Mellitus, Hypertension. This is a normal diet with energy values reduced to 1500-2000 calories. Protein levels should be 65-100 g.

High protein diet: High protein diet of 100-125 g/day will be prescribed for a variety of conditions like fever, burns, diarrhea, elderly, and alcoholics.

Low protein diet: Low protein diet is usually prescribed for conditions like acute and chronic renal failure, inborn error of metabolism, Nephrosclerosis.

Fat controlled diet: Usually fat controlled diets are prescribed for atherosclerosis, myocardial infarction, and gall bladder diseases. The calories from fat should provide about 30% and 35% of the total calories with 10% from saturated fat and 12% - 14% from polyunsaturated fats.

Likewise a number of diets such as Low sodium diet, Potassium restricted diet, Acid ash diet, Alkaline ash diet, Renal diet etc are used for therapy.

Therapeutic diet with modifications in the consistency includes:

Normal diet, Liquid diet, Clear Fluid diet, Full fluid diet, Bland diet, Soft diet.

Normal diet is most commonly used in hospitals. Liquid diets consist of variety of food that are liquid at room temperature. Clear liquid diet includes drinks such as clear fruit juice, coconut water, extracts of dhal, cereal waters. A clear fluid diet is usually used for 1 or 2 days for about 30-60 ml/hour. Full fluid diet includes liquid foods which are liquid at body temperature. Soft diet is used after full fluid diet and before moving onto a normal diet. Foods included are those which are easy to mix with saliva, swallow and digest.

Food allergies due to abnormal immune response and food intolerance (example: intolerance to lactose) of the patients are also taken into account. In such cases appropriate substitution are made to ensure the meal is adequate with nutrients. Additional feeding such as Supplements, usually as liquid nutritional shakes are provided once, twice or three times per day in order to nourish the patients and improve their nutritional status.

Therefore, Diet therapy is a practical application of nutrition as a preventive or corrective treatment of disease and it is based on a simple balance of "Food- Blood- Mind". The food that one eats, determines the quality of the blood and the blood in turn determines the quality of the mind of the individual. It helps to maintain a healthy lifestyle or improve health in patients.

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1. Vimala, V. Advances in Diet Therapy. New age International (P) Limited, 2009.
2. Rajagopal, M.V., Sumati R. Mudambi. Fundamentals of Foods, Nutrition and Diet Therapy. New age International (P) Limited, 2010.



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