

RESUME

Name: Dr. Maninder Kaur
Father's Name: Late S. Kuldip Singh
Date of Birth: 09-03-1976
Nationality: Indian
Marital Status: Married
Designation Lecturer
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Educational qualifications:

<i>Examination</i>	<i>Board/University</i>	<i>Year</i>	<i>Percentage</i>
Ph.D. (Food Technology)	Guru Nanak Dev University, Amritsar	October, 2005	-
M.Sc. (Food Technology)	Guru Nanak Dev University, Amritsar	April, 1999	74%
B.Sc. (Home Science)	Guru Nanak Dev University, Amritsar	April, 1997	82%
10+2 (Medical)	P.S.E.B, Mohali	March, 1993	70%
10+1 (Medical)	D.A.V College, Amritsar	March, 1992	74%
Matriculation	I.C.S.E, New Delhi	March, 1991	76%

- National Eligibility Test for Lecturership conducted by ASRB (ICAR), New Delhi, 1999.

Post Doctorate Fellowship: Digestibility properties of legume starches
Korea University, Seoul, South Korea

Field of Specialization: Food Science and Technology.

Ph.D. Thesis: Isolation and characterization of starch and proteins from different legume varieties.

Academic achievements/medals/scholarships:

- Awarded *Post Doctoral Research Fellowship* by Korean Ministry of Education, South Korea.
- Awarded Gold Medal by Guru Nanak Dev University, Amritsar for standing first in M.Sc. (Food Technology).
- Awarded scholarship by Association of Food Scientists and Technologists (AFST), CFTRI, Mysore for standing first in University in M.Sc.
- Awarded Gold Medal by Guru Nanak Dev University, Amritsar for standing first in B.Sc. (Home Science).
- Awarded Roll of honour for standing first in University in B.Sc.
- Awarded National Scholarship in B.Sc. by Ministry of Human Resources Development (Ministry of Education), New Delhi.

Professional membership:

- Full member of Association of Food Scientists and Technologists, Mysore, India.
- Life member of Punjab Academy of Sciences

Reviewer of Journals:

- Starch/Starke
- Carbohydrate Polymers
- Journal of the Science of Food and Agriculture
- Journal of Food Science and Technology

Employment Records:

<i>Date</i>	<i>Institute/Industry</i>	<i>Designation</i>
19-9-2007 to date	Guru Nanak Dev University, Amritsar	Lecturer
01-8-2007 to 13-9-2007	Korea University, Seoul, South Korea	Post Doctoral Researcher
30-7-04 to 18-9-07	Chaudhary Devi Lal University, Sirsa	Lecturer
15-7-03 to 15-6-04	Guru Nanak Dev University, Amritsar	---do---
17-7-02 to 30-4-03	---do---	---do---
03-9-01 to 30-4-02	---do---	---do---
03-8-2000 to 02-3-01	S.R. Govt. College for Women, Amritsar	---do---

Job Responsibilities: Teaching and Research.

Teaching Experience:

- Teaching various courses in the subject of Food Science and Technology to undergraduate (B.Tech), postgraduate (M.Sc.) and Ph.D students at Guru Nanak Dev University, Amritsar.

- Taught various courses in the subject of Food Science and Technology to postgraduate (M.Sc.) students at Chaudhary Devi Lal University, Sirsa.

Research Experience:

- Supervised 12 B.Tech and 13 M.Sc. students (Food Science & Technology) in their research projects at Guru Nanak Dev University, Amritsar, Punjab and at Chaudhary Devi Lal University, Sirsa.

Area of Research Interest:

- Characterization of bio-macromolecules (starch and proteins), their modifications and applications.
- Digestibility properties of starches.
- Characterization of flours from various botanical sources.

Orientation/Refresher course attended:

1. Attended General Orientation Course at Guru Nanak Dev University, Amritsar from 21-02-2005 to 19-03-2005.
2. Attended Special Winter School in “Nano Science and Technology” at Guru Nanak Dev University, Amritsar from 23-12-2008 to 12-01-2009.

LIST OF RESEARCH PUBLICATIONS:

<i>S. No.</i>	<i>Publications</i>	<i>Impact factor</i>
1.	Maninder Kaur , Kawaljit Singh Sandhu, and Seung-Taik Lim. Microstructure, physicochemical properties and <i>in vitro</i> digestibility of starches from different Indian lentil (<i>Lens culinaris</i>) cultivars. <i>Carbohydrate Polymers</i> , 79, 349-355 (2010).	3.167
2.	Maninder Kaur and Kawaljit Singh Sandhu. <i>In vitro</i> digestibility, structural and functional properties of starch from pigeon pea (<i>Cajanus cajan</i>) cultivars grown in India. <i>Food Research International</i> , 43, 263-268 (2010).	2.414
3.	Kawaljit Singh Sandhu, Maninder Kaur , and Mukesh. Studies on noodle quality of potato and rice starches and their blends in relation to their physicochemical, pasting and gel textural properties. <i>LWT Food Science and Technology</i> , 43, 1289-1293 (2010).	2.114
4.	Maninder Kaur and Kawaljit Singh Sandhu. Characterization of flours from different Indian lentil (<i>Lens culinaris</i>) cultivars. <i>Journal of Food Science and Technology</i> , 47, 273-278 (2010).	0.318
5.	Kawaljit Singh Sandhu, Maninder Kaur , Narpinder Singh and Seung-Taik Lim. A comparison of native and oxidized normal and waxy corn starches: Physicochemical, thermal, morphological and pasting properties. <i>LWT-Food Science and Technology</i> 41, 1000-1010 (2008).	2.114

6. **Maninder Kaur**, Narpinder Singh and Kawaljit Singh Sandhu. 0.318
Preparation and characterization of protein isolates from different lentil (*Lens culinaris*) cultivars. *Journal of Food Science and Technology* 44 (3), 327-329 (2007).
7. **Maninder Kaur**, Kawaljit Singh Sandhu and Narpinder Singh. 3.146
Comparative study of the functional, thermal and pasting properties of flours from different field pea and pigeon pea cultivars. *Food Chemistry* 104, 259-267, (2007).
8. **Maninder Kaur** and Narpinder Singh. Relationships between various 1.386
functional, thermal and pasting properties of flours from different Indian Black gram cultivars. *Journal of the Science of Food and Agriculture*, 87, 974-984 (2007).
9. **Maninder Kaur** and Narpinder Singh. Characterization of protein 3.146
isolates from different Indian chickpea (*Cicer arietinum* L.) cultivars. *Food Chemistry*, 102, 366-374 (2007).
10. **Maninder Kaur** and Narpinder Singh. A comparison between the 1.386
properties of seed, starch, flour and proteins separated from chemically hardened and normal kidney beans. *Journal of the Science of Food and Agriculture*, 87, 729-737 (2007).
11. **Maninder Kaur** and Narpinder Singh. Relationships between selected 0.820
properties of seeds, flours and starches from different chickpea cultivars. *International Journal of Food Properties*, 9/4, 597-608 (2006).
12. **Maninder Kaur** and Narpinder Singh. Studies on functional, thermal and 3.146
pasting properties of flours from different Chickpea (*Cicer arietinum* L.) cultivars. *Food Chemistry* 91(3), 403-411 (2005).
13. **Maninder Kaur**, Narpinder Singh and Navdeep Singh Sodhi. 2.313
Physicochemical, cooking, textural and roasting characteristics of Chickpea (*Cicer arietinum* L.) cultivars. *Journal of Food Engineering* 69(4), 511-517 (2005).
14. Narpinder Singh, **Maninder Kaur** and Kawaljit Singh Sandhu. 1.048
Physicochemical and functional properties of freeze-dried and oven dried corn gluten meals. *Drying Technology*, 23/4, 975-988 (2005).
15. Narpinder Singh, Kawaljit Singh Sandhu and **Maninder Kaur**. --
Physicochemical properties including granular morphology, amylose content, swelling and solubility, thermal and pasting properties of starches from normal, waxy, high amylose and sugary corn. *Progress in Food Biopolymer Research [E-journal]* 1, 44-54 (2005).
16. **Maninder Kaur**, Narpinder Singh, Kawaljit Singh Sandhu and Harmeet 3.146
Singh Guraya. Physico-chemical, morphological, thermal and rheological

properties of starches separated from kernels of some Indian mango cultivars (*Mangifera indica* L.). *Food Chemistry* 85/1, 131-140 (2004).

The above paper was Rapid Communication in Food Chemistry.

17. **Maninder Kaur**, Narpinder Singh and Kawaljit Singh Sandhu. 0.820
Relationship between selected properties of black gram seeds and their composition. *International Journal of Food Properties* 7(3), 541-552 (2004).
18. Narpinder Singh, **Maninder Kaur**, Kawaljit Singh Sandhu and Navdeep Singh Sodhi. 1.386
Physico-chemical, cooking and textural characteristics of some Indian Black gram varieties (*Phaseolus mungo* L.). *Journal of the Science of Food and Agriculture* 84, 977-982 (2004).
19. Narpinder Singh, **Maninder Kaur**, Kawaljit Singh Sandhu and Harmeet Singh Guraya. 1.136
Physicochemical, thermal, morphological and pasting properties of starches from some Indian black gram (*Phaseolus mungo* L.) varieties. *Starch* 56, 535-544 (2004).
20. **Maninder Kaur** and Narpinder Singh. 0.318
Effect of Ammonium Bicarbonate on Extrusion Behaviour of Rice and Corn grits. *Journal of Food Science and Technology* 41, 223-225 (2004).
21. Kawaljit Singh Sandhu, Narpinder Singh and **Maninder Kaur**. 2.313
Characteristics of the different corn types and their grain fractions: physicochemical, thermal, morphological, and rheological properties of starches. *Journal of Food Engineering* 64/1, 119-127 (2004).

The above paper has been listed in the TOP25 Hottest Articles - Downloaded during July-September, 2004 – within the Journal of Food Engineering.

22. Narpinder Singh, Kawaljit Singh Sandhu and **Maninder Kaur**. 2.313
Characterization of starches from Indian chickpea (*Cicer arietinum* L.) cultivars. *Journal of Food Engineering* 63/4, 441-449 (2004).
 23. Narpinder Singh, Sonia Anthak, **Maninder Kaur** and Faqir Chand Shukla. --
Effects of additives and mixing duration on dough development, gaseous release and bread making properties. *Processed Food Industry* 32-35, 54-55 (2003).
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Research Papers submitted:

24. **Maninder Kaur**, Kawaljit Singh Sandhu and Jasmeen Kaur. Pasting properties of Tamarind (*Tamarindus indica*) flour in the presence of Xanthan, Carboxymethylcellulose and Locust bean gum in comparison to Rice and Potato flour. *Journal of Food Processing and Preservation*
25. **Maninder Kaur**, Pragati Kaushal and Kawaljit Singh Sandhu. Studies on

functional and pasting properties of Taro (*Colocasia esculenta L.*) flour in comparison with a cereal, tuber and legume flour. *Journal of Food Science and Technology*.

26. **Maninder Kaur**, Kawaljit Singh Sandhu, Narpinder Singh and Seung-Taik Lim. Effect of cultivar on amylose content, molecular structure, physicochemical properties and *in vitro* digestibility of starches from Indian mung bean (*Phaseolus mungo*). *Food Chemistry*.
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Invited speaker/Paper Presentation:

1. **Maninder Kaur**. Factors influencing functional properties of legumes. Paper presented at 13th Punjab Science Congress, held at Panjab University, Chandigarh (7-9 February, 2010).
 2. **Maninder Kaur**. Overview of Probiotics and Prebiotics. Paper presented at National Seminar on Functional foods and Nutraceuticals-Current Status and Future Scenario, held at Kanya Maha Vidyalaya, Jalandhar (2-3 March, 2009).
 3. **Maninder Kaur** and Kawaljit Singh Sandhu. Starch: its characterization, modification and utilization in food industry. Paper presented at 12th Punjab Science Congress, held at Punjab Agricultural University, Ludhiana (7-9 February, 2009).
 4. **Maninder Kaur**. Isolation and characterization of starches from cereals, legumes and non-conventional sources. Invited speaker at 6th International Food Convention organized by Association of Food Scientists and Technologists, held at Mysore, India (15-19 December, 2008).
 5. Narpinder Singh, Kawaljit Singh Sandhu and **Maninder Kaur**. Functional properties of corn starches. Paper presented at National Symposium held at Punjabi University, Patiala (February, 2004).
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Poster Presentation:

1. Maninder Kaur and **Kawaljit Singh Sandhu**. Applications of Nanotechnology in the food sector. Poster presented at National Conference on Recent Trends in Biotechnology, held at DAV College, Amritsar (September 01, 2010).
2. **Kawaljit Singh Sandhu** and Maninder Kaur. Nanosensors for pathogen and contaminant detection. Poster presented at National Conference on Recent Trends in Biotechnology, held at DAV College, Amritsar (September 01, 2010).
3. **Maninder Kaur**, Parminder Singh and Kawaljit Singh Sandhu. Effect of germination and autoclaving on functional and pasting properties of mung

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- bean flour. Poster presented at 13th Punjab Science Congress, held at Panjab University, Chandigarh (7-9 February, 2010).
4. Kawaljit Singh Sandhu, **Maninder Kaur** and Harminder Singh. Functional properties of chickpea, pigeon pea and kidney bean flours as influenced by pre-soaking and cooking methods. Poster presented at 13th Punjab Science Congress, held at Panjab University, Chandigarh (7-9 February, 2010).
 5. Kawaljit Singh Sandhu and **Maninder Kaur**. Factors affecting in vitro digestibility of legume starches. Poster presented at 12th Punjab Science Congress, held at Panjab Agricultural University, Ludhiana (7-9 February, 2009).
 6. **Maninder Kaur** and Kawaljit Singh Sandhu. Effect of various processing methods on pasting properties and in vitro starch digestibility of mung bean. Poster presented at 6th International Food Convention organized by Association of Food Scientists and Technologists, held at Mysore, India (15-19 December, 2008).
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7. Kawaljit Singh Sandhu and **Maninder Kaur**. Comparative study of physical, structural and digestibility properties of field pea and pigeon pea starches. Poster presented at 6th International Food Convention organized by Association of Food Scientists and Technologists, held at Mysore, India (15-19 December, 2008).
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Scientific & Technical Skills:

- *Physicochemical analysis of starches, flours and proteins*
Isolation of corn, rice, legumes (chickpea, black gram), mango starches: Amylose content, swelling power, solubility, water binding capacity, light transmittance, turbidity, syneresis, fractionation of starches, lyophilization techniques, protein isolates: their preparation and characterization.
- *Morphological analysis of starches and flours:*
Microscopic studies (Scanning electron microscopy)
- *Structural studies of starches (Molecular weight studies):*
Gel permeation chromatography
Multi angle laser light scattering
Starch chain length studies: HPLC
- *Digestibility of starch*
Digestibility of starch and their fractions (Readily digestible starch, RDS; Slowly digestible starch, SDS; Resistant starch, RS).
Hydrolysis and glycemic index of starch
- *Thermal analysis of starches and proteins:*
Gelatinization, retrogradation, denaturation of proteins (Differential scanning calorimeter)
- *Pasting and rheological properties of starches and flours:*
Rapid Visco analyzer, Dynamic rheometer
- *Textural analysis of starches, grains, flours:*
Instron universal testing machine-grain hardness

TA/XT2 machine-Starch gels

- *Spectroscopy:*

UV-visible spectroscopy

- *Modification of starch*

Standardization of laboratory scale methods of starch modifications

Preparation of modified starches and analysis of modified starches for the above said properties

- *Computer*

MS Windows, Statistical software's (Minitab, Sigma plot, SPSS, Statistica, Origin), Internet.

Conferences/Workshops/Training Courses organized/attended:

- National Conference on "Recent Trends in Biotechnology", held at DAV College, Amritsar (September 01, 2010).
- Seminar on "Food Safety concerns of GM foods" by Department of Food Science and Technology, Guru Nanak Dev University, Amritsar, Punjab on 09 March, 2010.
- Organizing Secretary for UGC sponsored seminar on "Food Security in times of crisis" by Department of Food Science and Technology, Guru Nanak Dev University, Amritsar, Punjab on 10 February, 2010.
- 13th Punjab Science Congress, held at Panjab University, Chandigarh (7-9 February, 2010).
- Seminar on "Soy nutrition and health", organized by American Soybean Association held at Guru Nanak Dev University, Amritsar, Punjab on 11 April, 2009.
- National Seminar on Functional foods and Nutraceuticals-Current Status and Future Scenario, held at Kanya Maha Vidyalaya, Jalandhar from 2-3 March, 2009.
- 12th Punjab Science Congress, held at Punjab Agricultural University, Ludhiana from 7-9 February, 2009.
- Organized 2nd student research convention, ANVESHAN-2009, held at Guru Nanak Dev University, Amritsar from 2-4 February, 2009.
- 6th International Food Convention, organized by Association of Food Scientists and Technologists (India) at Mysore, India from 15-19 December, 2008.
- International conference on "Capacity Building in Science & Technology, Policy perspective, Opportunities and Challenges in the context of the Globalization", held at New Delhi from November 27-29, 2007.
- "Nutrela health workshop" conducted by American Soybean Association held at Guru Nanak Dev University, Amritsar on 20th February, 2004.
- Silver jubilee congress of Indian Association of Sports Medicine held at Guru Nanak Dev University, Amritsar from 5-7 December, 2003.
- "Bakery Workshop" conducted by N.M.C.P, Netherlands, held at Guru Nanak Dev University, Amritsar from 29 October-8 November, 2003.
- Seminar on "Organic Foods-Scope, Production and Benefits" held at Guru Nanak Dev University, Amritsar on 14th March, 2003.
- Training course in "Fish Culture" conducted by Fish Farmers Development Agency, Amritsar from 10-19 February, 2003.

- Workshop on “National and International Food Regulations” held at Guru Nanak Dev University, Amritsar on 11th November, 2002.
- Training course at "Amritsar Beverages" (Coca Cola India Ltd.) Chheharta, Amritsar.

References: Available upon request.

Date:

(Maninder Kaur)