

NAME: PUSZTAL, ARPAD JANOS

MARITAL STATUS: Married.

Biographical data:

Date of birth: 08. 09. 1930
Place of birth: Budapest (Hungary)
Mother's name: Erzsebet Ferenczy
Nationality: British
Education: *Diploma in Chemistry*, 1953, Faculty of Natural Sciences (TTK), Eotvos Lorant University of Science (ELTE), Budapest, Hungary
Ph.D. in Biochemistry, 1960, University of London, UK

Career to date:
1952-53, University Demonstrator, Organic Chemistry Department, TTK, ELTE, Budapest
1953-56, Associate Scientist, Biochemistry Department, Hungarian Academy of Sciences, Budapest, Hungary
1956-57, Political refugee in Austria & UK
1957-60, Ford Foundation scholar at University of London (Lister Institute of Preventive Medicine)
1960-63, Postdoctoral Fellow to Prof. W.T.J. Morgan, The Lister Institute of Preventive Medicine, London, UK
1963-67, Senior Research Officer, The Rowett Research Institute, Bucksburn, Aberdeen, UK
1967-68, Visiting Professor at Department of Biological Chemistry, University of Illinois Medical School, Chicago, Ill. USA
1968-1990, Principal Scientific Officer, The Rowett Research Institute, Bucksburn, Aberdeen,
1990-1998, Senior Research Fellow of the Rowett Research Institute, Bucksburn, Aberdeen, UK

Awards & Distinctions:
1987, Stillmark Medal from University of Tallin (Estonia)
1988, Elected Fellow of The Royal Society of Edinburgh
1990-92, Leverhulme Fellowship (Leverhulme Foundation, UK)
1990-91, The Auber Fellowship (The Royal Society of Edinburgh)
1988-94, Coordinator of European FLAIR Programme (No. 9)
1994-98, Chairman of European COST 98 Programme

Research interests: The focus of my interest has been to establish how body metabolism and health can be influenced and manipulated to our advantage by natural dietary factors, particularly lectins

(carbohydrate-binding proteins) which, by specifically binding to cell membrane glycans of the gastrointestinal epithelium and mimicking the action of endogeneous ligands, such as growth factors, hormones and other biological signals, can stimulate digestion/absorption and hormone release, influence bacterial ecology, immune responses and metabolism of the gut. The powerful gut growth factor activity of some lectins has increasingly been exploited in many novel important applications, such as in ameliorating the life-threatening effects of chemo/radiotherapy, inhibiting the growth of implanted tumours, stimulating the mobilization and removal of body fat, blocking the overgrowth of pathogenic bacteria in the gut and more recently, using lectin genes for the genetic modification of crop plants to increase their pest resistance.

Publications: Over 300 primary papers in international scientific journals, 1 major international patent on lectins and 3 lectin books, including 1 monograph and 9 EU COST books

OVERSEAS VISITS:

- 1964 6th International Biochemistry Congress, New York.
- 1967 Visiting Assistant Professor in the Department of Professor S.B. Binkley, The University of Illinois Medical School, Chicago, U.S.A. for one year from September.
- 1971 Baden (Vienna). 1st Congress of Eur. Biophysics.
- 1973 Stockholm. 9th Int. Congress of Biochemistry
- 1974 Budapest. 9th FEBS Meeting.
- 1975 Zeutralinstitut für Genetik und Kulturpflanzenforschung, Akademie der Wissenschaften der DDR, Gatersleben, DDR.
- 1976 Spent 1 month (March) in the Biochemistry Department of Universidade Federal do Ceara (Fortaleza, Brazil). It was sponsored by the OAS Regional Scientific and Technological Development Program.
- 1976 Hamburg. 10th International Congress of Biochemistry.
- 1977 Zeutralinstitut für Genetik und Kulturpflanzenforschung, Gatersleben, Akademie der Wissenschaften der DDR.
- 1979 11th International Congress of Biochemistry, Toronto, Canada.
- 1980 13th FEBS Meeting, Jerusalem, Israel.
- 1981 IVth Lectin Meeting, Copenhagen.
Visited the Univ. Federal do Ceara, Department of Biochemistry and Biophysics to set up a collaborative research programme with this Brazilian Group on the allergenicity of the *Phaseolus vulgaris* lectin. The visit was financed jointly by the British Council and the Brazilian CNPq.
- 1981 Invited lecture on "Seed lectins: Distribution, Location and Biological Role" at the Phytochemical Society of Europe, Symp. on "Seed Proteins". Versailles, France.

- 1983 Invited paper on 'Local and systemic responses to dietary lectins at a meeting on Chemical Taxonomy, Molecular Biology and Function of Plant Lectins. Asilomar, California, U.S.A.
- 1983 Visit by invitation to the Cenargen Laboratory (Embrapa) in Brasilia (Brazil) for consultation and lecturing on the programme of improvements in the nutritional quality of the common bean by genetic engineering.
- 1984 32nd Colloquium, Protides, Biological Fluids at Brussels. Paper presented: Effects of dietary legume proteins on the morphology and secretory responses of the rat small intestine.
- 1985 Invited lecture on "The biological effects of lectins in the diet of animals and man" at Interlec 7, Brussels, Belgium.
- 1986 Invited lecture on "Metabolic effects of dietary lectins" at Interlec 8, La Paz, Mexico.
- 1986 Invited to give the opening lecture: The chemistry and biochemistry of lectins' at the Hungarian Biochemical Society's 24th Annual Meeting in Gödöllő (Hungary). Invited to organize a three-day Symposium for The Rank Prize Funds on Lectins from Higher Plants.
- 1987 Visit by invitation to University of Campinas, Sao Paulo and to Federal University of Ceara, Fortaleza for consultation and lecturing on antinutritive substances in plants.
Member of the Organizing Committee of Interlec 9, Cambridge and giving one of the main lectures of the symposium.
- 1988 Invited lecture at Interlec 10, Prague, Czechoslovakia.
Invited main speaker at the International Workshop on Antinutrients, Wageningen, The Netherlands.
External examiner of doctoral thesis and lecture given at University of Geneva.
- 1989 January 13-19. USA. Children's Nutrition Research Center, Houston. Invited for consultation.
June 4-9. USSR. Rowett and Tartu Univ. Estonia. Invited to give a plenary lecture at Interlec 11.
June 19-23. USA. A. Pusztai. Invited to present a paper at the Gordon Research Conference on Polyamines.
October 25-28. West Germany. Invited by the organisers to present a paper at the Fourth International Conference on Intestinal and Pancreatic Adaptation.
- 1990 1st Brazilian Congress on Proteins. Campinas, Brasil, 4-8 March. Invited speaker.
20th Meeting of the Federation of European Biochemical Societies. Budapest, August 19-24. Organizer of session; "Agrobiochemistry - from theory to practice"; also presenting an invited paper.
Advanced Phaseolus bean research workshop. Cali, Colombia, September 10-16. Invited speaker.
- 1991 Invited lecture at Euro Food Tox III An Interdisciplinary Conference on "Effects of Food on the Immune and Hormonal Systems. 23-24 May, Zurich, Switzerland.
- 1991 Invited lecture at FLAIR Workshop. Utrecht, The Netherlands. 226 May.
- 1991 Invited to present paper at Gordon Conference on Polyamines. 18-22 June. Newport, Rhode Island, USA.

- 1991 Invited lecture at International Workshop of Canavalia Maracay, Venezuela, 26 July.
- 1991 Invited lecture at Brazilian Conference on Lectins. 28-31 July, Fortaleza, Brazil.
- 1991 Invited lecture at Interlec 13, 11-12 August, Berlin, Germany.
- 1991 Invited to FLAIR Coordinator's Conference. 26-27 September, Brussels, Belgium.
- 1991 Invited to give paper at 4th International Symposium on Clinical Nutrition. 2-4 October, Heidelberg, Germany.
- 1991 Invited to give paper at the Falk Symposium: Polyamines in the Gastrointestinal Tract. 6-8 October Titisee/Black Forest, Germany.
- 1991 Invited lecture at FLAIR Workshop. Brussels. 13-15 December.
- 1992 Science and Technology Days. CEC-Agroindustrial Research. Brussels. 10 February.
- 1992 The British Council sponsored Specialist Tour of India. Lecturing in Delhi and Calcutta. 17-23 May.
- 1992 Invited lecture at 14th Intern. Lectin Soc. Meeting; Darjeeling, India, 24-30 May.
- 1992 Invited lecture at FLAIR Workshop; Pamplona, Spain 17-20 June.
- 1992 24-27 October. Visit and collaborative experiment at the German Research Centre, Heidelberg, Germany.
- 1992 2-6 November. Visit Internal Medicine Clinics, Kiel, Germany.
- 1992 10-13 December. Organizing and presenting paper at the Combined FLAIR Groups of No.6 & No.9; Southampton.
- 1993 17-21 February. Visit and collaborative experiment at Department of Biochemistry & Molecular Biology, University of Bergen, Norway.
- 1993 26 May-1st June. Working visit, collaborative experiment and giving a seminar at Biochem. Dept. University of Bergen.
- 1993 13-16 May. Organizing and presenting a paper at FLAIR No.9 Workshop; Bilzen, Belgium.
- 1993 20-26 June. Invited paper at Gordon Conference on Polyamines; New London, Ma. USA
- 1993 23-28 August. Organizing and presenting paper at Interlec 15; Szeged, Hungary.
- 1993 30 August-1 September. Presenting an invited paper at 1st International Meeting of the Hungarian Biochemical Society, Debrecen, Hungary.
- 1993 16-19 September. Presenting paper at AIR Workshop on Polyamines; Utrecht, The Netherlands.
- 1993 6-10 November. Working visit to German Cancer Center; Heidelberg, Germany
- 1993 29 December-10 January 1994. Visit to, giving lectures and setting up common programmes of work at Central Food Research Institute and University of Veterinary Sciences, Budapest, at the invitation of British Council - Hungarian OMFB.
- 1994 3-6 February, Madrid Spain; Invited lecture at the meeting 'Food in XXI. Century'
- 1994 10 February, Guildford, lecturing at an 'Applied Toxicology Course'
- 1994 25 February- 2 March 2, Bergen Norway collaborative experiment EEC FLAIR and AIR Concerted Action on Polyamines in Food
- 1994 19-23 March, Heidelberg, Germany, Collaborative experiment FLAIR Concerted Action and ARC Programme at the German Cancer Research Centre.

- 1994 4-6 April, Utrecht, The Netherlands, collaborative experiment of FLAIR Concerted Action Programme.
- 1994 7-12 April, Budapest, Hungary CFRI, discussion of EEC FLAIR and COST 909 Programmes, preparation of publication
- 1994 23-26 April, Bergen, Norway, EEC AIR Meeting on Polyamines
- 1994 8-11 June, Albere di Tenna, Italy, Symposium on Polyamines: Biological and Clinical Aspects.
- 1994 12-14 June, Freiburg, Germany, International Symposium on Gastrointestinal Tract and Endocrine System-Interactions in Physiology and Pathophysiology.
- 1994 27-31 August, 10th International Symposium on Gastrointestinal Hormones, Santa Barbara, California, USA.
- 1944 1-6 September, Invitation and seminars by Department of Biochemistry at University of Illinois Medical Center.
- 1994 13 December, Brussels, 1st Management Committee Meeting of COST 98.
- 1995 10-13 February, Budapest 2nd Management Committee Meeting of COST 98.
- 1995 24-28 February, Bergen, Norway, Collaborative experiments in the framework of AIR Concerted Action.
- 1995 4-7 May, Paris, France, EEC AIR Meeting on Polyamines.
- 1995 18-21 May, Invited to give paper at 10th Penn State Symposium on Plant Protective Factors, State College, Pennsylvania, USA.
- 1995 25-30 June, Toulouse, France, Organizing and giving paper at 16th Interlec Syposium.
- 1995 Organizing and chairing a Symposium on "Antinutrients" at 9th World Congress of Food Science and Technology, July 30th-August 4th, Budapest (Hungary).
- 1995 Chairing 2nd COST 98 Workshop on Antinutrients, 4-6th August, Budapest, Hungary.
- 1995 Presenting an invited paper at 22nd International Symposium on Controlled Release of Bioactive Materials, Seattle, Washington USA, July 30th-August 2nd.
- 1995 1-4 September. Visit and collaborative experiment at Department of Biochemistry & Molecular Biology, University of Bergen, Norway.
- 1995 30 September-3 October, Kiel, Germany; EEC AIR Meeting on Polyamines.
- 1995 19-21 October, Organizing 3rd COST 98 Workshop & Management Committee Meeting, Aberdeen.
- 1995 30 October-5 November, Budapest (Hungary), Concluding visit as part of the British-Hungarian Science Collaboration Programme sponsored by the British Council-OMFB (Hungary).
- 1995 12-19 November, visit, discussions and lecturing as part of the COST 98 Programme, Madrid, Spain.
- 1996 12-16 January; Bergen, Norway: Collaborative experiment
- 1996 31 January-4 February; Budapest, Hungary: Organiser & Speaker at COST 98 Workshop on Interleukins
- 1996 20-22 March; Brighton: British Society of Gastroenterology Spring Meeting, poster presentation
- 1996 25-28 April; Gorezd Martuljek, Slovenia: Organiser and Speaker at COST 98 Workshop 'Impact of Food Antinutrients on the Microbial Ecology of the Gut'

1996 2-5 May; Belgirate, Italy: Chairman and Speaker at the '7th Workshop of AIR 569/92 Concerted Action'

1996 24-28 May; Bergen, Norway: Collaborative experiment

1996 3-7 September, 1996 Copenhagen, Denmark: 11th International Symposium on Regulatory Peptides. Speaker & Poster Presentation

1996 19-22 September; Madrid, Spain: Organiser and Speaker at COST 98 Workshop on 'Effect of antinutrients on the nutritional quality of legume diets'

1996 21-25 October; Shonan Village Centre, Kanagawa, Japan: Presentations at the Tokyo International Symposium on Polyamines'

1996 29-30 October; Budapest, Hungary: Official Observer at the Management Committee Meeting of COST 916 'Bioactive plant cell-wall components'

1996 7-10 November; Witten, Germany: Organiser and Speaker at COST 98 Workshop on 'Immunomodulatory and Anti-tumour Effects of Mistletoe and Kidney Bean'

1996 28 November-1 December; Aberdeen, UK. 8th Workshop of AIR 569/92: Chairman and Speaker

1997 2-3 January; Nottingham UK. Invited Speaker at the Annual Food Manufacturers Conference

1998 Over 20 invited visits and lectures

1999/2001 Lecturing on GM matters all over the world

Publications

- 1 Kovács, J., Könyves, I., **Pusztai, A.** 1953. Darstellung von Polyasparaginsäuren (Polyaspartensäuren) aus dem thermischen Autokondensationsprodukt der Asparaginsäure. *Experientia* **9**, 459.
- 2 Kovács, J., Könyves, I., **Pusztai, A.** 1954. The structure of polyaspartic acid. *Vegyipari Kutató Intézetek Közleményei* **4**, 120-126.
- 3 **Pusztai, A.** 1954. A paper chromatographic examination of the vitamin B6-group and their derivatives. *Magyar Kémiai Folyóirat* **60**, 323-325.
- 4 Szörényi, E., Elödi, P., Szörényi, B., **Pusztai, A.** 1955. Zitrulliniminase, ein neues kristallinisches Pyridoxalprotein. *Acta Physiol. Hung.* **7**, 163-165.
- 5 **Pusztai, A.** 1956. Enzymatic synthesis of pyridoxalphosphate. *Acta Physiol. Hung.* **9**, 381-391.
- 6 **Pusztai, A.** 1956. The natural codecarboxylase. *Magyar Kémiai Folyóirat* **62**, 380-385.
- 7 Dévényi, T., **Pusztai, A.**, Sajgó, M., Szörényi, B. 1958. Die Herstellung neuer Formen von Phosphoglycerinaldehyd-dehydrogenase. *Acta Physiol. Hung.* **13**, 95-101.

- 8 **Pusztai, A.,** Morgan, W.T.J. 1958. Degradation of blood-group specific mucopolysaccharides by ficin and papain. *Nature (Lond.)* **182**, 648-650.
- 9 **Pusztai, A.,** Morgan, W.T.J. 1960. A blood-group specific sialomucopolysaccharide possessing virus-receptor activity. *Biochem. J.* **74**, 31P.
- 10 **Pusztai, A.** 1960. Biochemistry of blood group substances; the action of ficin and papain on human blood-group specific mucopolysaccharides. PhD Thesis, University of London.
- 11 **Pusztai, A.,** Morgan, W.T.J. 1961. Studies in immunochemistry. 18. The isolation and properties of a sialomucopolysaccharide possessing blood-group Lea specificity and virus-receptor activity. *Biochem. J.* **78**, 135-146.
12. **Pusztai, A.,** Morgan W.T.J. 1961. Studies in immunochemistry. 19. Further observations on the preparation and properties of human blood-group specific mucopolysaccharides. *Biochem. J.* **80**, 107-121.

13. **Pusztai, A.**, Morgan, W.T.J. 1961. Studies in immunochemistry. 20. The action of papain and ficin on blood-group specific substances. *Biochem. J.* **81**, 639-647.
14. Morgan, W.T.J., **Pusztai, A.** 1961. Studies in immunochemistry. 21. The products of degradation of blood-group specific substances by ficin and papain. *Biochem. J.* **81**, 648-658.
15. **Pusztai, A.**, Morgan, W.T.J. 1963. Studies in immunochemistry. 22. The amino acid composition of the human blood-group, A, B, H and Lea specific substances. *Biochem. J.* **88**, 546-555.
16. **Pusztai, A.**, Morgan, W.T.J. 1964. Studies in immunochemistry. 23. Some observations on the heterogeneity of preparations of human blood-group specific substances. *Biochem. J.* **93**, 363-372.
17. **Pusztai, A.** 1964. Hexosamines in the seeds of higher plants (Spermatophytes). *Nature (Lond.)* **201**, 1328-1329.
18. **Pusztai, A.** 1964. Glycoproteins in plants. Abstr. Commun. 6th Int. Congr. Biochem., New York, **II**, 153.
19. **Pusztai, A.** 1965. A study on the glycosamine-containing constituents of the seeds of kidney beans (*Phaseolus vulgaris*). *Biochem. J.* **94**, 604-610.
20. **Pusztai, A.** 1965. Studies on the extraction of nitrogenous and phosphorus-containing materials from the seeds of kidney beans (*Phaseolus vulgaris*). *Biochem. J.* **94**, 611-616.
21. **Pusztai, A.** 1965. The isolation and characterization of a glycoprotein from the seeds of kidney beans. *Biochem. J.* **95**, 3C-5C.
22. **Pusztai, A.** 1966. Interactions of proteins with other polyelectrolytes in a two-phase system containing phenol and aqueous buffers at various pH values. *Biochem. J.* **99**, 93-101.
23. **Pusztai, A.** 1966. The properties of bovine serum albumin and chymotrypsinogen-A in solvent mixtures containing phenol. *Biochem. J.* **101**, 265-273.
24. **Pusztai, A.** 1966. The isolation of two proteins, Glycoprotein I and a trypsin inhibitor, from the seeds of kidney bean (*Phaseolus vulgaris*). *Biochem. J.* **101**, 379-384.

- 25 **Pusztai, A.** 1967. Trypsin inhibitors of plant origin, their chemistry and potential role in animal nutrition. *Nutr. Abs. & Rev.* **37**, 1-9.
- 26 **Pusztai, A.** 1967. The recovery of adolase from solvents containing phenol. *Proc. Roy. Soc. B.*
- 27 Jennings, A.C., **Pusztai, A.**, Synge, R.L.M., Watt, W.b. 1968. Fractionation of plant material. III. Two schemes for chemical fractionation of fresh leaves, having special applicability for isolation of the bulk protein. *J. Sci. Fd. Agric.* **19**, 203-213.
- 28 **Pusztai, A.** 1968. Hydrogen-ion equilibria of glycoprotein I from kidney bean. *Arch. Biochem. Biophys.* **126**, 289-298.
- 29 **Pusztai, A.** 1968. General properties of a protease inhibitor from the seeds of kidney bean. *Eur. J. Biochem.* **5**, 252-259.
- 30 Molnar, J., **Pusztai, A.** 1968. Biosynthesis of structural glycoproteins of Ehrlich ascites carcinoma cell membranes. *Proc. Am. Ass. Cancer Res.* **9**, 50.
- 31 **Pusztai, A.**, Watt, W.B. 1969. Fractionation and characterization of glycoproteins containing hydroxyproline from the leaves of *Vicia faba*. *Eur. J. Biochem.* **10**, 523-532.
- 32 Dobryszczyka, W. **Pusztai, A.**, Kukral, J.C. 1969. Reactivity of tyrosine and tryptophan in haptoglobin. *Biochim. Biophys. Acta* **175**, 271-281.
- 33 **Pusztai, A.**, Watt, W.B. 1970. Glycoprotein II - The isolation and characterization of a major antigenic and non-haemagglutinating glycoprotein from *Phaseolus vulgaris*. *Biochim. Biophys. Acta* **207**, 413-431.
- 34 **Pusztai, A.**, Watt, W.B. 1970. The determination of the molecular size of peptides and proteins by chromatography on Bio Gel P-100 columns in phenol-acetic acid water (1:1:1 w/v/v) solvent mixture. *Biochim. Biophys. Acta* **214**, 463-467.
- 35 **Pusztai, A.**, Duncan, I. 1971. Changes in proteolytic enzyme activities and transformation of nitrogenous compounds in the germinating seeds of kidney bean (*Phaseolus vulgaris*). *Planta (Biol.)* **96**, 317-325.
- 36 **Pusztai, A.**, Duncan, I. 1971. Glycoprotein I of *Phaseolus vulgaris*. Homogeneity and enzymic properties. *Biochim. Biophys. Acta* **229**, 785-794.

- 37 **Pusztai, A.**, Begbie, R., Duncan, I. 1971. Fractionation and characterisation of water soluble polysaccharide-protein complexes containing hydroxyproline from the leaves of *Vicia faba*. *J. Sci. Fd. Agric.* **22**, 514-419.
- 38 **Pusztai, A.**, Watt, W.B. 1971. Free-flow electrophoresis of proteins in phenol-containing solvents at various pH values. *Biochim. Biophys. Acta* **251**, 158-163.
- 39 **Pusztai, A.** 1972. Metabolism of trypsin inhibitory proteins in the germinating seeds of kidney bean (*Phaseolus vulgaris*). *Planta (Biol.)* **107**, 121-129.
- 40 Evans, R.J. **Pusztai, A.**, Watt, W.B., Bener, D.H. 1973. Isolation and properties of protein fractions from navy beans (*Phaseolus vulgaris*) which inhibit growth of rats. *Biochim. Biophys. Acta* **303**, 175-184.
- 41 **Pusztai, A.** 1973. Purification of proteins in phenol-containing solvent systems. Methodological Developments in Biochemistry. Vol. 2. Preparative Techniques. Ed. by E. Reid, Longman, London, p. 145-153.
- 42 Palmer, R., McIntosh, A., **Pusztai, A.** 1973. The nutritional evaluation of kidney beans (*Phaseolus vulgaris*), the effect on nutritional value of seed germination and changes in trypsin inhibitor content. *J. Sci. Fd. Agric.* **24**, 937-944.
- 43 **Pusztai, A.**, Watt, W.B. 1973. Polyacrylamide gel electrophoresis of proteins in phenol-ethanediol-water (3:2:3, w/v/v) buffers of various pH values. *Anal. Biochem.* **54**, 58-65.
- 44 **Pusztai, A.**, Croy, R., Stewart, J.C., Grant, G. 1973. Isolation and properties of plant (*Phaseolus vulgaris*) intracellular proteases. Abstr. 9th Int. Congr. Biochem. **20**, 11, p.95.
- 45 Rattray, E.A.S., Palmer, R.M., **Pusztai, A.** 1974. Toxicity of kidney beans to conventional and gnotobiotic rats. *J. Sci. Fd. Agric.* **25**, 1035-1040.
- 46 **Pusztai, A.**, Watt, W.B. 1974. The dependence of biological activity of *Phaseolus vulgaris* isolectins on molecular charge and other structural features. Abstr. 9th FEBS Meeting, Budapest, p. 304.
- 47 **Pusztai, A.**, Watt, W.B. 1974. Isolectins of *Phaseolus vulgaris*. A comprehensive study of fractionation. *Biochim. Biophys. Acta* **365**, 57-71.

- 48 **Pusztai, A.**, Grant, G., Palmer, R. 1975. Nutritional evaluation of kidney beans (*Phaseolus vulgaris*): the isolation and partial characterisation of toxic constituents. *J. Sci. Fd. Agric.* **26**, 149-156.
- 49 **Pusztai, A.**, Croy, R.R.D., Grant, G., Watt, W.B. 1977. Compartmentalization in the cotyledonary cells of *Phaseolus vulgaris* L. seeds. A differential sedimentation study. *New Phytol.* **79**, 61-71.
- 50 **Pusztai, A.**, Palmer, R. 1977. Nutritional evaluation of kidney beans (*Phaseolus vulgaris*): the toxic principle. *J. Sci. Fd. Agric.* **28**, 620-623.
- 51 **Pusztai, A.**, Stewart, J.C., Watt, W.B. 1978. A novel method for the preparation of protein bodies by filtration in high (over 70% w/v) sucrose-containing media. *Plant Sci. Lett.* **12**, 9-15.
- 52 **Pusztai, A.**, Stewart, J.C. 1978. Isolectins of *Phaseolus vulgaris*. Physicochemical studies. *Biochim. Biophys. Acta* **536**, 38-49.
- 53 **Pusztai, A.**, Croy, R.R.D., Grant, G. 1978. Mobilization of the nitrogen reserves of the seed of *Phaseolus vulgaris* during the early stages of germination. Abhandl. Akad. Wissensch. DDR. Abt. Math. Naturwissensch. Technik. **N4**, 133-144.
- 54 **Pusztai, A.**, Clarke, E.M.W., King, T.P. 1979. The nutritional toxicity of *Phaseolus vulgaris* lectins. *Proc. Nutr. Soc.* **38**, 115-120.
- 55 **Pusztai, A.**, Clarke, E.M.W., King, T.P., Stewart, J.C. 1979. Nutritional evaluation of kidney beans (*Phaseolus vulgaris*): Chemical composition, lectin content and nutritional value of selected cultivars. *J. Sci. Fd. Agric.* **30**, 843-848.
- 56 **Pusztai, A.**, Croy, R.R.D., Stewart, J.C., Watt, W.B. 1979. Protein body membranes of *Phaseolus vulgaris* L. cotyledons: Isolation and preliminary characterization of constituent proteins. *New Phytol.* **83**, 371-378.
57. **Pusztai, A.**, Stewart, J.C. 1980. Molecular size, subunit structure and microheterogeneity of glycoprotein II from the seeds of kidney bean (*Phaseolus vulgaris* L.). *Biochim. Biophys. Acta* **623**, 418-428.
58. King, T.P., **Pusztai, A.**, Clarke, E.M.W. 1980. Immunocytochemical localization of ingested kidney bean (*Phaseolus vulgaris*) lectins in rat gut. King, T.P., **Pusztai, A.**, Clarke, E.M.W. *Histochem. J.* **12**, 201-208.
- 59 King, T.P., **Pusztai, A.**, Clarke, E.M.W. 1980. Kidney bean (*Phaseolus vulgaris*) lectin induced lesions in rat small intestine: light microscopy studies. *J. Comp. Pathol.* **90**, 585-595.

- 60 Wilson, A., King, T.P., Clarke, E.M.W., **Pusztai, A.** 1980. Kidney bean (*Phaseolus vulgaris*) lectin induced lesions in rat small intestine: microbiological studies. *J. Comp. Pathol.* **90**, 597-602.
- 61 **Pusztai, A.** 1980. Nutritional toxicity of the kidney bean (*Phaseolus vulgaris*). Rep. Rowett Inst. **36**, 110-118.
- 62 **Pusztai, A.**, Grant, G. 1980. The isolation and properties of lectins of different carbohydrate specificity from the roots of a *Phaseolus vulgaris* variety lacking conventional seed lectins. Abstr. 13th FEBS Meeting, S2-P41, p.44.
- 63 **Pusztai, A.**, Grant, G., Stewart, J.c. 1981. Diversity of glycoprotein lectins in the cells of *Phaseolus vulgaris* cultivars. Abstr. 14th FEBS Meeting Mon-S3-16, 144 P.
- 64 King, T.P., **Pusztai, A.**, Clarke, E.M.W. 1981. Electron microscope immunocytochemistry of kidney bean poisoning in rats. *Micron* **12**, 191.
- 65 **Pusztai, A.**, Clarke, E.M.W., Grant, G., King, T.P. 1981. The toxicity of *Phaseolus vulgaris* lectins. Nitrogen balance and immunochemical studies. *J. Sci. Fd. Agric.* **32**, 1037-1046.
- 66 Fletcher, T.C., White, A., Youngson, A., **Pusztai, A.**, Baldo, B.A. 1981. Characterization of C-reactive protein from the eggs of the marine teleost, *Cyclopterus lumpus* L. *Biochim. Biophys. Acta* **671**, 44-49.
- 67 **Pusztai, A.**, Grant, G., Stewart, J.C. 1981. A new type of *Phaseolus vulgaris* (cv. Pinto III) seed lectin: Isolation and characterisation. *Biochim. Biophys. Acta* **671**, 146-154.
- 68 King, T.P., **Pusztai, A.**, Clarke, E.M.W. 1982. Kidney bean *Phaseolus vulgaris* lectin-induced lesions in rat small intestine: 3. Ultrastructural studies. *J. Comp. Pathol.* **92**, 357-373.
- 69 **Pusztai, A.**, King, T.P., Clarke, E.M.W. 1982. Recent advances in the study of the nutritional toxicity of kidney bean (*Phaseolus vulgaris*) lectins in rats. *Toxicon* **20**, 195-197.

- 70 **Pusztai, A.**, Grant, G., Stewart, J.C. 1982. The isolation and characterisation of an unusual seed lectin from a "lectin-free" cultivar of *Phaseolus vulgaris*, Pinto III, and its relationship to lectins synthesized by root cells. Lectins: Biology, Biochemistry, Clinical Biochemistry (T.C. Bøg-Hansen, ed.) W. de Gruyter, Berlin. Vol. 2, p. 743-758.
- 71 Sgarbieri, V.C., Clarke, E.M.W., **Pusztai, A.** 1982. Proteolytic breakdown of native bean (*Phaseolus vulgaris*) storage proteins. Nutrition implications. *J. Sci. Food Agric.* **33**, 881-891.
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