

# Sind Lebensmittel aus genetisch veränderten Pflanzen gesundheitsgefährdend?

Prinzipien der Sicherheitsbewertung

Prof. Dr. Klaus-Dieter Jany

Ernährungs Umschau 54 (2007), S. 238 ff.

## Literatur

1. James, C (2006) *Global Status of commercialized Biotech/GM crops:2006. ISAAA Brief 35-2006 International Service for the Acquisition of Agri-biotech Applications (ISAAA): Ithaca, NY. <http://www.isaaa.org/resources/publications/briefs/35/executivesummary/default.html>*
2. Jany, K-D (2005) *Wann gibt es endlich blaue Baumwolle direkt vom Strauch?* In: Evolution Wege des Lebens. Ed. J. Grolle, 2005 Stiftung Deutsches Hygiene-Museum, Dresden und Deutsche Verlagsanstalt (ISBN 3-421-05904-7) 166–174
3. Seralini, G-E, Cellier D, Spiroux de Vernois J (2007) *New analysis of a rat feeding study with a genetically modified maize reveals signs of hepatorenal toxicity*, Arch Environ Contamination Toxicology DOI: 10.1007/s00244-006-0149-5, <http://www.springerlink.com/content/02648wu132m07804/full-text.html>
4. Hammond B et al. (2006) *Results of a 90-day safety assurance study with rats fed grain from corn rootworm-protected corn*. Food Chem Toxicol 44: 147–160
5. EFSA (2004) *Opinion of the Scientific Panel on Genetically Modified Organisms on a request from the Commission related to the safety of foods and food ingredients derived from insect-protected genetically modified maize MON 863 and MON 863 x MON 810, for which a request for placing on the market was submitted under Article 4 of the Novel Food Regulation (EC) No 258/97 by Monsanto*. The EFSA Journal 50, 1–25
6. EC (1997) *Regulation (EC) No 258/97 of the European Parliament and of the Council of 27 January 1997 concerning novel foods and novel food ingredients*. Official Journal of the European Union, L 43, 1–6
7. EC (2003) *Regulation (EC) 1829/2003 of the European Parliament and of the Council of 22 September 2003 on genetically modified food and feed*. Official Journal of the European Union, L 268, 1–23
8. EC (2003) *Regulation (EC) 1830/2003 of the European Parliament and of the Council of 22 September 2003 concerning the traceability and labelling of genetically modified organisms and the traceability of food and feed products produced from genetically modified organisms*. Official Journal of the European Union, L 268, 24–28
9. WHO, 1999. *Principles for the Assessment of Risks to Human Health from Exposure to Chemicals, Environmental Health Criteria Vol. 210. International Program on Chemical Safety, World Health Organisation, Geneva*. [http://www.who.int/pcs/risk-assessmentehc/docs/ehc210\\_exposure.htm](http://www.who.int/pcs/risk-assessmentehc/docs/ehc210_exposure.htm)
10. OECD, 1993. *Guidelines for the Testing of Chemicals*, Organisation for Economic Cooperation and Development, Paris
11. OECD (1993) *Safety Evaluation of Foods Derived by Modern Biotechnology*. Concepts and Principles. Organisation for Economic Cooperation and Development (OECD), Paris
12. OECD (1998) *Report of the OECD Workshop on the Toxicological and Nutritional Testing of Novel Foods*, Aussois, France, 5–8 March, 1997. Organisation for Economic Cooperation and Development (OECD), Paris
13. FAO/WHO (2000) *Safety aspects of genetically modified foods of plant origin. Joint FAO/WHO consultation on foods derived from biotechnology*, Geneva, Switzerland 29 May - 2 June 2000. Food and Agriculture Organisation of the United Nations and World Health Organisation
14. FAO/WHO (2001) *Safety assessment of foods derived from genetically modified microorganisms – joint FAO/WHO expert consultation on foods derived from biotechnology*, Geneva, Switzerland, 24 to 28 September 2001. Food and Agriculture Organisation of the United Nations and World Health Organisation
15. ILSI International Food Biotechnology Committee (2004) *Nutritional and Safety Assessments of Foods and Feeds Nutritionally Improved through Biotechnology. Comprehensive Reviews in Food Science and Food Safety*. Vol. 3. Institute of Food Technologists
16. EFSA (2004) *Draft Guidance Document for the risk assessment of genetically modified plants and derived food and feed*. [http://www.efsa.eu.int/consultation/372/consultation\\_guidance\\_gmo\\_301\\_en371.pdf](http://www.efsa.eu.int/consultation/372/consultation_guidance_gmo_301_en371.pdf)

17. EFSA (2006) Guidance document of the Scientific Panel on Genetically Modified Organisms for the risk assessment of genetically modified plants and derived food and feed. *The EFSA Journal* 99: 1–100
18. Miller HI (1999) Substantial equivalence: Its uses and abuses. *Nature Biotechnology* 17: 1042–1043.
19. Doerfler W, Schubert R (1997) Fremde DNA im Säugersystem. *Deutsches Ärzteblatt* 94: 51–52
20. Schubert R et al. (1998) On the fate of orally ingested foreign DNA in mice: Chromosomal association and placental transmission to the fetus. *Mol Gen Genet* 259, 569–576
21. Schubert R et al. (1997) Foreign (M13) DNA ingested by mice reaches peripheral leukocytes, spleen, and liver via the intestinal wall mucosa and can be covalently linked to mouse DNA. *Proc Natl Acad Sci USA* 94: 961–966
22. Mazza et al. (2005) Assessing the transfer of genetically modified DNA from feed to animal tissues in Transgenic Research 14: 775–784
23. Einspanier R et al. (2004) Tracing residual recombinant feed molecules during digestion and rumen bacterial diversity in cattle fed transgene maize. *Eur Food Res Technol* 218: 269–273
24. Pühler A (1999) Horizontal Transfer von Antibiotika-Resistenzgenen – Diskussion und Erkenntnisse. *Nachr Chem Tech Lab* 47: 1088–1092
25. Smalla K, Gebhard F, Heuer H (2000) Antibiotika-Resistenzgene als Marker in gentechnisch veränderten Pflanzen – Gefahr durch horizontalen Gentransfer?: *Nachrichtenbl Deut Pflanzenschutz* 52: 62–68
26. Davison J (1999) Genetic exchange between bacteria in the environment. *Plasmid* 42: 73–91
27. de Vries J, Meier P, Wackernagel W (2001) The natural transformation of the soil bacteria *Pseudomonas stutzeri* and *Acinetobacter* sp. By transgenic plant DNA strictly depends on homologous sequences in the recipient cells: *FEMS Microbiol Lett* 195: 211–215
28. Bennet PM et al. (2004) An assessment of the risks associated with the use of antibiotic resistance genes in genetically modified plants: report of the Working Party of the British Society for Antimicrobial Chemotherapy. *J. Antimicrob Chemother* 53: 418–431
29. Gay PB, Gillespie SH (2005) Antibiotic Resistance Markers in Genetically Modified Plants: A Risk to Human Health? *Lancet Infect Dis* 5: 637–646
30. Schlüter K, Potrykus I (1999) Horizontaler Gentransfer von transgenen Pflanzen zu Mikroorganismen und seine ökologische Relevanz. In: Schulte E, Käppeli O: Gentechnisch veränderte krankheits- und schädlingsresistente Nutzpflanzen – eine Option für die Landwirtschaft? Publikation des Schwerpunktprogrammes Biotechnologie des Schweizerischen Nationalfonds, Bern, 160–190
31. EFSA (2007) Statement of the Scientific Panel on genetically modified organisms on the safe use of the *nptII* antibiotic resistance marker gene in genetically modified plants. 22.-23.03.2007; <http://www.efsa.europa.eu/en/science/gmo/statements0/npt2.html>
32. EC (2001) Directive 2001/18/EC of the European Parliament and of the Council of 12 March 2001 on the deliberate release into the environment of genetically modified organisms. *Official Journal of the European Union*, L 106, 1–39
33. Metcalf DD et al. (1996) Allergenicity of foods produced by genetic modification, *Critical Reviews in Food and Nutrition* 36(S): 165
34. FAO/WHO (2001) Allergenicity of genetically modified foods – Joint FAO/WHO consultation on foods derived from biotechnology, Rome, Italy, 22–25 January 2001. *Food and Agriculture Organisation of the United Nations and World Health Organisation*.
35. Nordlee JA et al. (1996) Identification of a Brazil-nut allergen in transgenic soybeans. *N Engl J Med* 334: 688–692
36. Fuchs RL, Astwood JA (1996) Allergenicity assessment of foods derived from genetically modified plants. *Food Technol* 50: 83–88
37. National Center for Environmental Health (2001) Investigation of human health effects associated with potential exposure to genetically modified corn. A report to the U.S. Food and Drug Administration from the Centers for Disease Control and Prevention. <http://www.cdc.gov/nceh/ehhe/cry9cReport/cry9creport.pdf>
38. Devine K (2000) GM food debate gets spicy. *The Scientist* 14: 10
39. Ivanciu O et al. (2003) Detecting potential IgE-reactive site on food proteins using a sequence and structure database, SDAP-Food. *J Agric Food Chem* 51: 4830–4837
40. Stadler MB, Stadler BM (2003) Allergenicity prediction by protein sequence. *FASEB J.* 17: 1141–1143
41. Prescott VE et al. (2005) Transgenic Expression of Bean alpha-Amylase Inhibitor in Peas Results in Altered Structure and Immunogenicity. *J Agric Food Chem* 53: 9023–9030
42. CSIRO (2006) Effective risk assessment of GM field peas. <http://www.pi.csiro.au/GMpeas/GMpeas.htm>; <http://www.pi.csiro.au/whatsnew.htm>
43. Kiener C (2002) Sicherheitsbewertung neuartiger Lebensmittel: Am Beispiel zweier -Carotin-Hydroxylasen und der Lycopinkarotte. Dissertation Universität Karlsruhe
44. Rübelt MC et al. (2006) Application of two dimensional gel electrophoresis to interrogate alterations in the proteome of genetically modified crops. 3. Assessing unintended effects. *J Agri Food Chem* 54: 2169–2177
45. Kuiper HA, Kok EJ, Noteborn HP (2000) Topic 5: Profiling techniques to identify differences between foods derived from biotechnology and their Counterparts, in Joint FAO/WHO expert consultation on foods derived from biotechnology. FAO/WHA: Geneva.