

Curriculum Vitae

Personal information **Katia Pauwels**

Work experience

1. Employer: Sciensano, Biosafety and Biotechnology Unit
 - Start date: 012010
 - End date: present
 - Position: Senior scientific officer
 - Activities:
 - Risk evaluation of regulatory dossiers within the framework of the Regulation (EC) 1829/2003 and Directive 2001/18/EC related respectively to the deliberate release of Genetically Modified Organisms (GMO) and placing on the market.
 - Scientific support to the Belgian federal and regional competent authorities and the Belgian Biosafety Advisory Council with regard the risk assessment of GMOs and GMMs (e.g. participation in meetings and committees dealing with the application of Directives 2001/18/EC).
 - **Contribution to the elaboration of international and European guidelines and recommendations with regard the risk evaluation of GMOs at the regional, federal, European and international level.**
 - Scientific follow_up of developments in several domains of life science, with particular emphasis on biotechnological developments (organization of and participation to scientific meetings, workshops, networks and task forces, follow_up of scientific literature).
 - Communication of scientific information with regard the risk assessment of GMO through the publication of peer_reviewed papers, talks, poster presentation, lectures.

Business or sector Publichealth

 - Country: Belgium
2. Employer: Scientific Institute of Public Health, Biosafety and Biotechnology Unit
 - Start date: 092003
 - End date: 122009
 - Position: Junior Scientific officer
 - Activities:
 - Risk evaluation of regulatory dossiers within the framework of the EU Directive 2009/41/EC on the contained use of GMMs (Belgian regional decrees implementing Directive 2009/41/EC also covers the contained use of GMOs and pathogenic micro_organisms).
 - Publication of several biosafety recommendations, e.g. biosafety recommendations for the manipulation of animal cell cultures, the use of viral vectors.
 - *Project leader and resource person for a 4_day certified course 'Biosafety'.*
 - *Member of the steering group establishing a novel regulatory framework (Belgian regional level) for the decontamination of infectious waste.*
 - **National coordinator for the containment of poliovirus within the frame of the WHO global actionplan for laboratory containment of wild polio viruses.**
 - Country: Belgium

Education and training

1. Subject: Free University of Brussels
 - Start date: 101998
 - End date: 092003
 - Qualification: PhD Applied Biological Sciences
 - Organisation:
 - Country: Belgium
2. Subject: Free University of Brussels
 - Start date: 091993
 - End date: 061998
 - Qualification: Bio_engineer Cell and Gene Biotechnology
 - Organisation:
 - Country: Belgium

Additional information

Publications

Peer-reviewed publications

Onnockx, S, Baldo, A, **Pauwels, K** (2023) Oncolytic Viruses: An Inventory of Shedding Data from Clinical Trials and Elements for the Environmental Risk Assessment. *Vaccines* 2023, 11, 1448.

Baldo A, Leunda A, Willemarck N, **Pauwels K** (2021) *Environmental Risk Assessment*

of Recombinant Viral Vector Vaccines against SARS-Cov-2. *Vaccines*, 9(5):453

Leunda A and **Pauwels K** (2019). GMO Regulatory Aspects of Novel Investigational Vaccine Candidates. Book chapter in 'Vaccines - the History and Future', 2019, DOI: 978-1-78923-804-4

Bogdanove AJ, Donovan DM, Elorriaga E, Kuzma J, **Pauwels K**, Strauss SH, Voytas DF (2018) *Genome Editing in Agriculture: Methods, Applications, and Governance*. A paper in the series on The Need for Agricultural Innovation to Sustainably Feed the World by 2050. *Council for Agricultural Science and Technology (CAST)*, Issue Paper 60. CAST, Ames, Iowa

Pauwels K, De Keersmaecker S, De Schrijver A, du Jardin P, Roosens N, Herman P (2015). [Next-Generation sequencing as a tool for the molecular characterisation and risk assessment of genetically modified plants: added value or not?](#) *Trends in Food Science & Technology*, 45 (2), 319-326

Goossens M, **Pauwels K**, Willemarck N, Breyer D (2013). [Environmental Risk Assessment of Clinical Trials Involving Modified Vaccinia Virus Ankara \(MVA\)-Based Vectors](#) *Curr Gene Ther*, 13, 413-420.

Baldo A, van den Akker E, Bergmans H, Lim F, **Pauwels K** (2013). General considerations on the biosafety of virus-derived vectors used in gene therapy and vaccination. *Curr Gene Ther*, , 13, 385-94.

Pauwels K, Podevin N, Breyer D, Carroll D, Herman P (2014). Engineering nucleases for gene targeting: safety and regulatory considerations. *New Biotechnology* 31(1): 18-27. Epub 2013 Jul 12.

Pauwels K, Mampuy R, Golstein C, Breyer D, Herman P, Kaspari M, Pagès J-P, Pfister H, van der Wilk F, Schöning B (2013). Event report: SynBio Workshop (Paris 2012) – Risk assessment challenges of Synthetic Biology. *Journal of Consumer Protection and Food Safety* 2013. Doi: 10.1007/s00003-013-0829-9

Baldo A, Leunda A, Do Thi CD, Breyer D, **K Pauwels**, Welby S, Van Vaerenbergh B, Herman P (2013). Biosafety risk assessment and management of laboratory derived influenza A (H5N1) viruses transmissible in ferrets. *Applied Biosafety*, 18 (1), 6-17.

Verheust C, Goossens M, **Pauwels K**, Breyer D (2012). Biosafety aspects of Modified Vaccinia Virus Ankara (MVA)based vectors used for gene therapy of vaccination. *Vaccine*, 30 (16) 2623-2632.

Pauwels K (2012). Are 'OMICS' Contributing to the Identification of Unintended Effects in Genetically Modified Crops. *Biosafety* 1:1, 1-2.

Breyer D, Goossens M, De Schrijver A, **Pauwels K**, Herman P. (2011) Plants: Recent Advances and Future Prospects. Chapter 12: Biosafety of molecular farming in plants. *Ed. Springer*, 2011.

Pauwels K, Breyer D, De Schrijver A, Goossens M, Herman P. (2011) Contributions from scientific research to the risk assessment of GMOs. Lessons learned from a symposium held in Brussels, Belgium, 21–22 October 2010. *Environmental Biosafety Research*, 9 (July-Sept), 113-121.

Available online: <http://www.ebr-journal.org/action/displayAbstract?fromPage=online&aid=8358139>

B. Van Vaerenbergh, F. Koenen, **Pauwels K**, Quanten K, Boyen F, Declercq K, Desmecht, D. J. Thiry, P. Herman (2010). Methodology of the biological risk classification of animal pathogens in Belgium. *Scientific and Technical Review of the OIE*. ; 29(3): 513-522.

Verheust C, **Pauwels K**, Helinski DR, Mahillon J, Herman P. (2010) Contained use of bacteriophages: Risk assessment and biosafety recommendations. *Applied Biosafety Journal*, 15 (1), 32-44.

Breyer B, Herman P, Brandenburger A, Gheysen G, Remaut E, Soumilion P, Van Doorselaere J, Custers R, **Pauwels K**, Sneyers M, Reheul D. (2009) Should Novel Organisms Developed Using Oligonucleotide-mediated Mutagenesis Be Excluded from the EU Regulation? ISB NEWS REPORT. Nov, 2009.

Pauwels K, Gijsbers R, Toelen J, Schambach A, Willard-Gallo K, Verheust C, Debyser Z, Herman P (2009). State-of-the-art lentiviral vectors for research use: Risk assessment and biosafety recommendations. *Current Gene Therapy*, **9** (6), 459-474. Available Open Access

Breyer B, Herman H, Brandenburger A, Gheysen G, Remaut E, Soumillion P, Van Doorselaere J, Custers C, **Pauwels K**, Sneyers M, Reheul D. (2009) Genetic modification through oligonucleotide-mediated mutagenesis. A GMO regulatory challenge?. *Environmental Biosafety Research*, **8** (2), 57-64

Pauwels K., Herman P., Van Vaerenbergh B., Do thi C.D., Berghmans L., Waeterloos G., Van Bockstaele D., Dorsch K. & Sneyers M. (2007) Animal Cell Cultures : Risk Assessment and Biosafety Recommendations" . *Applied Biosafety Journal*, 2007, vol. 12 number 1.

Pauwels K., Abadjieva A., Hilven P., Stankiewicz A. & Crabeel M. (2003) The N-acetylglutamate synthase/N-acetylglutamate kinase metabolon of *Saccharomyces cerevisiae* allows a coordinated feedback regulation of the two first steps in arginine biosynthesis. *European Journal of Biochemistry*, **270**, 1014-1024

Abadjieva A., **Pauwels K.**, Hilven P. & Crabeel M. (2001). A New Yeast Metabolon Involving at Least the Two First Enzymes of Arginine Biosynthesis. *Journal of Biological Chemistry*, **276**, 42869-42880.

Abadjieva A., Hilven P., **Pauwels K.** & Crabeel M. (2000). The yeast ARG7 Gene Product is Autoproteolysed to Two Subunit Peptides, Yielding Active Ornithine Acetyltransferase. *Journal of Biological Chemistry*, **275**, 11361-11367.

Pauwels K., Abadjieva A., Hilven P. & Crabeel M. (1999). A Strong Carbon Source Effect Is Mediated by pUC Plasmid Sequences in a Series of Classical Yeast Vectors Designed for Promoter Characterization. *Yeast* **15**, 1269-1274.

Projects

Course Trainer : _ ICGEB Workshop 'Field trials and Post_release and Post_Market Monitoring of GMOs' , 5_7 december 2011, Zagreb, Croatia: Legislative context of the EU in regards to GMO Field trials (Part B) , GMO Field trials in Belgium , Specific issues related to Field trials of different GM plant Species: GM Potatoes and GM Poplars, Legislative context of the EU in regards to Part C' _

European Biosafety Association (EBSA) preconference courses : 'Challenges of new genetic techniques for biosafety', 21 April 2015, Vienna, Austria. Co_instructor : Sharon Wood (UK). _ Certificat en biosécurité, Brussels, module 9 _ dissémination volontaire d'OGM _ essais cliniques avec des OGM médicaux

Organisation Symposia / workshops: _

8th meeting of the European Advisory Bodies on Biosafety _ 23_24 November 2017, Liège _ Symposium on the contributions from scientific research to the risk assessment of GMOs, October 21_22, Brussels, Belgium.

"SynBio Workshop (Paris 2012) Risk assessment challenges of synthetic biology, 12/12/2012, Paris, France. Co_organisers: Haut Conseil des Biotechnologies (HCB, F), Zentrale Kommission für die Biologische Sicherheit (ZKBS, D), Commissie Genetische Modificatie (COGEM, NL), Biosafety and Biotechnology Unit (SBB, WIV_ISP, BE).

Workshop: Next_generation sequencing as a tool for the molecular characterization of GMOs. November, 25th, 2013, Brussels, Belgium. Organizers : SBB and PBB

"GAP III _ The WHO poliovirus containment policy: implications and implementation in Belgium", Brussels, Eurostation 17 June 2015. Organizers : SBB

Memberships

- External expert of the Working group on Synthetic Biology of the European Commission and the Scientific Committees SCHER (Scientific Committee on Health and Environmental Risks), SCENIHR (Scientific Committee on Emerging and Newly Identified Health Risks), SCCS (Scientific Committee on Consumer Safety) (2013 to 2016)
- Member of the EC New techniques working group (2008_2011)
- Member of the external advisory board of the centre for the Synthetic Biology of fine and speciality chemicals (SYNBIOCHEM) (2015_ to date)
- Member of EC working group Interplay GGO_Pharma

Other Relevant Information