

## CURRICULUM VITAE | Ariane König



**Nationality:** German & Luxembourgish

**Position:** Senior Researcher

**Organisation, Research Unit:** University of Luxembourg, Research Unit "Education, Cognition, Culture, and Society (ECCS)"

**Languages:** German, English, French, Luxembourgish, Italian, Spanish

### EDUCATION

Mar. 1996	Department of Biochemistry and Emmanuel College, <b>University of Cambridge'</b> Ph.D. in Biochemistry 'The biosynthesis of the macrolide polyketide immunosuppressant rapamycin'
Mar. 1996	M.A. Emmanuel College, <b>University of Cambridge</b> , March 1996
June 1992	B.A. Honours Degree in Natural Sciences: Chemistry, Molecular biology, Biochemistry. 2(i) Emmanuel College, <b>University of Cambridge</b>
June 1989	<b>European School Varese, Italy</b> (1975-1981); <b>European School Luxembourg</b> (1982-1989), European Baccalaureate 1.0

### CAREER SUMMARY

Aug. 2012 – to date	<b>University of Luxembourg</b> , Senior Researcher. My main research and teaching activities centre on the co-production of technologies and social norms, and challenges to interdisciplinary research and education and on how universities engage in integrating research, teaching and practice for transformation to a sustainable society. I created the Certificate in 'Sustainability and social innovation', the first study programme at the university that offers a learning platform for students and professionals to engage in addressing complex sustainability problems in diverse groups for effecting local change.
June 2009 – Dec. 2015	<b>University of Luxembourg</b> Head of Sustainable Development. Worked on integration of education and research with the practice of campus operations, planning and civic engagement projects for sustainability. At present our campus-based projects include biennial sustainability reporting, running student award programmes on improved recycling and green student residences, and the development and implementation together with the Director of Administration of a sustainable transport policy. As <i>founder and Head of the UL Cell for Sustainable Development</i> , I developed the UL's first 4 year action plan on sustainable development in a participatory process, and was <i>lead author of the Charter of the International Sustainable Campus Network (ISCN)</i> , which was signed by 38 University presidents, including Harvard, ETH Zürich, and Hong Kong University. The UL signed in July 2010, and published a first annual report in 2011. For the ISCN, I organized an international symposium in the Luxembourg Pavillion at the Shanghai World Expo, I continue to chair one of three Working Groups. In 2008 I led the preparation of a 'Position Statement on' Energy-efficiency in campus buildings in Belval' with an expert group now used as guidance for architects and engineers.
Oct. 2007 – Dec. 2012	<b>University of Luxembourg</b> , Advisor to the President. As co-responsible for fostering <i>multi- and interdisciplinary in education</i> for UL students I have developed the Open Course Programme, with over 60 diverse courses open to all students from all faculties. In 2010 I organized a workshop with the European Research Council on the evaluation of interdisciplinary research. <i>Establishment of the UL Interdisciplinary Group on Social Enterprise</i> : In 2011 a workshop on Social Business, introduced by Grande-Duchesse Maria-Theresa was the starting point for two study trips with high-level politicians and the Crown Prince Guillaume, leading to a UL Interdisciplinary group, I facilitated the creation of a Chair on Social Business with the City of Esch, and developed an interdisciplinary course on 'Social Enterprise and Social Innovation' which is now part of the University Certificate. In 2008 I was responsible for establishing two student exchange agreements with US Universities and a child care facility for the University. I remained Associate Fellow at Oxford until 2009.
Jan. 2006 – Oct. 2007	<b>University of Oxford</b> , Associate Fellow and Independent scientific consultant on risk governance. Leaving Oxford for family reasons, I founded my own consultancy providing services of research and writing interdisciplinary scientific reports and publications in the area of risk governance and credibility of expertise. My clients included the Universities of Oxford and Wageningen. In charge of <i>integrating results from natural and social science work packages in the European Integrated Platform SAFE FOODS</i> (Framework Programme 6) I became lead-author of the main project publication and the reports to the European Commission.
May 2004 – Sept.2005	<b>University of Oxford</b> , Research Fellow at the James Martin Institute for Science and Civilization at the Saïd Business School. As the Institute's first member of staff (it opened in March 2004) I convened strategy meetings with the Director and affiliates, and was responsible for the Institute's first seminar series on 'Technology and democracy'. Working closely with Prof. Steve Rayner, then head of the institute, I learnt of cultural theory and muddling through specific complex issues in diverse learning communities, a process in which friction seems necessary for developing more socially robust approaches.

Sept. 2000 – Apr. 2004	<b>Harvard University</b> , Fellow at the Science, Technology and Public Policy Program, Belfer Center for Science and International Affairs, Kennedy School of Government. Professor Sheila Jasanoff and I collaborated on a report on the 'Credibility of expert advice' in contribution to the European White Paper on Governance, I had obtained funds from the European Commission Foresight Study Unit. Whilst at Harvard, my research results were published in journals dedicated to both natural and social science and considered in policy-making processes. For example, my research on integrated assessment approaches of new selectable marker biotechnologies, was published in the journal Nature Biotechnology, and used by a European Commission Working Group on Antibiotic Resistance Markers; I had obtained funds for this project from Germany's Federal Institute for Biology (Biologische Bundesanstalt). In charge of integrating natural and social science work package results in the EU Thematic Network ENTRANSFOOD (Framework Programme 5), I was first author of the lead- publications, and guest editor of a special issue_and primary editor of concluding project reports with policy advice to the European Commission.
May 2002 – Dec. 2003	<b>Harvard University</b> , Senior Research Associate at the Harvard Center for Risk Analysis, Harvard School for Public Health.
Jan. 1997 – Aug. 2000	<b>Monsanto International Services S.A.</b> , Regulatory Affairs Manager and Scientific Affairs Coordinator, Agricultural Sector. . Since 1999 I built and led a five-member Scientific Affairs team in charge of outreach to public sector research in sixteen countries, managing a budget of US \$ 1.4 M. In my position of Regulatory Affairs Manager held over the entire period, my primary responsibility was to compile risk assessments and interact with experts and officials in regulatory processes in over twenty different countries allowing cross-institutional and -cultural comparisons on governance processes in practice, public acceptance and variation of social norms relating to new technologies. I was also involved in discussions on regulatory strategy and policy advice from an industry perspective, both, internally and in industry associations. (I left on my own accord for independent research on national differences in biotechnology governance).
Apr. – Sept. 1996	<b>European Commission</b> , Stagiaire in DG 3. Enterprise. Unit on Biotechnology. Head of Unit: Mr G. Cozigou.

## RESEARCH

### Titles of two most recent research projects as leader:

NEXUS FUTURES: Anticipating challenges at the food-water nexus with collaborative conceptual systems mapping, scenarios, and citizen science approaches. (2 Ph.D.s.; 1 Post doc, 5 year duration, funded by the Luxembourg Ministry for Sustainable Development and Infrastructures and the University of Luxembourg.)

SCHOOL FUTURES: Transformative learning in the face accelerating change: Scenarios and conceptual systems mapping for linking learning at the organisational level and in individuals in schools. (2 Ph.D.s, 4 year duration, funded by the Luxembourg Ministry for national Education, Childhood and Youth (MENJE), and the Service for Coordination of Research and Innovation and Technologies (SCRIPT)).

### Research trainees:

- Kristina Hondrila 'What is actionable knowledge for sustainable water governance?' started on 15 March 2017 - ongoing. Supervisor, PI.
- Karl Pickar 'Co-design of a citizen science tool for sustainable water governance and transformative learning', started on 1 July 2017- ongoing. Supervisor, PI.
- Bo Raber 'Transformative learning from collaborative with conceptual systems mapping and futures in schools', started on 15 November 2017 – ongoing. Supervisor, PI.
- Ante Galich 'The co-production of policy and science in the governance of EU research & innovation policy" co-supervisor with Prof. Robert Harmsen- in the role of scientific contact and vice president of the jury. Completed with the notion of 'very good' in February 2015.
- Franklin Feyeh Bahfon on 'Greening Local Economies in Luxembourg: Understanding Nature Parks as instruments of Sustainable Regional Development' co-supervisor with Prof. Christian Schulz in the role of scientific contact. Completed in May 2015.
- Jan Tobias-Doerr . ' Learning from 30 of transition – A reconstruction of the sustainable development of Beckerich and its implication for Luxembourgish rural development' co-supervisor with Prof. Christian Schulz, in the role of scientific contact. Ongoing.

Oversaw research at the University of Oxford towards a Master thesis on 'The governance of biotechnology at WTO: a cultural theory framework' by Samuel Evans, who was awarded the Dan Gowler Prize for prize for best dissertation in the Management Department of the year at the Saïd Business School. Gave supervisions and tutorials to undergraduates at Cambridge University, and to Masters students at Harvard University Kennedy School of Government).

### EDITORIAL AND REVIEWING ACTIVITIES

**Journals:** reviewed for include Nature Biotechnology, Journal for Cleaner Production, Futures, International Journal for Sustainability in Higher Education, Minerva, Food Control, Risk Analysis.

**Special issues edited** in the international peer reviewed Journals *Current Opinion in Environmental Sustainability* (2015) and *Environmental and Sustainability Education*.(in press, 2018).

**Books edited:** Sustainability science (Routledge, 2018); Regenerative Sustainability in Universities and Cities (Edward Eglar, 2013).

### FUNDING RESPONSIBILITIES AT VARIOUS CAREER STAGES INCLUDED

2017-2023: Project 'NEXUS FUTURES', PI: Ariane König. Budget: 943 k Euro 2017-2023.

2017-2021: Project 'WATGOV' PI: Ariane König. Budget: 187 k Euro 2017-2023.

2017-2021: Project 'SCHOOL FUTURES', PI: Ariane König. Budget: 380 k Euro 2017-2021.

2009 to date: University of Luxembourg: Head of Sustainable development. Budget: ~75 000 Euro / year.

2012: Grant by Fonds National de la Recherche : Public Lecture Series on Sustainable Development' : 3000 Euro

2010: Grant by Fonds National de la Recherche for ISCN Symposium in China. Budget: 10 000 Euro.

2005-2007: Independent consultant. Received fees in the order of 15 000 - 20,000 Euro / year.

1998-2000: Monsanto. Head of Scientific Affairs Europe / Africa. Budget of ~1.4 M USD / year.

1993-1995: ESRS grant in support of Ph.D.

### ORGANISATION OF CONFERENCES, WORKSHOPS AND SESSIONS

2017: Invited to co-design and contribute to course in Summer School of Hokkaido University on Sustainable campus development, systems thinking and futures.

2014: Invited Key Note Speaker at the International Conference of the Sustainable Campus Network of Japan

2014: Invited Chair and presenter of the Education Sessions at the Conference on Sustainability Science of the International Alliance of Research Universities

2009-to date: Chair of ISCN Working group 3, annual organization of all Working Group sessions

2011 Workshop on 'Exploring the Potential of Social Business in Luxembourg' (1 day, 103 participants)

2010 International Symposium of the International Sustainable Campus Network in the Luxembourg Pavillion at the Shanghai Expo and at Tongji University (2 days, 92 participants)

2009 International conference on Best Practices for Sustainable Laboratories and Data Centres (Kirchberg, Luxembourg) (2 days, 87 participants)

König, A. (2000). Risk assessment of antibiotic resistance markers in genetically modified crops. In 'Proceedings of the International Congress on Foresight and Precaution, International Society for Risk Analysis - 2000 Edinburgh, Scotland'.

König, A. (2000). Development and biosafety aspects of transgene excision methods. In 'Proceedings of the 6th International Symposium on the Biosafety of Genetically Modified Organisms - 2000 Saskatchewan, Canada'.

König, A. (1998). Comparison of the EU and the U.S. regulatory framework for the environmental safety assessment of transgenic crops - an industry perspective. In 'Proceedings Brighton Crop Protection Conference - 1998 Monday Symposium, Brighton, UK'.

König, A. (1998). Genetically modified crops in the European Union - the regulatory framework and public acceptance. In 'Proceedings of the International Congress of the International Association of Plant Tissue Culture and Biotechnology - 1998 Jerusalem, Israel'.

## AWARDS

2000 EU Fulbright Fellowship to conduct research on science and technology governance at the Harvard University, Kennedy School of Government

1994 Emmanuel College Quartercentenary Studentship funding Ph.D. research.

## TEACHING

2017 - to date: At the University of Hokkaido, Sapporo, Japan - Invited to co-design and contribute to course in Summer School of Hokkaido University on Sustainable campus development, systems thinking and futures.

2013-to date: Developed and launched the University of Luxembourg's Certificate in 'Sustainability and Social Innovation' with 2 core courses for 6 ECTS each on 'Science and Citizens meet Challenges of Sustainability' and on 'Social Enterprise and Social Innovation', 2 auxiliary course, project work, and internship opportunities for transformative learning for sustainability. I developed the course on environmental science for 'Global Environmental Change in the Anthropocene' the Master in Geography and Spatial Planning that can also count towards the Certificate.

2014- 2017: Co-lead and development of the programme for the interdisciplinary strand on sustainability of the IPSE doctoral school.

2009-2012: Developed and taught the University of Luxembourg's first interdisciplinary cross-faculty courses (for students and professionals) on 'Science and citizens meet challenges of sustainability'; and 'Social enterprise and social innovation'.

2002-2004: Executive training: Taught in executive training programmes offered by the Massachusetts Institute of Technology and the Harvard School of Public Health.

2001-2004: Training at post-graduate-level: Taught in post-graduate courses at the Harvard Kennedy School of Government, Oxford University Saïd School of Business, and at Georgetown University.

1992-1995: Training at undergraduate level: Taught and supervised undergraduate students at the University of Cambridge, Emmanuel College: Taught tutorials and laboratory classes in biochemistry and molecular biology.

EXPERT AND ADVISORY POSITIONS	
April 2016, April 2017	Expert advice on the initiative Real Labore in Baden-Württemberg at which the Land invests 15 M Euro in
January 2015 to date	Appointed a member of the European Statistical Advisory Committee of the European Statistical System
Jan. 2013 – to date	Member of the Luxembourg 'Conseil Supérieur pour un Développement Durable'. Co-lead of the project 'Scenarios for education in Luxembourg in the face of 21st century sustainability challenges'. Lead of the working group to evaluate the national action plan on climate change.
Apr. 2009 – 2016	Chair of a Working Group of the International Sustainable Campus Network (ISCN), and lead-author of ISCN Charter committing signatories to regular reporting. Over 50 Universities signed.
Apr. 2012 -2015	Appointed Member of the national 'Groupe de Réflexion: Indicateurs Développement Durable du Ministère pour le Développement Durable et Infrastructures'
2012 - 2013	Jury member of the national competition 123 Go Social awarding business plans for social enterprise.
March-May 2011	Invited international expert for a campus planning project for the regional government of Canton Zürich, Zentrale Hochschule für Angewandte Wissenschaft, and Baseler & Partner.
Jan. 2012 – May 2013	Expert for the OECD-LEED study on Indicators for Local Green Growth Transition in Alzette-Belval.
October 2005	Expert for the evaluation of FP6 SME cooperative research proposals in health and biomedicine.
2003-2004	Consultant to OECD, a research report on public participation in activities on technology policy under the auspices of intergovernmental organizations.

2000-2002	Expert on panel for evaluation of biosafety research for German Federal Ministry for Research and Education.
2000	Expert advisor to the European Commission Forward Studies Unit contributing background paper on democratising expertise and a presentation towards the 'White Paper on Governance'.
1998-1999	Business and Industry Advisory Committee (BIAC) representative at OECD meetings on food safety.

## PUBLICATIONS

ISI Web of Science (WoS): H-Factor: 14; SCOPUS: H-factor 13; over 1600 citations (Research Gate); Peer-reviewed publications: 37; 34 first author publications

Van Poeck, K., König, A. and Wals, A. E.J. (2018). Environmental and sustainability education in the Benelux countries: Research, policy and practices at the intersection of education and societal transformation. *Environmental Education Research*. *in press*.

Van Poeck, K., Wals, A. E.J. and König, A. (2018). Guest Editors. Environmental and Sustainability Education in the Benelux Region. *Environmental Education Research*, Special Issue. *In press*.

Dendoncker, N., Boeraeve, F., Crouzat, E., Dufrière, M., König, A. and Barnaud, C. (2018). How can Integrated Valuation of Ecosystem Services help understanding and steering agroecological transitions? *Ecology and Society* **23** (1), 12. doi: 10.5751/ES-09843-230112

König, A. (2018). *Sustainability Science: Key issues*. Abingdon, UK: Routledge.

König, A. (2018). Sustainability science as a transformative social learning process. *In: König, A. (Ed.) Sustainability Science: Key issues*. Abingdon, UK: Routledge. Pp. 3-28.

König, A. (2018). Systems approaches for transforming social practice: Design requirements. *In: König, A. (Ed.) Sustainability Science: Key issues*. Abingdon, UK: Routledge. Pp. 55-81.

König, A. (2018). Outlook. *In: König, A. (Ed.) Sustainability Science: Key issues*. Abingdon, UK: Routledge. Pp. 345-356.

Drenth, G., Elahi, S. and König, A. (2018). Exploring alternative futures with scenarios. *In: König, A. (Ed.) Sustainability Science: Key issues*. Abingdon, UK: Routledge. Pp. 113-132.

Tran, K.C. and König, A. (2018). Community-based monitoring for improved water governance: A case study in Holbox Island, Quintana Roo State, Mexico. *In: König, A. (Ed.) Sustainability Science: Key issues*. Abingdon, UK: Routledge. Pp. 250-268.

Sonnleitner, P., König, A. and Sikharulidze, T. (2017). Learning to confront complexity: what roles can a computer-based problem-solving scenario play? *Environmental Education Research*, 1-19. doi: 10.1080/13504622.2017.1378623

König, A., Dyball, R. and Davila, F. (2016). Transforming the World by Transforming the University: Envisioning the University of 2040. *Solutions* **7** (3), 12-16.

Luederitz, C., Schöpke, N., Wiek, A., Lang, D.J., Bergmann, M., Bos, J.J., Burch, S., Davies, A., Evans, J., ; König, A., Farrelly, M. A., Forrest, N., Frantzeskaki, N., Gibson, R. B., Kay, B., Loorbach, D., McCormick, K., Parodi, O., Rauschmayer, F., Schneidewind, U., Stauffacher, M., Stelzer, F., Trencher, G., Venjakob, J., Vergragt, P. J., von Wehrden, H and Westley, F.R (2016). Learning through evaluation - A tentative evaluative scheme for sustainability transition experiments. *Journal of Cleaner Production* xxx, 1-16. doi: 10.1016/j.jclepro.2016.09.005

König, A. & Budwig, N. (2015). Guest Editors. Changing requisites to higher education in the face of 21<sup>st</sup> century sustainability challenges. A Special Issue in *Current Opinion in Environmental Sustainability* **16**. doi: 10.1016/S1877-3435(15)00133-5

König, A. (2015). Changing requisites to universities in the 21<sup>st</sup> century: Organizing for transformative sustainability science for systemic change. *Current Opinion in Environmental Sustainability* **16**, 105-111. doi: 10.1016/j.cosust.2015.08.011

König, A. (2015). Towards systemic change? On the co-creation and evaluation of a study programme in transformative sustainability science with stakeholders in Luxembourg. *Current Opinion in Environmental Sustainability* **16**, 89-98. (IF=3,1) doi: 10.1016/j.cosust.2015.08.006

- Sprumont, F., Viti, F., Caruso, G., & König, A. (2014). Workplace Relocation and Mobility Changes in a Transnational Metropolitan Area: The Case of the University of Luxembourg. *Transportation Research Procedia* **4**, 286–299. doi:10.1016/j.trpro.2014.11.022
- Bruyninckx, H., Martinez-Fernandez, C., Sharpe, S. and König, A. (2013). Green growth in the Benelux: Indicators of local transition to a low-carbon economy in cross-border regions. Ghent, Belgium and Esch-sur-Alzette, Luxembourg: OECD/LEED/European Commission/Benelux Region. doi: 10.1787/20794797
- König, A. (2013). Regenerative Sustainable Development of Universities and Cities: The role of living laboratories. 1<sup>st</sup> edition. Cheltenham, Glos, UK: Edward Elgar publishing.
- König, A. (2013). Introduction: Experimenting for sustainable development? Living laboratories, social learning and the role of the university. In: König, A. (Ed.) Regenerative Sustainable Development of Universities and Cities: The role of living laboratories. Cheltenham, Glos, UK: Edward Elgar publishing. Pp. 1-23.
- König, A. (2013). What might a sustainable university look like? Challenges and opportunities in the development of the University of Luxembourg and its new campus. In: König, A. (Ed.) Regenerative Sustainable Development of Universities and Cities: The role of living laboratories. Cheltenham, Glos, UK: Edward Elgar publishing. Pp. 142-169.
- König, A. (2013). Conclusion: a cross-cultural exploration of the co-creation of knowledge in living laboratories for societal transformation across four continents. In: König, A. (Ed.) Regenerative Sustainable Development of Universities and Cities: The role of living laboratories. Cheltenham, Glos, UK: Edward Elgar publishing. Pp.254-273.
- König, A. (2010) Compatibility of the SAFE FOODS Risk Analysis Framework with the legal and institutional settings of the EU and the WTO. *Food Control* **21**(12), 1638-1652. doi:10.1016/j.foodcont.2009.11.018
- König, A., Kuiper, H.A., Marvin, H.J.P., Boon, P.E., Busk, L., Cnudde, F., Cope, S., Davies, H.V., Dreyer, M., Frewer, L.J., Kaiser, M., Kleter, G.A., Knudsen, I., Pascal, G., Prandini, A., Renn, O., Smith, M.R., Traill, B.W., van der Voet, H., van Trijp, H., Vos, E., Wentholt, M.T.A. (2010) The SAFE FOODS framework for improved risk analysis of foods. *Food Control*, **21**(12), 1566-1587. doi:10.1016/j.foodcont.2010.02.012
- Smith, M.R. and König, A. (2010) Environmental risk assessment for food-related substances. *Food Control*, **21**(12), 1588-1600. doi:10.1016/j.foodcont.2009.12.032
- Traill, W.B. and König, A. (2010) Economic assessment of food safety standards: Costs and benefits of alternative approaches. *Food Control* **21**(12), 1611-1619. doi:10.1016/j.foodcont.2009.06.018
- Wentholt, M. T. A., Rowe, G., König, A., Marvin, H. J. P. and Frewer, L. J. (2009). The views of key stakeholders on an evolving food risk governance framework: Results from a Delphi study. *Food Policy*, **34** (6), 539–548. doi:10.1016/2549.j.foodpol.2009.06.002
- König A. (2007). Democratising decision-making on food safety in the EU: Closing gaps between principles of governance and practice. *Minerva* **45** (3), 275-294.
- König, A. (2007). Towards safer foods and more democratic decisions: Is this a contradictory goal? *OCL Oleagineux, Corps Gras, Lipides*, **14** (2), 92–99.
- König, A. (2006). Governance of Food Safety in the European Union. In: Carruth, Reba (Ed.) Global Governance of Food and Agriculture Industries: Transatlantic Regulatory Harmonization and Multilateral Policy Cooperation for Food Safety. Cheltenham, UK and Brookfield, US: Edward Elgar Publishers. Pp. 133-163. (Book adopted as official WHO and PAHO text).
- König, A., Cohen, J., Bouzan, C., Connor, W., Kris-Etherton, P.M., Gray, G., Lawrence, R.S., Savitz, D.A. and Teutsch, S. (2005). Fish consumption and coronary heart disease: A review of data on the dose-response relationship. *American Journal for Preventive Medicine* **29** (4), 335-346.
- Bouzan, C., Cohen, J.T., Connor, W.E., Kris-Etherton, P.M., Gray, G.M., König, A., Lawrence, R.S., Savitz, D.A. and Teutsch, S.M. (2005). A Quantitative Analysis of Fish Consumption and Stroke Risk. *American Journal of Preventive Medicine* **29** (4), 347-352. doi: 10.1016/j.amepre.2005.07.001
- European Commission. (2004). Genetically modified crops in the EU: Food safety assessment, regulation and public concerns. Project report for ENTRANSFOOD, the European network on safety assessment of genetically modified crops. Ed.s. König, A., Kleter, G., Hammes, W., Knudsen, I. and Kuiper, H.
- König, A. (2004). Combining multiple viewpoints on genetically modified foods. *Food Today* (A publication of the European Food Information Council) **45**.
- König, A., Cockburn, A., Crevel, R.W.R., Debruyne, E., Grafstroem, R., Hammerling, U., Kimber, I., Knudsen, I., Kuiper, H.A., Peijnenburg, A.A.C.M., Penninks, A., Poulsen, M., Schauzu, M. and J.M. Wal. (2004). Assessment of the safety of foods derived

from genetically modified crops. *Journal of Food and Chemical Toxicology* **42**, 1047-1088. (Science Direct ranked the article #9 of the Top 25 articles published in the same quarterly in the area of pharmacology, toxicology and pharmaceutical sciences).

König, A. (2003). "Forum Comment" *Issues in Science and Technology* **XX**, 14-16.

König, A. (2003). A framework for designing transgenic crops - science, safety, and citizen's concerns. *Nature Biotechnology*, **21** (11), 1274-1279.

König, A. (2003). Book review of 'How much risk? A guide to understanding environmental health hazards, by Inge F. Goldstein and Martin Goldstein. *Environment* **45**, 42-43.

König, A. (2002). Book review of 'The Precautionary Principle: A Critical Appraisal of Environmental Risk Assessment.' *Environment* **44**, 42.

König, A. and Jasanoff, S. (2002). The credibility of expert advice for regulatory decision-making in the US and EU. Cambridge, MA: Mossavar Rahmani Center for Business and Government, John F. Kennedy School of Government, Harvard University [Working Paper RPP-2002-07].

König, A. (2002). Negotiating the precautionary principle: Regulatory and institutional roots of divergent US and EU positions. *International Journal of Biotechnology*, **4** (1), 61-81.

Jonas, D.A.; Elmadfa, I.; Engel, K.-H.; Heller, K.; Koziarowski, G.; König, A.; Müller, D.; Narbonne, J.-F.; Wackernagel, W.; Kleiner, J. (2001). Safety considerations of DNA in food. *Annals of Nutrition and Metabolism*, **45** (6), 1-20.

König, A. (2000). Towards a common understanding of the precautionary principle? *Foreign Policy Bulletin* **11** (1-2), 125-135.

König, A. (2000). Risk assessment of antibiotic resistance markers in genetically modified crops. In 'Proceedings of the International Congress on Foresight and Precaution - 2000 Edinburgh, Scotland'.

König, A. (2000). Development and biosafety aspects of transgene excision methods. In 'Proceedings of the 6<sup>th</sup> International Symposium on the Biosafety of Genetically Modified Organisms - 2000 Saskatchewan, Canada'.

König, A. (1998). Comparison of the EU and the U.S. regulatory framework for the environmental safety assessment of transgenic crops - an industry perspective. In 'Proceedings Brighton Crop Protection Conference - 1998 Monday Symposium, Brighton, UK'.

König, A. (1998). Genetically modified crops in the European Union - the regulatory framework and public acceptance. In 'Proceedings of the International Congress of the International Association of Plant Tissue Culture and Biotechnology - 1998 Jerusalem, Israel'.

König, A., Schwecke, T., Molnár, I., Böhm, G.A., Lowden, P.A.S., Staunton, J., and Leadlay, P.F. (1997). The pipecolate incorporating enzyme for the biosynthesis of the immunosuppressant rapamycin: Nucleotide sequence analysis, disruption and heterologous expression of rapP from *Streptomyces hygroscopicus*. *European Journal of Biochemistry* **247** (2), 526-534.

König, A., Schwecke, T., Molnár, I., Böhm, G.A., Lowden, P.A.S., Staunton, J. and Leadlay, P.F. (1996). The nature of the starter unit for the rapamycin polyketide synthase. *Angew. Chemie. Intl. Edn. Engl.*, **35** (19), 2249-2251.

Aparicio, J.F., Molnar, I., Schwecke, T., König, A., Haydock, S.F., Olinyk, M., Staunton, J., and Leadlay, P.F. (1996). Organisation of the biosynthetic gene cluster for rapamycin in *Streptomyces hygroscopicus*: analysis of the enzymatic domains in the modular polyketide synthase. *Gene* **169**, 9-16.

Aparicio, J.F., Haydock, S.F., Khaw, S.F., Schwecke, T., König, A., Staunton, J., and Leadlay, P.F. (1996). Organisation of the biosynthetic gene cluster for rapamycin in *Streptomyces hygroscopicus*: analysis of the genes flanking the polyketide synthase. *Gene* **169** (1), 1-7.

Haydock, S.F., Aparicio, J.F., Molnár, I., Schwecke, T., König, A., Marsden, A.F.A., Galloway, I.S., M., Staunton, J., and Leadlay, P.F. (1995). Divergent sequence motifs correlated with the substrate specificity of (methyl)malonyl-CoA: acyl carrier protein transacylase domains in modular polyketide synthases. *FEBS Letters* **374** (2), 246-248.

Schwecke, T., Aparicio, J.F., Molnár, I., König, A., Khaw, L.E., Haydock, S.F., Olinyk, M., Caffrey, P., Cortés, J.B., Lester, J., Böhm, G.A., Staunton, J., and Leadlay, P.F. (1995). The biosynthetic cluster for the polyketide immunosuppressant rapamycin. *Proceedings of the National Academy of Sciences USA* **92** (17), 7839-7843.

König, A., Schwecke, T. and Leadlay, P.F. (1994). Cloning of structural genes for type I polyketide synthases involved in macrolide polyether biosynthesis. In 'Proceedings of the 7<sup>th</sup> International Symposium on the Genetics of Industrial Microorganisms. 1994, Montreal, Canada'. Abstract no. P.184, 158.

## REVIEWING ACTIVITIES

**Journals:** reviewed for include Nature Biotechnology, Journal for Cleaner Production, Futures, International Journal for Sustainability in Higher Education, Minerva, Food Control, and Risk Analysis.

## Books and Special Issues

König, A. (2018). Ed. Sustainability Science: Key Issues. Earthscan: Routledge.

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