



PERSONAL INFORMATION

Brendan Edward Murray



 Toxicology Unit, Pesticide Registration Division, Department of Agriculture, Food and the Marine, Backweston Campus, Celbridge, Éire/Ireland
 +353 1 6157600

 brendan.murray@agriculture.gov.ie

 <http://www.toxicologyireland.com>

Sex Male | Date of birth 31 March 1968 | Nationality Irish

CURRENT JOB

Regulatory Toxicologist, Pesticide Registration Division, DAFM

WORK EXPERIENCE

April 2005 – Present

Regulatory Toxicologist

Department of Agriculture, Food and the Marine (DAFM), Celbridge (Éire/Ireland)

- I am a member of the toxicology evaluation team in the pesticides division of the Department of Agriculture, Food and the Marine. The work involves both commitment as an individual chemical assessor and as part of a team.
- Evaluation of the intrinsic hazard of pesticide and biocide active substances and mixtures. I submit comprehensive toxicological evaluations on EU dossiers. This involves preparation of the Mammalian Toxicology (and Risk Assessment) sections of EU Pesticide & Biocide Review monographs to be submitted to the EFSA, European Commission and to the competent authorities of the other Member States for peer review.
- I provide robust and objective toxicological analysis in areas outside substance or product reviews (response to media reports, liaison with colleagues in FSAI, HSA, safe food, EFSA and ECHA).
- Extensive international experience presenting findings to colleagues in technical meetings on draft assessment reports to EFSA in Parma and technical meetings to specialised committees at ECHA, Helsinki.
- I am a member of the ECHA Risk Assessment Committee (RAC), a body that has responsibility for preparing opinions on the risk of chemical substances to human health and the environment and has responsibility in proposing harmonised classification and labelling to the European Commission. RAC provides an advanced technical forum for discussions on carcinogenicity, mutagenicity, reproductive toxicity, sensitisation as well as other effects on a case-by-case basis.
- ECHA Rapporteur for several substances, mainly pesticides and biocides → primary author of the opinion document in each case, presented to the RAC committee for open debate.
- Assessing the risk to human health associated with or derived from pesticide handling and use on the basis of results from animal studies. The conclusions from the hazard evaluation are used to estimate operator risk.
- Assessing the risk to human health associated with MRL breaches by determining exposure through probabilistic methods utilising consumer dietary consumption data and an online exposure assessment service such as CREME or local models like PRIMo.
- Elaborating on draft decisions for pesticides and biocides relevant to the granting (or none granting) of clearances or authorisations to market and use on the grounds of human safety.
- Advising on the acceptability from a human health perspective of proposed maximum residue levels for pesticides.
- Administrator for the IUCLID 5 server, facilitate the production of CLH dossiers and Administrator and ECHA Security Officer for REACH-IT & Biocides-IT access within the Pesticides Registration & Control Division of the Department of Agriculture.
- Former team leader of the IT Infrastructure Group which was part of a Strategic Management Project supported by the Division.

Feb 1999 – 31 Mar 2005

Research Officer

Teagasc, Ashtown Food Centre, Dublin (Éire/Ireland)

- Research project investigating the biochemical basis of meat quality
- Research project investigating the production of long chain poly-unsaturated fatty acids and CLA enrichment of beef
- Research project investigating the production of acrylamide in potato based products
- Investigations into veterinary drug residues in animal liver
- GC laboratory manager
- Food chemical analyst - establishment of new methods for fatty acid, monosaccharide and amino acid analysis. Application of techniques to various food matrices.
- Preparation of meat products for in house consumer assessment and sensory evaluation of these food types.
- IT facilitator for the Ashtown Food Centre – instrument PC upgrades, photography, network administrator for test kitchen/sensory analysis LIMs system.
- Tutor to BSc., MSc and PhD students.

Dec 1995 – Jan 1999

Welcome Trust Postdoctoral Fellow

Department of Pharmacology, University College Dublin

- Research scientist, molecular basis of muscle contraction.
- Investigation of proteins in fast twitch vs slow twitch muscle. Transplantation biology and the use of muscle in supporting cardiac function.

1990-1991

Various Technician Posts

University College Cork / Waterford Regional Hospital (WRH)

- Laboratory technician electron microscopy unit, UCC
- Locum medical lab technician for biochemistry and bacteriology labs, WRH
- Post graduate research microbiology / immunology, UCC

EDUCATION AND TRAINING

2013

QCF level 7: M.Sc. (distinction) Applied Toxicology

EQF level 7

University Of Surrey, Guildford (United Kingdom)

- Carcinogenicity
- Reproductive toxicology
- Target organ toxicology - systems I, II, & III (general organ toxicity)
- paediatric toxicology
- immunotoxicology
- histopathology
- haematology & clinical chemistry
- metabolism & toxicokinetics
- biomarkers

1997

NFQ level 10: Ph.D Biochemistry

EQF level 8

University College Cork, National University of Ireland, Cork (Éire/Ireland)

- Enzymology
- Protein chemistry
- Electron microscopy
- Meat chemistry
- Computer programming, developed a personal, simple LIMs system
- Animal handling / sample processing / literature reviews

1990 NFAQ level 8: BSc. (Hons) First Class, Biochemistry
University College Cork, National University of Ireland, Cork (Éire/Ireland)

EQF level 6

- enzymology
- immunology
- microbiology
- virology
- pharmacology
- physiology
- biochemistry & metabolism
- statistics
- chemistry
- molecular biology
- electron microscopy
- histology

PERSONAL SKILLS

Mother tongue(s) English

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
Irish		A1	A1		--
French	--	A1	A1	A1	--

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user
Common European Framework of Reference for Languages

Communication skills

- good communication skills gained through my experience as a scientist presenting data and results of substance evaluations/risk assessments/fundamental research
- good listening skills gained through my experience as a regulator in the pesticide and biocides area when dealing with agrochemical companies and European colleagues during peer review processes

Organisational / managerial skills

- Leadership (formerly responsible for the IT Infrastructure Group, lead toxicologist for several substance evaluations, primary RAC rapporteur for 4 x CLH dossiers).
- Good organisational skills gained as RAC rapporteur complying with ECHA and EU legal deadlines. Also meeting EFSA timelines for substance evaluation monographs and technical meetings and comments in response to the peer review process. Webmaster of the Irish Society of Toxicology, responsible for maintenance and news announcements.
- Good presentational skills gained as lead toxicologist for substance evaluation and lead rapporteur for CLH dossiers at RAC meetings.
- Good team building from being the lead toxicologist on several substances, advisor to former Irish RAC member at ECHA, IT coordinator for Pesticides Unit.
- Good managerial and mentoring skills from running the GC laboratory while at Teagasc and supervisor to BSc, MSc, and PhD students.

Job-related skills

- Appreciation of quality control processes (currently responsible for REACH IT/BIOCIDES IT annual audit for ECHA)
- Good mentoring skills (responsible for induction to software - SPSS, Sharepoint, IUCLID)

- Computer skills
- Good command of anything to do with computers (repair, build, office, web design, data analysis, photoediting, programming, word processing etc).
- Other skills
- Photography, provide team and match photos to Castleknock Celtic, id staff photos for the Pesticides division, produced a photo catalogue of all manufacturing, production and research activities for the Ashtown Food Centre.
 - Calligraphy – gothic and celtic scripts.
 - Graphic design, brochures, leaflets, flyers, web notices
- Driving licence
- B

ADDITIONAL INFORMATION

- Publications
- Research publication record: See annex to this document
- Presentations
- Several, summaries of evaluations, opinions, relevant for technical audiences, generally confidential.
- Projects
- Team leader of the IT Infrastructure Group which was part of a Strategic Management Project.
- Conferences
- IST 2014: THE ROLE OF TOXICOLOGY IN 21ST CENTURY SOCIETY
 - IST 2012: The Cocktail Effect: The Toxicology of Chemical Mixtures
 - IST 2011: Towards 21st Century Toxicology.
 - Systems Toxicology, Switzerland, 2016.
- Seminars
- IST 2012: Human Biomonitoring
 - IST 2013: Heavy Metals Geochemical Risk and Toxicology.
- Honours and awards
- College Scholar 1989, 1990, UCC.
- Memberships
- Irish Society of Toxicology, webmaster, IST committee member.
- References
- Referee details on request.
- Articles
- URL: <http://www.toxicologyireland.com/>
- IST Newsletter no.1: Computational Approaches Applied to the Field of Toxicology, p10.
 - IST Newsletter no.2: Effects of Heavy Metals on Reproductive, Developmental & Neurobehavioural Processes, p12.
 - IST Newsletter no.2: Book Review. The Immortal Life of Henrietta Lacks, p16

ANNEXES

- Publications
- (1) MURRAY, B. E., REVILLE W. J., AND ZEECE M. G. (1991) Increased Calpain activity in skeletal muscle of rats maintained on caloric restricted and fasting diet regimes. *Biochem. Soc. Trans.* 20, 69S.
 - (2) MURRAY, B. E. & OHLENDIECK, K. (1997) Cross-linking analysis of the ryanodine receptor and $\alpha 1$ -dyhydropyrodine receptor in rabbit skeletal muscle triads. *Biochem. J.* 324, 689-696
 - (3) MURRAY, B. E., FROEMMING, G. R., MAGUIRE, P. B. & OHLENDIECK, K. (1998) Excitation-contraction-relaxation cycle: role of Ca^{2+} -regulatory membrane proteins in normal, stimulated and pathological skeletal muscle (Review). *Inter. J. Molecul. Med.* 1, 677-687.
 - (4) MURRAY, B. E. & OHLENDIECK, K. (1998) Complex Formation between Calsequestrin and the Ryanodine Receptor in Fast- and Slow-Twitch Rabbit Skeletal Muscle. *FEBS Letts.* 429, 317-322 .
 - (5) FROEMMING, G. R., MURRAY, B. E. & OHLENDIECK, K. (1999) Self-aggregation of triadin in the sarcoplasmic reticulum of rabbit skeletal muscle. *Biochim. Biophys. Acta* 1418 (1):197-205
 - (6) OHLENDIECK, K., FROEMMING, G. R., MURRAY, B. E., MAGUIRE, P. B., LEISNER, E., TRAUB, I. & PETTE, D. (1999) Effects of chronic low-frequency stimulation on Ca^{2+} regulatory membrane proteins in rabbit fast muscle. *Pflugers Arch* 438 (5): 700-708
 - (7) FROEMMING, G. R., MURRAY, B. E., HARMON, S., PETTE, D. & OHLENDIECK, K. (2000) Comparative analysis of the isoform expression pattern of Ca^{2+} -regulatory membrane proteins in fast-twitch, slow-twitch, cardiac, neonatal and chronic low-frequency stimulated muscle fibres. *Biochim. Biophys. Acta* 1466 (1-2):151-168
 - (8) MURRAY, B. E. & OHLENDIECK, K. (2000) Chemical cross-linking analysis of Ca^{2+} -ATPase from rabbit skeletal muscle. *Biochem. Edu.* 28, 41-46
 - (9) ALDAI, N. & MURRAY, B. E., TROY, D. J., NAJERA, A. I., OSORO, K. (2005) Derivatization of fatty acids and its application for conjugated linoleic acid studies in ruminant meat lipids. *J. Sci. Food Agric.* 85 (7):1073-1083.
 - (10) ALDAI N, MURRAY BE, OLIVAN M, MARTINEZA, TROY DJ, OSORO K, NAJERA AI. (2006). The influence of breed and mh-genotype on carcass conformation, meat physico-chemical characteristics, and the fatty acid profile of muscle from yearling bulls. *Meat Sci.* 72(3):486-495
 - (11) SARRIES M.V., MURRAY B.E., TROY D. & BERIAIN M. (2006). Intramuscular and subcutaneous lipid fatty acid profile composition in male and female foals. *Meat Science*, 72 (3):475-485
 - (12) BRUNTON, N. P., GORMLEY, T. R. & MURRAY, B. (2007). Use of the alditol acetate derivatisation for the analysis of reducing sugars in potato tubers. *Food Chemistry* 104: 398-402