

The interest on tritium risk assessment was growing in the last years.

The Canadian Nuclear Safety Commission started a “Tritium study” project in 2007 and published recently the results:

http://publications.gc.ca/collections/collection_2011/ccsn-cnsc/CC172-56-2011-eng.pdf

The French Nuclear Authority have also launched a tritium project and published the “Livre Blanc” for tritium

<http://livre-blanc-tritium.asn.fr/plus/telechargements.html>

The International Atomic Energy Agency (IAEA) included tritium in the Environmental Modelling for RADIATION Safety project (EMRAS I and II 2003-2011)

<http://www-ns.iaea.org/projects/emras/emras-tritium-wg.asp?s=8>

<http://www-ns.iaea.org/projects/emras/emras2/working-groups/working-group-seven.asp?s=8>

Romania use Nuclear Energy with Pressurized Heavy Water Reactors of Canadian origin (CANDU) and tritium is the main concern.

The “Horia Hulubei National Institute for Physics and Nuclear Engineering” (IFIN-HH) started a dedicated research program on tritium in early 90’s and gradually increases his contribution on national and international scale until recent acceptance as a main contributor.

At this moment the international tritium group under IAEA is lead by an IFIN-HH researcher and we will guest the interim meeting

<http://emras2011.nipne.ro>

The list of IFIN-HH contribution on tritium study follows and is mostly public. It includes paper in peer review journals, chapters in books and technical documents, invited and oral lectures in international conference, seminars abroad and our IAEA EMRAS contribution as well as work under request of our nuclear authority or nuclear energy units.

IFIN-HH TRITIUM List

In print

P. Davis, D. Galeriu TRITIUM IN THE ENVIRONMENT , in

Encyclopedia of Sustainability Science and Technology, Editor-in-chief: Meyers, Robert A.

Environmental Radioactivity and Ecotoxicology of Radioactive Substances, Editor Glen Bird; Springer, to be released in 2011-2012

2011

Chapter in books

A. Melintescu, D. Galeriu, H. Takeda, “Reassessment of Tritium Dose Coefficients” (pp. 615-621) in SURVIVAL AND SUSTAINABILITY – Environmental Concerns in the 21st Century, Part V – Environment and Health, Edited by Hüseyin Gökçekus, Umut Türker and James W. LaMoreaux, 1st Edition, 2011, **Springer-Verlag**, Berlin-Heidelberg, Germany, ISBN 978-3-540-95990-8, 1514 pages

Papers

A. Melintescu, D. Galeriu, “[Dynamic model for tritium transfer in an aquatic food chain](#)”, *Radiation and Environmental Biophysics*, (2011) 50:459–473

T.L. Yankovich, S.B. Kim, F. Baumgärtner, D. Galeriu, A. Melintescu, K. Miyamoto, M. Saito, F. Siclet and P. Davis, “[Measured and Modelled Tritium Concentrations in Freshwater Barnes Mussels \(*Elliptio complanata*\) Exposed to an Abrupt Increase in Ambient Tritium Levels](#)”, *Journal of Environmental Radioactivity*, 102, 26-34, 2011

D. Atanassov, D. Galeriu, “[Rain scavenging of tritiated water vapour: a numerical Eulerian stationary model](#)”, *Journal of Environmental Radioactivity*, 102, 43 – 52, 2011

Invited, oral lectures

A. Melintescu, D. Galeriu, S.B. Kim, “[Tritium dynamics in large fish – a model test](#)”, accepted to *Radioprotection* and presented (oral) at **International Conference** on Radioecology & Radioactivity – Environment and Nuclear Renaissance (ICRER2011), 19 – 24 June 2011, Hamilton, Ontario, Canada

D. Galeriu, A. Melintescu, “[A model approach for tritium dynamics in wild animals and birds](#)”, accepted to *Radioprotection* and presented (oral) at **International Conference** on

Radioecology & Radioactivity – Environment and Nuclear Renaissance (ICRER2011),
19 – 24 June 2011, Hamilton, Ontario, Canada

Seminars abroad

Anca Melintescu, Dan Galeriu, “[Tritium dynamics in Animals, Wild Biota, Birds and Aquatic Foodchain – An IFIN-HH Updated Approach](#)”, Seminar held at Chalk River Laboratories, Atomic Energy of Canada Limited, Ontario, Canada, June 27 2011

Dan Galeriu, Anca Melintescu, “[Tritium Human Dosimetry – A Metabolic Approach](#)”, Seminar held at Chalk River Laboratories, Atomic Energy of Canada Limited, Ontario, Canada, June 27 2011

IAEA- EMRAS

Anca Melintescu, “Exchange velocity approach and OBT formation in plants during the day time”, Third Technical Meeting on the Environmental Modelling for Radiation Safety (EMRAS II), Working Group 7 “Tritium Accidents”, Vienna, Austria, 24 -28 January 2011, available at <http://www-ns.iaea.org/downloads/rw/projects/emras/emras-two/third-technical-meeting/wgroup-seven/presentation-5th-wg7-obt-in-day-time.pdf>

Dan Galeriu, “Overview of night tritium transfer from air to plants and conversion to OBT”, Third Technical Meeting on the Environmental Modelling for Radiation Safety (EMRAS II), Working Group 7 “Tritium Accidents”, Vienna, Austria, 24 -28 January 2011, available at <http://www-ns.iaea.org/downloads/rw/projects/emras/emras-two/third-technical-meeting/wgroup-seven/presentation-5th-wg7-obt-in-night-time.pdf>

2010

Chapters in books

Dan Galeriu, Anca Melintescu, RADIONUCLIDES IN THE ENVIRONMENT, Chapter – TRITIUM (pp. 47-64), Edited by David A. Atwood, Copyright 2010, John Wiley & Sons Ltd., West Sussex, England, ISBN 978-0-470-71434-8, 560 pages.

P.A. Davis, E. Leclerc, D.C. Galeriu, A. Melintescu, S-R. Peterson, F. Siclet, P.M. Ravi , IAEA Technical Report Series 472 (TRS 472)- HANDBOOK OF PARAMETER VALUES FOR THE PREDICTION OF RADIONUCLIDE TRANSFER TO HUMANS IN TERRESTRIAL AND FRESHWATER ENVIRONMENTS, Chapter 10 - Specific activity models and parameter values for Tritium, ^{14}C and ^{36}Cl , International Atomic Energy Agency, pp. 131-144, ISBN 978-92-0-113009-9, ISSN 0074–1914, 2010.

Papers

A. Melintescu, D. Galeriu, “[Energy metabolism used as a tool to model the transfer of \$^{14}\text{C}\$ and \$^3\text{H}\$ in animals](#)”, *Radiation and Environmental Biophysics*, November 2010, 49 (4):657–672

D. Galeriu, A. Melintescu, “[Retention of tritium in reference persons: a metabolic model. Derivation of parameters and application of the model to the general public and to workers](#)”, *Journal of Radiological Protection*, (2010), Volume 30 (3), 445-468

H. Takeda, S. Fuma, K. Miyamoto, K. Yanagisawa, N. Ishii, I. Kawaguchi, A. Melintescu, D. Galeriu, “Comparative Biokinetics of Radiocarbon Ingested as Compounds or Foods in Rats”, *Health Physics*, 99(5):668-673, November 2010

D. Galeriu, P. Davis, W. Workman, “[Tritium profiles in snowpacks](#)”, *Journal of Environmental Radioactivity*, 101, 869 – 874, 2010

Invited, oral lectures

A. Melintescu, D. Galeriu, “[Exchange velocity approach and the role of photosynthesis for tritium transfer from atmosphere to plants](#)”, accepted to *Fusion Science and Technology* and presented (oral) at 9th **International Conference** on Tritium Science and Technology “TRITIUM 2010”, October, 24 - 29, 2010, Nara, Japan

D. Galeriu, A. Melintescu, “[Research and development of environmental tritium modelling](#)”, accepted to *Fusion Science and Technology* and presented (invited) at 9th **International Conference** on Tritium Science and Technology “TRITIUM 2010”, October, 24 - 29, 2010, Nara, Japan

L. Patryl, D. Galeriu, P. Armand, “Sensitivity analysis of rain characteristics on HTO concentration in drops”, accepted to *Fusion Science and Technology* and presented (oral) at 9th **International Conference** on Tritium Science and Technology “TRITIUM 2010”, October, 24 - 29, 2010, Nara, Japan

IAEA- EMRAS

Anca Melintescu, “Updated AQUATRIT as for users”, Fourth Meeting of the EMRAS II Working Group 7 “Tritium Accidents”, Aix-en-Provence, France, 6 – 9 September 2010, available at <http://www-ns.iaea.org/downloads/rw/projects/emras/emras-two/first-technical-meeting/fourth-working-group-meeting/working-group-presentations/workgroup7-presentations/presentation-4th-wg7-updated-aquatrit.pdf>

Anca Melintescu, “Revision of experimental tritium data for farm animals”, Fourth Meeting of the EMRAS II Working Group 7 “Tritium Accidents”, Aix-en-Provence, France, 6–9 September 2010, available at <http://www-ns.iaea.org/downloads/rw/projects/emras/emras-two/first-technical-meeting/fourth-working-group-meeting/working-group-presentations/workgroup7-presentations/presentation-4th-wg7-farm-animals.pdf>

L. Patryl, D. Galeriu, “Washout rate”, Fourth Meeting of the EMRAS II Working Group 7 “Tritium Accidents”, Aix-en-Provence, France, 6–9 September 2010, available at <http://www-ns.iaea.org/downloads/rw/projects/emras/emras-two/first-technical-meeting/fourth-working-group-meeting/working-group-presentations/workgroup7-presentations/presentation-4th-wg7-wet-deposition.pdf>

D. Galeriu, A. Melintescu, “Status of tritium modelling in IFIN-HH”, Fourth Meeting of the EMRAS II Working Group 7 “Tritium Accidents”, Aix-en-Provence, France, 6–9

September 2010, available at <http://www-ns.iaea.org/downloads/rw/projects/emras/emras-two/first-technical-meeting/fourth-working-group-meeting/working-group-presentations/workgroup7-presentations/presentation-4th-wg7-status-ifin.pdf>

D. Galeriu, “Fish Bioenergetics”, Fourth Meeting of the EMRAS II Working Group 7 “Tritium Accidents”, Aix-en-Provence, France, 6–9 September 2010, available at <http://www-ns.iaea.org/downloads/rw/projects/emras/emras-two/first-technical-meeting/fourth-working-group-meeting/working-group-presentations/workgroup7-presentations/presentation-4th-wg7-fish-bioenergetics.pdf>

Sang Bog Kim, Dan Galeriu, Anca Melintescu, “OBT formation at night time, data and modelling trials”, Fourth Meeting of the EMRAS II Working Group 7 “Tritium Accidents”, Aix-en-Provence, France, 6–9 September 2010, available at <http://www-ns.iaea.org/downloads/rw/projects/emras/emras-two/first-technical-meeting/fourth-working-group-meeting/working-group-presentations/workgroup7-presentations/presentation-4th-wg7-day-and-night-time.pdf>

Dan Galeriu, Anca Melintescu, “Modelling optimisation of HTO transfer from soil to plants”, Fourth Meeting of the EMRAS II Working Group 7 “Tritium Accidents”, Aix-en-Provence, France, 6–9 September 2010, available at <http://www-ns.iaea.org/downloads/rw/projects/emras/emras-two/first-technical-meeting/fourth-working-group-meeting/working-group-presentations/workgroup7-presentations/presentation-4th-wg7-modelling-optimisation.pdf>

Anca Melintescu, “User approach of expanded MAGENTC for animals; parsimonious modelling trials and discussions”, Third Meeting of EMRAS II Working Group 7 “Tritium Accidents”, Vienna, Austria, 25-29 January 2010, available at <http://www-ns.iaea.org/downloads/rw/projects/emras/emras-two/first-technical-meeting/second-working-group-meeting/working-group-presentations/workgroup7-presentations/presentation-wg7-magentc-3rd-mtg.pdf>

D. Galeriu, A. Melintescu, “IFIN-HH planned work on plant – soil modelling”, Third Meeting of EMRAS II Working Group 7 “Tritium Accidents”, Vienna, Austria, 25-29 January 2010, available at <http://www-ns.iaea.org/downloads/rw/projects/emras/emras-two/first-technical-meeting/second-working-group-meeting/working-group-presentations/workgroup7-presentations/presentation-wg7-plant-soil-3rd-mtg.pdf>

D. Galeriu, A. Melintescu, D. Atanassov, L. Patryl, P. Guetat, “Review on HTO washout”, Third Meeting of EMRAS II Working Group 7 “Tritium Accidents”, Vienna, Austria, 25-29 January 2010, available at <http://www-ns.iaea.org/downloads/rw/projects/emras/emras-two/first-technical-meeting/second-working-group-meeting/working-group-presentations/workgroup7-presentations/presentation-wg7-tritium-washout-3rd-mtg.pdf>

D. Galeriu, P. Davis, W. Workman, “Retention and dispersion of HTO in snow”, Vienna, Austria, 25-29 January 2010, available at <http://www-ns.iaea.org/downloads/rw/projects/emras/emras-two/first-technical-meeting/second-working-group-meeting/working-group-presentations/workgroup7-presentations/presentation-wg7-snow-3rd-mtg.pdf>

D. Galeriu, A. Melintescu, “Update of AQUATRIT, user approach, what to do with irrigation”, Vienna, Austria, 25-29 January 2010, available at <http://www-ns.iaea.org/downloads/rw/projects/emras/emras-two/first-technical-meeting/second-working-group-meeting/working-group-presentations/workgroup7-presentations/presentation-wg7-aquatrit-3rd-mtg.pdf>

D. Galeriu, A. Melintescu, “Approaches in modelling tritium uptake by crops”, Vienna, Austria, 25-29 January 2010, available at <http://www-ns.iaea.org/downloads/rw/projects/emras/emras-two/first-technical-meeting/second-working-group-meeting/working-group-presentations/workgroup7-presentations/presentation-wg7-uptake-by-crops-3rd-mtg.pdf>

D. Galeriu, A. Melintescu, “Crop growth modelling and OBT”, Vienna, Austria, 25-29 January 2010, available at <http://www-ns.iaea.org/downloads/rw/projects/emras/emras-two/first-technical-meeting/second-working-group-meeting/working-group-presentations/workgroup7-presentations/presentation-wg7-crop-growth-3rd-mtg.pdf>

2009

Chapters in books

P.A. Davis, E. Leclerc, D.C. Galeriu, A. Melintescu, V. Kashparov, S-R. Peterson, P.M. Ravi, F. Siclet, C. Tamponnet, IAEA-TECDOC-1616, QUANTIFICATION OF RADIONUCLIDE TRANSFER IN TERRESTRIAL AND FRESHWATER ENVIRONMENTS FOR RADIOLOGICAL ASSESSMENTS, Chapter Miscellaneous topics - Specific activity models and parameter values for Tritium, ^{14}C and ^{36}Cl , International Atomic Energy Agency, pp. 549-576, ISBN 978-92-0-104509-6, ISSN 1011-4289, 2009.

Papers

D. Galeriu, A. Melintescu, N. A. Beresford, H. Takeda, N.M.J. Crout, “[The Dynamic transfer of \$^3\text{H}\$ and \$^{14}\text{C}\$ in mammals – a proposed generic model](#)”, *Radiation and Environmental Biophysics*, (2009) 48:29–45

H. Takeda, S. Fuma, K. Miyamoto, K. Yanagisawa, N. Ishii, I. Kawaguchi, K. Doi, A. Melintescu, D. Galeriu, “Biokinetics of Radiocarbon Ingested as a Food in Rats”, *Health Physics*, (2009), Vol. 96 (5), 587-593

A. Melintescu, D. Galeriu, “[Modelling the transfer of \$^3\text{H}\$ and \$^{14}\text{C}\$ into the environment - lessons learnt from IAEA’s EMRAS project](#)”, *Radioprotection*, Vol. 44, No. 5, (2009), 121 – 127.

D. Galeriu, A. Melintescu, D. Slavnicu, D. Gheorghiu, V. Simionov, “[Accidental release of tritiated water - toward a better radiological assessment](#)”, *Radioprotection*, Vol. 44, No. 5, (2009), 177 – 183.

Invited, oral lectures

D. Galeriu, A. Melintescu, N.A. Beresford, “Energy Metabolism – as a General Principle – for Modeling the Transfer of Carbon and Tritium across Animals”, Invited „Gökçekuş, H., 2009 (Editor) Proceedings of the International Conference on Environment: Survival and Sustainability. Nicosia (Lefkoşa), Turkish Republic of Northern Cyprus: Educational Foundation of Near East University. 10 volumes, LXXVI, 5498, XIV pages. International Conference on Environment: Survival and Sustainability, 19-24 February 2007 Nicosia, Northern Cyprus, ISBN: Volume 5: 978-975-8359-57-8, P. 1953 – 1964.

Anca Melintescu, “[Modelling the Tritium Impact on the Environment - Lecture one: Introduction; Tritium dry and wet deposition; Cuasi-equilibrium models for routine tritium emissions – TRS 346 updates](#)”, Seminar held at Universidad Politecnica de Madrid, Department of Nuclear Engineering, Monday, May 25 2009, 18.30 - 20, Madrid, Spain (see <http://www.din.upm.es/drupal/files/Conf-Tritium-AMelintescu.pdf>)

Anca Melintescu, “[Modelling the Tritium Impact on the Environment - Lecture two: Modelling of tritium transfer in vegetation; Modelling of tritium transfer in animals](#)”, Seminar held at Universidad Politecnica de Madrid, Department of Nuclear Engineering, Tuesday, May 26 2009, 12.30 – 14.30, Madrid, Spain (see <http://www.din.upm.es/drupal/files/Conf-Tritium-AMelintescu.pdf>)

Anca Melintescu, “[Modelling the Tritium Impact on the Environment - Lecture three: Dynamic approach of tritium transfer in aquatic food chain; Human tritium dosimetry – actual problems; Conceptual model for accidental impact asesment of tritium](#)”, Seminar held at Universidad Politecnica de Madrid, Department of Nuclear Engineering, Friday, May 29 2009, 12.30 – 14.30, Madrid, Spain (see <http://www.din.upm.es/drupal/files/Conf-Tritium-AMelintescu.pdf>)

IAEA- EMRAS

Anca Melintescu, “Modelling the dynamic tritium transfer to farm animals. Extension to wild mammals and birds”, Second Meeting of EMRAS II Working Group 7 “Tritium Accidents”, Chatou, France, 28-29 September 2009 available at <http://www-ns.iaea.org/downloads/rw/projects/emras/emras-two/first-technical-meeting/second-working-group-meeting/presentation-wg7-mammals-romania-2nd-mtg.ppt#257>

Anca Melintescu, “Update of AQUATRIT model for tritium dynamic transfer in aquatic foodchain”, Second Meeting of EMRAS II Working Group 7 “Tritium Accidents”, Chatou, France, 28-29 September 2009, available at <http://www-ns.iaea.org/downloads/rw/projects/emras/emras-two/first-technical-meeting/second-working-group-meeting/presentation-wg7-aquatrit-romania-2nd-mtg.ppt>

V. Berkovskyy, D. Galeriu, “IAEA’s Programme on Environmental Modelling for Radiation Safety (EMRAS II), WG7 “Tritium” Working Group”, Second Meeting of EMRAS II Working Group 7 “Tritium Accidents”, Chatou, France, 28-29 September 2009, available at <http://www-ns.iaea.org/downloads/rw/projects/emras/emras-two/first->

[technical-meeting/second-working-group-meeting/presentation-wg7-introduction-2nd-mtg.ppt](#)

2008

Papers

J. Koarashi, P. A. Davis, D. Galeriu, A. Melintescu, M. Saito, F. Siclet, S. Uchida, “Carbon-14 transfer into rice plants from a continuous atmospheric source: Observations and model predictions”, *Journal of Environmental Radioactivity*, 99 (2008), 1671-1679

A. Melintescu, D. Galeriu, “Tritium transfer in pigs – a model test”, *Fusion Science and Technology*, Volume 54, Number 1, July 2008, Pages 269-272

D. Galeriu, P. Davis, W. Raskob, A. Melintescu, “Recent progresses in tritium radioecology and dosimetry”, *Fusion Science and Technology*, Volume 54, Number 1, July 2008, Pages 237-242

Invited, oral lectures

A. Melintescu, D. Galeriu, “Current trend of researches on ^{14}C transfer modeling in human and livestock”, oral, International Symposium on Application of a Closed Experimental System to Modeling of ^{14}C Transfer in the Environment, 15-16 November 2007, Rokkasho, Aomori Prefecture, Japan, ISBN 978-4-9980604-0-6 C3040 ed. Y. Tako, T. Tani, R. Arai, S. Nozoe and Y. Nakamura pp 39-48, 2008

D. Galeriu, A. Melintescu, “Overview of dose estimation of ^{14}C in the environment”, Invited lecture, International Symposium on Application of a Closed Experimental System to Modeling of ^{14}C Transfer in the Environment, 15-16 November 2007, Rokkasho, Aomori Prefecture, Japan, ISBN 978-4-9980604-0-6 C3040 ed. Y Tako, T Tani, R Arai, S Nozoe and Y Nakamura pp 3-11, 2008

IAEA- EMRAS

A. Melintescu, (leader for The Potato Scenario), “The Potato Scenario – Final Report”, IAEA EMRAS (Environmental Modelling for RAdiation Safety), Vienna, Austria, 2008, <http://www-ns.iaea.org/downloads/rw/projects/emras/tritium/potato-report-final.pdf>

A. Melintescu, Chapter 1 – Potato Scenario, page 18; Chapter 11 – The Potato Scenario, pages 226-242; Appendix II.10 – Potato Scenario model descriptions, pages 537-552; in the Report of the Tritium and Carbon-14 Working Group of EMRAS Theme 1, “Modelling the Environmental Transfer of Tritium and Carbon-14 to Biota and Man”, 594 pages, IAEA EMRAS (Environmental Modelling for RAdiation Safety), Vienna, Austria, 2008, <http://www-ns.iaea.org/downloads/rw/projects/emras/draft-final-reports/emras-tritium-wg.pdf>

D. Galeriu (leader for The Pig Scenario), “The Pig Scenario – Final report”, IAEA EMRAS (Environmental Modelling for RAdiation Safety), Vienna, Austria, 2008, <http://www-ns.iaea.org/downloads/rw/projects/emras/tritium/pig-report-final.pdf>

D. Galeriu, Chapter 1 – Pig Scenario, page 12; Chapter 6 – The Pig Scenario, pages 108-119; Appendix II.5 – Pig Scenario model descriptions, pages 465-480; in the Report of the Tritium and Carbon-14 Working Group of EMRAS Theme 1, “Modelling the Environmental Transfer of Tritium and Carbon-14 to Biota and Man”, 594 pages, IAEA EMRAS (Environmental Modelling for RAdiation Safety), Vienna, Austria, 2008, <http://www-ns.iaea.org/downloads/rw/projects/emras/draft-final-reports/emras-tritium-wg.pdf>

2007

Papers

A. Melintescu, D. Galeriu, H. Takeda, “Reassessment of tritium dose coefficients for general public”, *Radiation Protection Dosimetry*, 127 (1-4):153-157, 2007

D. Galeriu, A. Melintescu, N.A. Beresford, N.M.J. Crout, R. Peterson, H. Takeda, “Modelling H-3 and C-14 transfer to farm animals and their products under steady state conditions”, *Journal of Environmental Radioactivity*, 98 (2007), 205 – 217

D. Slavnicu, D. Galeriu, D. Gheorghiu, A. Melintescu, E. Slavnicu, “RODOS Expert Module for the Assessment of Tritium Impact in Aquatic Environment”, *Romanian Reports in Physics*, Vol. 59, No. 3, P. 861-870, 2007

Invited, oral lectures

D. Galeriu, A. Melintescu, H. Takeda, N. A. Beresford, ‘An interdisciplinary approach for the transfer of tritium in animals and human dosimetry’, Invited lecture, Proceedings of the International Symposium on Environmental Modelling and Radioecology, October 18-20, 2006, P. 40-48, Institute for Environmental Sciences, Rokkasho, Aomori, Japan, Ed. Shun’ichi Hisamatsu, Shinji Ueda, Hideki Kakiuchi, Naofumi Akata, ISBN 978-4-9980604-9-9 C3040, 2007

D. Galeriu, A. Melintescu, H. Takeda, “Risk from tritium exposure”, IRPA Regional Congress for Central and Eastern Europe, Brasov, Romania, 24 – 28 September 2007, available on CD, Regional and Global Aspects of Radiation Protection, Institutul de Sanatate Publica – Bucuresti, Romania, 2007, ISBN-10 973-87778-3-6

2006

International report

Yankovich T.L., S.B. Kim, F. Baumgärtner, D. Galeriu, A. Melintescu, K. Miyamoto, M. Saito, F. Siclet and P. Davis. 2006. Intermodal comparison of tritium Concentrations in freshwater Barnes mussels (*Elliptio complanata*) following an abrupt increase in ambient tritium exposure conditions. AECL Technical Report No. 153-121240-440-007. December 2006.

2005

Papers

D. Galeriu, R. Heling and A. Melintescu, “The Dynamic of Tritium- Including OBT- In the Aquatic Food Chain”, *Fusion Science and Technology*, Vol. 48, Number 1 – July/August 2005, P. 779-782

D. Galeriu, H Takeda, A. Melintescu, A Trivedi, “Energy Metabolism and Human Dosimetry of Tritium”, *Fusion Science and Technology*, Vol. 48, Number 1 – July/August 2005, P.795-798

Y. Belot, B.M. Watkins, O. Edlund, D. Galeriu, G. Guinois, A. Golubev, C. Meurville, W. Raskob, M. Taschner, H. Yamazawa, “Upward movement of tritium from contaminated groundwaters: a numerical analysis”, *Journal of Environmental Radioactivity*, 84, 259-270, 2005

D. Galeriu, A. Melintescu, N.A. Beresford, N.M.J. Crout, H. Takeda, “¹⁴C and tritium dynamics in wild mammals: a metabolic model”, *Radioprotection*, Suppl. 1, Vol. 40 (2005), S351-S357, May 2005

A. Melintescu, D. Galeriu, “A versatile model for tritium transfer from atmosphere to plant and soil”, *Radioprotection*, Suppl. 1, Vol. 40 (2005), S437-S442, May 2005

2004

Papers

Gh. Mateescu, D. Galeriu, D. Slavnicu, D. Vamanu, T. Craciunescu, Catrinel Turcanu, Anca Melintescu, Dorina Gheorghiu, Adriana Gheorghiu, “Customization of RODOS 5.0 System for the Assessment of a CANDU-NPP Cernavoda Nuclear Accident Scenario”, *Romanian Journal of Physics*, Vol. 49, NOS. 7-8, P. 601-610, Bucharest, 2004

Invited lecture

D. Galeriu, A. Melintescu, N. Beresford, N. Crout, H. Takeda, “A generic, simple, metabolic model for the transfer of tritium and carbon-14 in adult mammals”, University of California (Davis), 15 November 2004

2003

Papers

D. Galeriu, N.A. Beresford, H. Takeda, A. Melintescu, N.M.J. Crout, “Towards a model for the dynamic transfer of tritium and carbon in mammals”, *Radiation Protection Dosimetry*, 105 (1-4): 387-390 2003

D. Galeriu, N.A. Beresford, A. Melintescu, R. Avila, N.M.J. Crout, “Predicting tritium and radiocarbon in wild animals”, International Conference on the Protection of the Environment on the Effects of Ionising Radiation, Stockholm, Sweden, 6 –10 Oct. 2003, P. 186-189, IAEA-CN-109/85

2002

Papers

D. Galeriu, A. Melintescu, N.A. Beresford, N.M. J. Crout, “The Derivation of Tritium Transfer Factors for Farm Animals on the Basis of a Metabolic Understanding”, *Radioprotection*, 37 (C1), 361-366, February 2002

A. Melintescu, D. Galeriu, E. Marica, “Using WOFOST Crop Model for Data Base Derivation of Tritium and Terrestrial Food Chain Modules in RODOS”, *Radioprotection*, 37 (C1): 1242-1246, February 2002

N. Paunescu, D Galeriu and N Mocanu (2002) Environmental tritium around a new CANDU nuclear power plant, *Radioprotection-Colloques*, vol 37,C1, pp 1253

2001

Papers

D. Galeriu, N. M. J. Crout, A. Melintescu, N. A. Beresford, S. R. Peterson, M. van Hess, “A Metabolic Derivation of Tritium Transfer Factors in Animal Products”, *Radiation and Environmental Biophysics*, 40 (4): 325-334 DEC 2001

International report

Dan Galeriu, Catrinel Turcanu, Anca Melintescu, “User guide for the tritium food chain and dose module FDMH of RODOS – PV4.OF_02” , RODOS Version 4 Handbook, Volume 1, 43 Pages, 2001, available at http://www.rodos.fzk.de/rodoshomepage/rodoshomepage/documents/public/handbook/volume1/fdmh_ugui_40e.pdf

2000

A. Trivedi, D. Galeriu, E.S. Lamothe, “Dose contribution from metabolized organically bound tritium after chronic tritiated water intakes in humans”, *Health Physics*, 78, 2 – 7, 2000

D. Galeriu, A. Melintescu, S. R. Peterson, “Derivation of Data Base for Tritium Transfer Parameters in Animal Products”, Workshop on Environmental Behavior and

Biological Effects of Tritium, 8-9 May 2000, P. 149, Kurri, Kumatori, Osaka, Japan, Ed. M. Saito, S. Kimura, and T. Takahashi ISSN 0287-0852 [KURRI-KR-61]

D. Galeriu, A. Melintescu, C. Turcanu, W. Raskob, “FDMH – The Tritium Module in RODOS”, Workshop on Environmental Behavior and Biological Effects of Tritium, 8- 9 May 2000, P.86, Kurri, Kumatori, Osaka, Japan, Ed. M. Saito, S. Kimura, and T. Takahashi ISSN 0287-0852 [KURRI-KR-61]

D. Galeriu, A. Melintescu, “Technical Characteristics of the CANDU Reactor”, International scientific Co-operation – Radiological Impact Assessment in the South-Mediterranean Area, Vol. II, P. 169-237, Thessaloniki, 2000, Greece, Ed. by: F. K. Vosniakos, A. A. Cigna, P. Foster, G. Vasilikiotis, ISBN 960-287-007-9 (set), 960-287-009-5 (vol II)

D. Galeriu, Anca Mirela Melintescu, Gh. Mateescu, “Reference CANDU-600 Routine Source Term”, International scientific Co-operation – Radiological Impact Assessment in the South-Mediterranean Area, Vol. II, P. 451-461, Thessaloniki, 2000, Greece, Ed. by: F. K. Vosniakos, A. A. Cigna, P. Foster, G. Vasilikiotis, ISBN 960-287-007-9 (set), 960-287-009-5 (vol II)

International report

D. Galeriu, C. Turcanu, A. Melintescu, “Chapter of the user guide of RODOS PV4.0 for the tritium food chain and dose module FDMH”, WG1_RP99_01_6, 43 PAGES, 2000, available on CD2 at request

Dan Galeriu, Wolfgang Raskob, Anca Melintescu, Catrinel Turcanu, “Documentation of tritium food chain and dose module FDMH in RODOS PV4.”, RODOS(WG3)-TN(99)-56, 70 PAGES, 2000, available on CD2 at request

Dan Galeriu, Wolfgang Raskob, Anca Melintescu, Catrinel Turcanu: “Model Description of the Tritium Food Chain and Dose Module FDMH in RODOS PV 4.”, RODOS (WG3)-TN(99)-54, 25 pages, 2000, available at http://www.rodos.fzk.de/RodosHomePage/RodosHomePage/Documents/Public/CD1/Wg3_CD1_General/WG3_TN99_54.pdf and on CD1, also

1999

N. Paunescu, M. Cotarlea, D. Galeriu, R. Margineanu, N. Mocanu, “Evaluation of environmental tritium level in preoperational period of Cernavoda CANDU Nuclear Power Plant”, *Journal of Radioanalytical and Nuclear Chemistry*, 239, 465 – 470, 1999

2. I.I. Kryshev, T.G. Sazykina, F.O. Hoffman, K.M. Thiessen, B.G. Blaylock, Y. Feng, D. Galeriu, R. Heling, A.I. Kryshev, A.L. Kononovich, B. Watkins, “Assessment of the consequences of the radioactive contamination of aquatic media and biota for the Chernobyl NPP cooling pond: model testing using Chernobyl data”, *Journal of Environmental Radioactivity*, 42, 143-156, 1999

3. E.K. Garger, F.O. Hoffman, K.M. Thiessen, D. Galeriu, A.I. Kryshev, T. Lev, C.W. Miller, S.K. Nair, N. Talerko, B. Watkins, “Test of existing mathematical models for

atmospheric resuspension of radionuclides”, *Journal of Environmental Radioactivity*, 42, 157-175, 1999

4. P.J. Barry, B.M. Watkins, Y. Belot, P.A. Davis, O. Edlund, D. Galeriu, W. Raskob, S. Russell, O. Togawa, “Intercomparison of model predictions of tritium concentrations in soil and foods following acute airborne HTO exposure”, *Journal of Environmental Radioactivity*, 42, 191-207, 1999

D. Galeriu, W. Raskob, A. Melintescu, C. Turcanu_“FDMH - the Tritium Module in RODOS, Proceed. RODOS Workshop ‘ The European Decision Support System for Off Site Management of Nuclear Emergency’, 20-24 Sept. 1999, Rhodes, Greece

1998

Cotarlea M.I., Paunescu N., Galeriu D., Mocanu N., Margineanu R., Marin G DETERMINATION OF TRITIUM IN WINE AND WINE YEAST SAMPLES Rom. J. Phys, **43 (1998)**147

Slavnicu D, Galeriu D, Berinde Al, Slavnicu E. EFFECTIVE DOSE ESTIMATION OF TRITIUM IN A CANDU-6 SEVERE ACCIDENT USING RODOS SYSTEM Romanian Report in Physics 50 **(1998)** 23

1997

A. Trivedi, D. Galeriu, R.B. Richardson, “Dose contribution from metabolized organically bound tritium after acute tritiated water intakes in humans”, *Health Physics*, 73, 579-586, 1997

1. Paunescu N., Cotarlea M., Galeriu D., Margineanu R., Mocanu N EVOLUTION OF ENVIRONMENTAL TRITIUM LEVEL IN PRE-OPERATIONAL PERIOD OF CERNAVODA CANDU NUCLEAR POWER PLANT Asia - Pacific Symposium on Radiochemistry, Kumamoto Univ. Japan, 6-9 Oct. **1997**

1996

Trivedi, D. Galeriu, R.B. Richardson and E.S. Lamothe DOSE CONTRIBUTION FROM ORGANICALLY BOUND TRITIUM AFTER TRITIATED WATER INTAKES. Bull. Radiat. Prot. **19 (1996)** 1-3.

1995

D. Galeriu, P. Davis, S. Chouhan, W. Raskob, “Uncertainty and sensitivity analysis for the environmental tritium code UFOTRI”, *Fusion Technology*, 28, 853-858, 1995

Davis, P.A., Galeriu, D. EVOLUTION OF HTO CONCENTRATIONS IN SOIL, VEGETATION AND AIR DURING AN EXPERIMENTAL CHRONIC HT RELEASE *Fusion Technology* **28 (1995)**,833

Trivedi, R.B. Richardson, D. Galeriu, “Dynamics of tritiated-water and organically bound tritium after an acute tritiated-water intake in humans”, *Fusion Technology*, 28, 982-987, 1995

N Paunescu, M Cotarlea, L Purghel, D Galeriu, N Mocanu, R Margineanu METHOD FOR DETERMINATION OF LOW LEVEL OF HTO IN AIR *Romanian Journal of Physics.***40,(1995)363**

1. R.J.C. Cornett, W.J. Workman, *D. Galeriu*, R.M. Brown AND A. Trivedi TRITIUM CONTENT IN AN ADULT RESIDENT RESIDING NEAR CHALK RIVER LABORATORIES (IN DEEP RIVER), CANADA AND DOSIMETRIC CONSIDERATIONS. (Invited Paper) Presented at the International Conference on Internal Radiation Dosimetry: Occupational Workers and Public, Bombay, India, **1995** February 21-24.
2. Trivedi, *D. Galeriu* and H. Takeda INTERPRETATION OF TRITIUM RETENTION AND EXCRETION DATA FOR DOSE CALCULATION. Presented at 40th annual meeting of Health Physics Society, Boston, USA, **1995** July 23-27.

D.Galeriu, P.Davis UNCERTAINTY IN ENVIRONMENTAL TRITIUM MODELLING Joint European Community (DG 12) - BIOMOVS Tritium Workshop, Karlsruhe,Germany, 3- 6.May **1994**

D.Galeriu PREDICTION OF UFOTRI-AECL CODE FOR ACCIDENTAL TRITIUM RELEASE BIOMOVS Conference, Vienna, Austria, Sept.**1993**