

## CURRICULUM VITAE

**Sergey Y. Tolmachev, Ph.D.**

**Director & Research Professor**

U.S. Transuranium and Uranium Registries  
College of Pharmacy and Pharmaceutical Sciences  
Washington State University  
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## EDUCATION

04/1998 – 03/2001, D.Sc. (Ph.D. equivalent) in Chemistry and Physics of Condensed Matter  
(Environmental Radiochemistry)

Kyushu University, Division of Science (Fukuoka, Japan): *“The behavior of  $^{210}\text{Po}$  in coastal seawater and maritime aerosols at Kyushu Island, Japan”*

09/1987 – 03/1993, *Diploma* (M.S. equivalent) in Nuclear-Chemical Engineering (Radiochemistry)

Mendeleev University of Chemical Technology of Russia, Department of Radiation Chemistry and Radiochemistry (Moscow, Russia): *“Application of radiochemically and isotopically ultra-pure  $^{237}\text{Pu}$  and  $^{236}\text{Pu}$  for  $^{238}\text{Pu}$  and  $^{239+240}\text{Pu}$  determination in soils under global monitoring”*

## PROFESSIONAL EXPERIENCE

07/2019 – present, Director and Research Professor

U.S. Transuranium and Uranium Registries, College of Pharmacy and Pharmaceutical Sciences,  
Washington State University (Richland, USA)

10/2010 – 06/2019, Director and Associate Research Professor

U.S. Transuranium and Uranium Registries, College of Pharmacy, Washington State University  
(Richland, USA)

05/2016 – 03/2022, Technical Advisor

Kyushu Environmental Evaluation Association (Fukuoka, Japan)

04/2015 – 03/2017, Visiting Professor

Radioisotope Center, Kyushu University (Fukuoka, Japan)

06/2011 – 05/2017, Adjunct Professor

Department of Chemistry, Laval University (Quebec, Canada)

02/2007 – 09/2010, Associate Research Professor and Radiochemistry Laboratory Manager

U.S. Transuranium and Uranium Registries, College of Pharmacy, Washington State University  
(Richland, USA)

04/2006 – 12/2006, Staff Scientist

National Institute of Radiological Sciences, Research Center for Radiation Safety (Chiba, Japan)

10/2004 – 03/2006, Postdoctoral Research Associate

National Institute of Radiological Sciences, Office of Biospheric Assessment for Waste Disposal (Chiba, Japan)

04/2004 – 09/2004, Technical Research Staff

Radiation Application Development Association (Tokai-mura, Japan)

04/2001 – 03/2004, Postdoctoral Research Associate

Japan Atomic Energy Research Institute, Department of Health Physics (Tokai-mura, Japan)

09/1993 – 03/2000, Junior Staff Scientist

Joint Institute for Nuclear Research, Flërov Laboratory of Nuclear Reactions (Dubna, Russia)

03/1992 – 03/1993, Laboratory Technician

Joint Institute for Nuclear Research, Flërov Laboratory of Nuclear Reactions (Dubna, Russia)

## TEACHING PORTFOLIO

### Teaching Experience

- PHARMSCI 800 Doctoral Research, Dissertation, Examination, 4 courses (2015–2018)

### Graduate Committee

- *Chair*, Ph.D. Dissertation, Sara Dumit, College of Pharmacy, Washington State University, 2015–2018: *“Development of a New Compartmental Model for Plutonium Decorporation Therapy”*
- *Member*, M.S. Thesis, Christopher Nielsen, College of Arts and Sciences, Washington State University, 2011–2012: *“An Analysis of the Microdistribution and Long-Term Retention of  $^{239}\text{Pu}(\text{NO}_3)_4$  in the Respiratory Tracts of an Exposed Plutonium Worker and Experimental Beagles”*

### Research Mentor

- Martin Šefl, Postdoctoral Research Associate; U.S. Transuranium and Uranium Registries, College of Pharmacy and Pharmaceutical Sciences, Washington State University, 2019–2022: *“Uncertainties in Radiation Dose Assessment for Internally Deposited Radionuclides in Support of Radiation Epidemiology”*

## PROFESSIONAL AFFILIATIONS

- American Association for the Advancement of Science, 2020 – present
- Radiation Research Society, 2014 – present
- European Radiation Dosimetry Group (EURADOS) WG-7 on Internal Dosimetry, 2011 – present
- Columbia Chapter Health Physics Society, 2010 – present
- Health Physics Society, 2007 – present
- Japan Health Physics Society, 2001–2006
- Society of Nuclear and Radiochemical Sciences (Japan), 1999–2006

## PROFESSIONAL SERVICE

### National Council on Radiation Protection and Measurements

- *Council Member*, 2020–2026
- *Vice Chair*, Scientific Committee 6-12: Development of Models for Brain Dosimetry for Internally Deposited Radionuclides, 2018–2022
- *Chair*, Sub-committee on Radiochemistry and Nuclear Chemistry: Where are the Radiation Professionals (WARP)? 2017–2022

### U.S. Department of Energy: Russian Health Studies Program

- *Ex officio Member*, U.S. Scientific Review Group, 2020 – present

### Herbert M. Parker Foundation

- *Member*, Board of Trustees, 2016 – present

### Japanese Journal of Health Physics

- *Member*, Editorial Board, 2011–2021

### Washington State University

- *Member*, Graduate Committee, College of Pharmacy and Pharmaceutical Sciences, 2015–2018

### Ad hoc Reviewer

- Radiochimica Acta (2009), Journal of Radioanalytical Nuclear Chemistry (2013, 2021), Springer Plus (2016) PLOS One (2016), Radiation Protection Dosimetry (2011–2017), Journal of Environmental Radioactivity (2018, 2019), International Journal of Radiation Biology (2019), Radiation Physics and Chemistry (2020), Health Physics (2022).

## HONORS AND AWARDS

- International Workshop on Internal Dosimetry of Radionuclides, Young Scientist Award, 2002
- Ministry of Education Culture and Sport of Japan (*MONBUSHO*), Doctoral Fellowship, 1998–2001
- Ministry of Education Culture and Sport of Japan (*MONBUSHO*), Research Student Fellowship, 1997

## PEER-REVIEWED PUBLICATIONS

### Books and Book Chapters

1. Leggett RW, **Tolmachev SY**, Avtandilashvili M, Eckerman KF, Sgouros G, Woloschak GE. NCRP Commentary 31 – Development of kinetic and anatomical models for brain dosimetry for internally deposited radionuclides. ISBN: 9781944888282; Bethesda, MD: National Council on Radiation Protection and Measurements. 2022;

### Journals

65. McComish SL, Liu X, Martinez FT, Zhou JY, **Tolmachev SY**. Over- and under-classification of underlying cause of death on death certificates from a small all-autopsied population of former nuclear workers. American Journal of Public Health. *In preparation*; 2022.
64. Tabatadze G, Avtandilashvili M, **Tolmachev SY**. Comparison of two methods to estimate plutonium and <sup>241</sup>Am skeletal concentrations from limited sets of bones. Radiation Protection Dosimetry. *In preparation*; 2022.
63. Šefl M, Avtandilashvili M, Eckerman KF, **Tolmachev SY**. Caveats of plutonium internal dosimetry: from biokinetics to dose estimates. Radiation Protection Dosimetry; *In preparation* 2022.
62. **Tolmachev SY**, Avtandilashvili M. Long-term retention and distribution of highly-enriched uranium in occupationally exposed female. Radiation and Environmental Biophysics; *In preparation* 2022.
61. Avtandilashvili M, **Tolmachev SY**. Forty-eight-year follow-up of a female worker exposed to highly-enriched uranium via chronic and acute inhalation. Radiation and Environmental Biophysics; *In preparation* 2022.
60. Romanyukha A, Tolmachev SY. Electron paramagnetic resonance dose measurements in teeth of tissue donors to the United States Transuranium and Uranium Registries. Radiation Protection Dosimetry; *Submitted* 2022.
59. Šefl M, Avtandilashvili M, Zhou JY, **Tolmachev SY**. Latent bone modelling for estimation of plutonium concentration in skeleton of former nuclear workers. Radiation Protection Dosimetry; *Submitted* 2022.
58. Poudel D, Avtandilashvili M, Klumpp J, Bertelli L, **Tolmachev SY**. Modified human respiratory tract model to describe the retention of plutonium in scar tissues. Radiation Protection Dosimetry; *Accepted* 2022. doi: 10.1093/rpd/ncac185
57. **Tolmachev SY**, Auxier JD, Nilsson M, Powell BA, Rucker TL, Sudowe R. Radiochemistry and nuclear chemistry workforce. Journal of Applied Clinical Medical Physics; 2022. doi: 10.1002/acm2.13789
56. Arbova DL, **Tolmachev SY**, Brockman JD. ICP-MS analysis of actinides in brain tissue of an occupationally exposed individual. Journal of Radioanalytical and Nuclear Chemistry; 2022. doi: 10.1007/s10967-022-08460-5
55. Leggett RW, **Tolmachev SY**, Avtandilashvili M, Eckerman KF, Grogan HA, Sgouros G, Woloschak GE, Samuels C, Boice JD, Jr. Methods of improving brain dose estimates for internally deposited radionuclides. Journal of Radiological Protection 42(3): 3001; 2022. doi: 10.1088/1361-6498/ac7e02
54. Arbova DL, **Tolmachev SY**, Brockman JD. Quadrupole and multi-collector ICP-MS analysis of <sup>226</sup>Ra in brain from a radium dial painter. Journal of Analytical Atomic Spectrometry 37(6): 1369–1376; 2022.

53. Boice JD, Quinn B, Ansari A, Blake PK, Blattnig SR, Caffrey EA, Cohen SS, Golden AP, Held KD, Jokisch DW, Mumma M, Samuels C, Till JE, **Tolmachev SY**, Yoder RC, Zhou JY, Dauer LT. A million persons, a million dreams: A vision for a national center of radiation epidemiology and biology. *International Journal of Radiation Biology* 98(4): 795–821; **2022**.
52. Martinez NE, Jokisch DW, Dauer LT, Eckerman KF, Goans RE, Brockman JD, **Tolmachev SY**, Avtandilashvili M, Mumma MT, Boice JD, Leggett RW. Radium dial workers: Back to the future. *International Journal of Radiation Biology* 98(4): 750–768; **2022**.
51. Leggett RW, **Tolmachev SY**, Boice JD. Potential improvements in brain dose estimates for internal emitters. *International Journal of Radiation Biology* 98(4): 644–656; **2022**.
50. Avtandilashvili M, **Tolmachev SY**. Four-decade follow up of plutonium contaminated puncture wound treated with Ca-DTPA. *Journal of Radiological Protection* 41(4): 1122–1144; **2021**.
49. Poudel D, Avtandilashvili M, Klumpp J, Bertelli L, **Tolmachev SY**. Modeling of long-term retention of high-fired plutonium oxide in the human respiratory tract: Importance of scar-tissue compartments. *Journal of Radiological Protection* 41(4): 940–961; **2021**.
48. Poudel D, Avtandilashvili M, Bertelli L, Klumpp J, **Tolmachev SY**. Modelling the long-term retention of plutonium in the human respiratory tract using scar-tissue compartments. *Radiation Protection Dosimetry* 196(3–4): 167–183; **2021**.
47. Šefl M, Zhou JY, Avtandilashvili M, McComish SL, **Tolmachev SY**. Plutonium in Manhattan Project workers: using autopsy data to evaluate organ content and dose estimates based on urine bioassay with implications for radiation epidemiology. *PLOS One* 16(10): e0259057; **2021**.
46. Šefl M, Avtandilashvili M, **Tolmachev SY**. Inhalation of soluble plutonium: 53-year follow up of Manhattan project worker. *Health Physics* 120(6): 661–670; **2021**.
45. Poudel D, Avtandilashvili M, Bertelli L, Klumpp J, **Tolmachev SY**. Long-term retention of plutonium in the respiratory tracts of two acutely-exposed workers: Estimation of bound fraction. *Health Physics* 120(3): 258–270; **2021**.
44. Giussani A, Lopez MA, Romm H, Testa A, Ainsbury EA, Della Monaca S, Etherington G, Fattibene P, Guclu I, Jaworska A, Lloyd DC, McComish S, Malatova I, Osko J, Rojo A, Roy L, Sotnik N, **Tolmachev SY**, Wieser A, Woda C, Youngman M. EURADOS review of retrospective dosimetry techniques for internal exposures to ionising radiation and their applications. *Radiation and Environmental Biophysics* 59(3): 357–387; **2020**.
43. Birchall A, Puncher M, Hodgson A, **Tolmachev SY**. The importance and quantification of plutonium binding in human lungs. *Health Physics* 117(2): 133–142; **2019**.
42. **Tolmachev SY**, Swint MJ, Bistline RW, McClellan RO, McInroy JF, Kathren RL, Filipy RE, Toohey RE. USTUR special sessions roundtable: United States Transuranium and Uranium Registries (USTUR): A five-decade follow-up of plutonium and uranium workers. *Health Physics* 117: 211–222; **2019**.
41. Kathren RL, **Tolmachev SY**. The United States Transuranium and Uranium Registries (USTUR): A five decade follow-up of plutonium and uranium workers. *Health Physics* 117(2): 118–132; **2019**.
40. Dumit S, Avtandilashvili M, **Tolmachev SY**. Evaluating plutonium intake and radiation dose following extensive chelation treatment. *Health Physics* 117(2): 156–167; **2019**.

39. Lopez MA, Nogueira P, Vrba T, Tanner RJ, Ruhm W, **Tolmachev SY**. Measurements and Monte Carlo simulations of  $^{241}\text{Am}$  activities in three skull phantoms: EURADOS-USTUR collaboration. *Health Physics* 117(2): 193–201; **2019**.
38. Goans RE, Toohey RE, Iddins CJ, McComish SL, **Tolmachev SY**, Dainiak N. The pseudo-Pelger Huët cell as a retrospective dosimeter: Analysis of a radium dial painter cohort. *Health Physics* 117(2): 143–148; **2019**.
37. Zhou JH, McComish SL, **Tolmachev SY**. A Monte Carlo t-test to evaluate mesothelioma and radiation in the U.S. Transuranium and Uranium Registries. *Health Physics* 117(2): 187–192; **2019**.
36. Tabatadze G, Miller B, **Tolmachev SY**. Mapping  $^{241}\text{Am}$  spatial distribution within anatomical bone structures using digital autoradiography. *Health Physics* 117(2): 179–186; **2019**.
35. Avtandilashvili M, **Tolmachev SY**. Modeling skeleton weight of an adult Caucasian man. *Health Physics* 117(2): 149–155; **2019**.
34. **Tolmachev SY**, Avtandilashvili M, Kathren RL. Estimation of total skeletal content of plutonium and  $^{241}\text{Am}$  from analysis of a single bone. *Health Physics* 117(2): 202–210; **2019**.
33. Breustedt B, Avtandilashvili M, McComish SL, **Tolmachev SY**. USTUR Case 0846: Modeling americium biokinetics after intensive decorporation therapy. *Health Physics* 117(2): 168–178; **2019**.
32. Dumit S, Avtandilashvili M, McComish SL, Strom DJ, Tabatadze G, **Tolmachev SY**. Validation of a system of models for plutonium decorporation therapy. *Radiation and Environmental Biophysics* 58(2): 227–235; **2019**.
31. Dumit S, Avtandilashvili M, Strom DJ, McComish SL, Tabatadze G, **Tolmachev SY**. Improved modeling of plutonium-DTPA decorporation. *Radiation Research* 191: 201–210; **2019**.
30. Schneider NR, Xie T, Glover SE, **Tolmachev SY**, Dong Z, Spitz HB. Determination of Th-232 and progeny in human reticuloendothelial tissues using alpha particle track autoradiographic microdosimetry from Thorotrast. *Journal of Radioanalytical and Nuclear Chemistry* 318(1): 235–239; **2018**.
29. Avtandilashvili M, Dumit S, **Tolmachev SY**. USTUR whole-body Case 0212: 17-year follow-up of plutonium contaminated wound. *Radiation Protection Dosimetry* 178(2): 160–169; **2018**.
28. **Tolmachev SY**, Nielsen CE, Avtandilashvili M, Puncher M, Martinez F, Thomas EM, Miller FL, Morgan WF, Birchall A. The Mayak Worker Dosimetry System (MWDS-2013): Soluble plutonium retention in the lungs of an occupationally exposed USTUR case. *Radiation Protection Dosimetry* 176(1–2): 45–49; **2017**.
27. Suslova KG, Sokolova AB, **Tolmachev SY**, Miller SC. The Mayak Worker Dosimetry System (MWDS-2013): Estimation of plutonium skeletal burden from limited autopsy bone samples from Mayak PA workers. *Radiation Protection Dosimetry* 176(1–2): 117–131; **2017**.
26. Puncher M, Birchall A, **Tolmachev SY**. The Mayak Worker Dosimetry System (MWDS-2013): A re-analysis of USTUR case 0269 to determine whether plutonium binds to the lungs. *Radiation Protection Dosimetry* 176(1–2): 50–61; **2017**.
25. Brooks AL, Church BW, Smith JN, **Tolmachev SY**.  $^{137}\text{Cs}$  environmental half-life without remediation: Impact on radiation dose. *Japanese Journal of Health Physics* 51(1): 51–59; **2016**.
24. Nogueira P, Rühm W, Lopez MA, Vrba T, Buchholz W, Fojtík P, Etherington G, Broggio D, Huikari J, Marzocchi O, Lynch T, Lebacqz AL, Li C, Oško J, Malátova I, Franck D, Breustedt B, Leone D, Scott J,

- Shutt A, Hauck B, Capello K, Pérez-López B, Navarro-Amaro JF, Pliszczyński T, Fantínová K, **Tolmachev SY**. EURADOS  $^{241}\text{Am}$  skull measurement intercomparison. *Radiation Measurements* 82: 64–73; **2015**.
23. Avtandilashvili M, Puncher M, McComish SL, **Tolmachev SY**. US Transuranium and Uranium Registries case study on accidental exposure to uranium hexafluoride. *Journal of Radiological Protection* 35(1): 129–151; **2015**.
  22. Vergucht E, De Samber B, Izmer A, Vekemans B, Appel K, **Tolmachev S**, Vincze L, Vanhaecke F. Study of the distribution of actinides in human tissues using synchrotron radiation micro X-ray fluorescence spectrometry. *Analytical and Bioanalytical Chemistry* 407(6): 1559–1566; **2015**.
  21. Kathren RL, **Tolmachev SY**. Natural uranium tissue content of three Caucasian males. *Health Physics* 109(3): 187–197; **2015**.
  20. Nielsen CE, Wang X, Robinson R, Brooks A, Lovaglio J, Patton K, McComish SL, **Tolmachev SY**, Morgan WF. Carcinogenic and inflammatory effects of plutonium-nitrate retention in an exposed nuclear worker and beagle dogs. *International Journal of Radiation Biology* 90(1): 60–70; **2014**.
  19. Lariviere D, **Tolmachev SY**, Kochermin V, Johnson S. Uranium bone content as an indicator of chronic environmental exposure from drinking water. *Journal of Environmental Radioactivity* 121: 98–103; **2013**.
  18. Gibb H, Fulcher K, Nagarajan S, McCord S, Fallahian NA, Hoffman HJ, Haver C, **Tolmachev S**. Analyses of radiation and mesothelioma in the US Transuranium and Uranium Registries. *American Journal of Public Health* 103(4): 710–716; **2013**.
  17. Nielsen CE, Wilson DA, Brooks AL, McCord SL, Dagle GE, James AC, **Tolmachev SY**, Thrall BD, Morgan WF. Microdistribution and long-term retention of  $^{239}\text{Pu}(\text{NO}_3)_4$  in the respiratory tracts of an acutely exposed plutonium worker and experimental beagle dogs. *Cancer Research* 72(21): 5529–5536; **2012**.
  16. Lariviere D, Tremblay M, Durand-Jezequel M, **Tolmachev S**. Detection of beryllium in digested autopsy tissues by inductively coupled plasma mass spectrometry using a high matrix interface configuration. *Analytical and Bioanalytical Chemistry* 403(2): 409–418; **2012**.
  15. **Tolmachev SY**, Ketterer ME, Hare D, Doble P, James AC. The US Transuranium and Uranium Registries: Forty years' experience and new directions in the analysis of actinides in human tissues. *Proceedings in Radiochemistry – A Supplement to Radiochimica Acta* 1: 173–181; **2011**.
  14. López MA, Broggio D, Capello K, Cardenas-Mendez E, El-Faramawy N, Franck D, James AC, Kramer GH, Lacerenza G, Lynch TP, Navarro JF, Navarro T, Perez B, Rühm W, **Tolmachev SY**, Weitzenegger E. EURADOS intercomparison on measurements and Monte Carlo modelling for the assessment of americium in a USTUR leg phantom. *Radiation Protection Dosimetry* 144(1–4): 295–299; **2011**.
  13. Li C, Elliot N, **Tolmachev S**, McCord S, Shultz T, Shi Y, Kramer GH. Measurement of uranium isotopes in human tissue samples by TIMS. *Journal of Analytical Atomic Spectrometry* 26(12): 2524–2527; **2011**.
  12. Kramer GH, Hauck B, Capello K, Rühm W, El-Faramawy N, Broggio D, Franck D, López MA, Navarro T, Navarro JF, Perez B, **Tolmachev S**. Comparison of two leg phantoms containing  $^{241}\text{Am}$  in bone. *Health Physics* 101(3): 248–258; **2011**.



11. Hare D, **Tolmachev S**, James A, Bishop D, Austin C, Fryer F, Doble P. Elemental bio-imaging of thorium, uranium, and plutonium in tissues from occupationally exposed former nuclear workers. *Analytical Chemistry* 82(8): 3176–3182; **2010**. (*Featured Article*, Webb S. MS maps actinides in exposed workers. *Analytical Chemistry* 82(9): 3409–3410; 2010).
10. Li C, Benkhedda K, **Tolmachev S**, Carty L, Ko R, Moir D, Cornett J, Kramer G. Measurement of <sup>236</sup>U in human tissue samples using solid phase extraction coupled to ICP-MS. *Journal of Analytical Atomic Spectrometry* 25(5): 730–734; **2010**.
9. Lynch TP, **Tolmachev SY**, James AC. Estimating <sup>241</sup>Am activity in the body: comparison of direct measurements and radiochemical analyses. *Radiation Protection Dosimetry* 134(2): 94–101; **2009**.
8. **Tolmachev S**, Kuwabara J, Noguchi H. Concentration and daily excretion of uranium in urine of Japanese. *Health Physics* 91(2): 144–153; **2006**.
7. **Tolmachev SY**, Kuwabara J, Noguchi H. Flow injection extraction chromatography with ICP-MS for thorium and uranium determination in human body fluids. *Journal of Radioanalytical and Nuclear Chemistry* 261(1): 125–131; **2004**.
6. Kuwabara J, **Tolmachev S**, Noguchi H. The development of flow injection technique for rapid uranium determination in urine samples. *Journal of Nuclear Science and Technology* 39(Suppl 3): 556–559; **2002**.
5. **Tolmachev S**, Mitarai S, Momoshima N, Yamamoto M, Maeda Y, Nakashima T. Application of PXAMS technique for Cl-36 analysis in soil collected at Semipalatinsk Nuclear Test Site. *Journal of Radioanalytical and Nuclear Chemistry* 251(2): 217–220; **2002**.
4. Gamo T, Momoshima N, **Tolmachev S**. Recent upward shift of the deep convection system in the Japan Sea, as inferred from the geochemical tracers tritium, oxygen, and nutrients. *Geophysical Research Letters* 28(21): 4143–4146; **2001**.
3. **Tolmachev S**, Ura S, Momoshima N, Yamamoto M, Maeda Y. Determination of Cl-36 by liquid scintillation counting from soil collected at the Semipalatinsk Nuclear Test Site. *Journal of Radioanalytical and Nuclear Chemistry* 249(3): 541–545; **2001**.
2. **Tolmachev SY**, Dmitriev SN, Maslov OD, Molokanova LG, Gustova MV, Sabel'nikov AV. Determination of natural and technogenic actinides in natural waters by photofission-based method. *Radiokhimiya* (in Russian) 41(5): 469–473; **1999**.
1. Maslov OD, Dmitriev SN, Molokanova LG, **Tolmachev SY**. Low-level measurements of thorium and neptunium in environmental samples using the ( $\gamma$ , f) reaction. *Journal of Radioanalytical and Nuclear Chemistry* 226(1): 181–183; **1997**.

#### Conference Proceedings

8. **Tolmachev SY**, McComish SL, Avtandilashvili M. USTUR: Expanding horizons for actinide biokinetics and dosimetry. *BIO Web of Conferences* 14: 08003; **2019**.
7. Avtandilashvili M, **Tolmachev SY**. Biokinetics of soluble plutonium after wound injury treated with Ca-DTPA. *BIO Web of Conferences* 14: 02008; **2019**.
6. Leggett RW, **Tolmachev SY**, Boice J. Case studies in brain dosimetry for internal emitters: Is more detail needed for epidemiology? *BIO Web of Conferences* 14: 03008; **2019**.



5. Avtandilashvili M, McComish SL, **Tolmachev SY**. The United States Transuranium and Uranium Registries: Fifty-year history of actinide biokinetics research. BIO Web of Conferences 14: 05001; **2019**.
4. **Tolmachev S**, Tagami K, Uchida S. Determination of  $^{226}\text{Ra}$  in surface waters using high-resolution inductively coupled plasma mass spectrometry after selective extraction. Proceedings of the 2<sup>nd</sup> International Conference on Environmental Radioactivity (October 2–6, 2005, Nice, France). Strand, P.; Borretzen, P.; Jolle, T. (Eds): 592–596; **2005**.
3. **Tolmachev SY**, Maeda Y, Momoshima N. Polonium-210 concentration in coastal seawater: Effect of suspended particulate matter and colloids on isotope behavior. Proceedings of the International Symposium on Radioecology and Environmental Dosimetry (October 22–24, 2003, Rokkasho, Aomori, Japan). Inaba, J.; Tsukada, H.; Takeda, A. (Eds) Institute for Environmental Sciences, Rokkasho, Aomori, Japan. ISBN 4-9980604-6-5; 366–371; **2004**.
2. **Tolmachev SY**, Momoshima N, Maeda Y. Role of suspended particulate matter and colloids in  $^{210}\text{Po}$  behavior in coastal seawaters. Proceedings of the 1<sup>st</sup> International Conference on Environmental Radioactivity (September 1–5, 2002, Monaco). Borretzen, P.; Jolle, T.; Strand, P. (Eds): 481–484; **2002**.
1. Momoshima N, **Tolmachev S**, Song L-X, Maeda Y, Osaki S. A new source of atmospheric polonium. In: Distribution and speciation of radionuclides in the environment. Inaba, J.; Hisamatsu, S.; Ohtsuka, Y. (Eds) Institute for Environmental Sciences, Rokkasho, Aomori, Japan. ISBN 4-9980604-3-0; 147–151; **2000**.

### Journal Editorials

5. Dumit S, Breustedt B, Avtandilashvili M, Strom DJ, McComish SL, Tabatadze G, **Tolmachev SY**. Response to the letter to the editor by Gremy and Miccoli on “Improved modeling of plutonium-DTPA decorporation”. Radiation Research, 192(6): 682–683; **2019**.
4. Boice JD, Leggett RW, Eckerman KF, **Tolmachev SY**, Woloschak GE, Golden AP, Ellis ED. Response to Mortazavi et al. on “Detecting bone-seeking radionuclides in brain tissue”. Health Physics, 115(3): 389–390; **2018**.
3. Zhou JY, **Tolmachev SY**. Five-decade follow-up of plutonium and uranium workers. Health Physics News 44(4): 2–3; **2016**.
2. Gibb H, Fulcher K, Nagarajan S, McCord S, Fallahian NA, Hoffman HJ, Haver C, **Tolmachev S**. Respond to “Incorrect analysis of radiation and mesothelioma”. American Journal of Public Health 104(2): e1–e2; **2014**.
1. Kramer GH, López MA, Broggio D, **Tolmachev S**, Rühm W. Reply to Spitz et al "Natural vs. artificial anthropometric phantoms for measuring bone-seeking radionuclides". Health Physics 102(3): 354–355; **2012**.

### Technical Reports

15. Tabatadze G, Strom DJ, Thomas EM, Avtandilashvili M, McComish SL, **Tolmachev SY**. Data quality objectives supporting U.S. Transuranium and Uranium Registries mission. Richland, WA: U.S. Transuranium and Uranium Registries; USTUR-0561-20, Richland, Washington, USA; *Under revision*, **2022**.

14. **Tolmachev SY**, McComish SL, Avtandilashvili M. United States Transuranium and Uranium Registries Annual Report: April 1, 2021 – March 31, 2022. United States Transuranium and Uranium Registries; USTUR-0632-22, Richland, Washington, USA, **2022**.
13. **Tolmachev SY**, McComish SL, Avtandilashvili M. United States Transuranium and Uranium Registries Annual Report: April 1, 2020 – March 31, 2021. United States Transuranium and Uranium Registries; USTUR-0587-21, Richland, Washington, USA, **2021**.
12. Tolmachev SY, **Avtandilashvili M**. United States Transuranium and Uranium Registries Annual Report: April 1, 2019 – March 31, 2020. United States Transuranium and Uranium Registries; USTUR-0570-20, Richland, Washington, USA, **2020**.
11. Avtandilashvili M, **Tolmachev SY**. United States Transuranium and Uranium Registries Annual Report: April 1, 2018 – March 31, 2019. United States Transuranium and Uranium Registries; USTUR- 0536-19, Richland, Washington, USA, **2019**.
10. McComish SL, **Tolmachev SY**. United States Transuranium and Uranium Registries Annual Report: April 1, 2017 – March 31, 2018. United States Transuranium and Uranium Registries; USTUR-0501-18, Richland, Washington, USA, **2018**.
9. McComish SL, **Tolmachev SY**. United States Transuranium and Uranium Registries Annual Report: April 1, 2016 – March 31, 2017. United States Transuranium and Uranium Registries; USTUR-0487-17, Richland, Washington, USA, **2017**.
8. **Tolmachev SY**, McComish SL. United States Transuranium and Uranium Registries Annual Report: April 1, 2015 – March 31, 2016. United States Transuranium and Uranium Registries; USTUR-0403-16, Richland, Washington, USA, **2016**.
7. **Tolmachev SY**, McComish SL. United States Transuranium and Uranium Registries Annual Report: April 1, 2014 – March 31, 2015. United States Transuranium and Uranium Registries; USTUR-0402-16, Richland, Washington, USA, **2016**.
6. **Tolmachev SY**, Avtandilashvili M. Case 0407: Refractory Plutonium Distribution in the Upper Airways of the Human Respiratory Tract. PNNL/JCCRER Contract Report: USTUR-0398-16; Richland, Washington, USA; **2016**.
5. McComish SL, **Tolmachev SY**. United States Transuranium and Uranium Registries Annual Report: April 1, 2012 – March 31, 2014. United States Transuranium and Uranium Registries; USTUR-0382-15, Richland, Washington, USA, **2015**.
4. **Tolmachev SY**. Technical report on plutonium binding in the upper airways of the human respiratory tract: Case 0631 and Case 0745. PNNL/JCCRER Contract Report: USTUR-0379-15; Richland, Washington, USA; **2015**.
3. **Tolmachev SY**. Technical report on plutonium binding in the upper airways of the human respiratory tract. PNNL/JCCRER Contract Report: USTUR-0350-13; Richland, Washington, USA; **2013**.
2. Parker MD, **Tolmachev SY**. United States Transuranium and Uranium Registries Annual Report: October 1, 2010 – March 31, 2012. United States Transuranium and Uranium Registries; USTUR- 0344-12, Richland, Washington, USA, **2013**.
1. James AC, Avtandilashvili M, McCord SL, **Tolmachev SY**, Birchall A, Puncher M, Gregoratto D, Brey R. USTUR Case 0202: Evaluation of Proposed Revisions to the ICRP HRTM for Refractory PuO<sub>2</sub> (Pu Fire) Aerosol. USTUR Internal Report: USTUR-0282-10; Richland, Washington, USA; **2010**.

## Conference Abstracts (since 2007)

43. Goans RE, Toohey RE, Iddins CJ, Mumma M, McComish SL, **Tolmachev SY**. The neutrophil to lymphocyte ratio shows evidence for chronic inflammation in a radium dial painter cohort. *Health Physics* 123(1): 55; **2022**.
42. McComish SL, Liu X, Martinez FT, Zhou JY, **Tolmachev SY**. Misclassification of causes of death among USTUR Registrants: death certificates vs. autopsy reports. *Health Physics* 123(1): 67; **2022**.
41. Strom DJ, Avtandilashvili M, Felsot A, McComish SL, Šefl M, Tabatadze G, **Tolmachev SY**. Revision of the ICRP 141 plutonium systemic model to incorporate the HAT model and the hepatic portal vein. *Health Physics* 123(1): 67; **2022**.
40. **Tolmachev SY**. U.S. Transuranium and Uranium Registries: 2010 – 2022 research accomplishments and collaborative efforts. *Health Physics* 123(1): 79; **2022**.
39. Šefl M, Zhou JY, Avtandilashvili M, McComish SL, Tabatadze G, **Tolmachev SY**. Uncertainties in radiation dose assessment for internally deposited plutonium in support of radiation epidemiology. *Health Physics* 123(1): 80; **2022**.
38. Avtandilashvili M, Lariviere D, Momoshima N, Wegge D, Brockman JD, **Tolmachev SY**. Beryllium in the tissues of former nuclear workers. *Health Physics* 123(1): 80; **2022**.
37. Zhou JY, Avtandilashvili M, **Tolmachev SY**. Uncertainty evaluation of skeleton plutonium activity concentration estimated from a latent bone model. *Health Physics* 122(4 Suppl 1): 72; **2022**.
36. Zhou JY, Avtandilashvili M, **Tolmachev SY**. Latent bone modeling approach to estimate plutonium activity concentration in human skeleton. *Health Physics* 122(4 Suppl 1): 71–72; **2022**.
35. **Tolmachev SY**, Avtandilashvili M, Zhou JY. Latent bone modeling approach to select best combination of bones for estimating plutonium activity concentration in human skeleton. *Health Physics* 122(4 Suppl 1): 66–67; **2022**.
34. **Tolmachev SY**, Avtandilashvili M, Zhou JY. Effect of osteoporosis on latent bone models to estimate plutonium activity concentration in human skeleton. *Health Physics* 122(4 Suppl 1): 66; **2022**.
33. Tabatadze G, Avtandilashvili M, **Tolmachev SY**. Comparison of two methods to estimate skeletal plutonium concentration from limited sets of bones. *Health Physics* 122(4 Suppl 1): 64; **2022**.
32. Šefl M, Avtandilashvili M, **Tolmachev SY**. USTUR whole-body Case 0680: 53-year follow-up of a Manhattan Project worker. *Health Physics* 122(4 Suppl 1): 60; **2022**.
31. Poudel D, Avtandilashvili M, Klumpp J, Bertelli L, **Tolmachev SY**. Analysis of long-term retention of plutonium in the respiratory tract of four workers: Bound fraction *vs.* scar-tissue compartments. *Health Physics* 122(4 Suppl 1): 55; **2022**.
30. Šefl M, Zhou JY, Avtandilashvili M, McComish SL, Strom DJ, Tabatadze G, **Tolmachev SY**. Uncertainty analysis on organ activities and intakes from occupational exposure to plutonium. *Health Physics* 122(4 Suppl 1): 10; **2022**.
29. Martinez NE, Jokisch DW, Leggett RW, Eckerman KF, **Tolmachev SY**, Mumma MT, Dauer LT, Boice JD. Radium dial painters: An overview. *Health Physics* 122 (4 Suppl 1): 7–8; **2022**.
28. Jokisch DW, Martinez NE, Leggett RW, Eckerman KF, Dauer LT, **Tolmachev SY**, Mumma MT, Boice JD. Dosimetry for a radium dial painter cohort - past approaches and improvements. *Health Physics* 122(4 Suppl 1): 6; **2022**.

27. Poudel D, Avtandilashvili M, Bertelli L, Klumpp J, **Tolmachev SY**. Long-term retention of plutonium in the respiratory tracts of two acutely-exposed workers. *Health Physics* 120(1 Suppl 1): 13; **2021**.
26. **Tolmachev SY**, Leggett RW, Avtandilashvili M, Boice JD. Case studies in brain dosimetry for internally deposited radionuclides *Health Physics* 117(6 Suppl): 81–82; **2019**.
25. Avtandilashvili M, **Tolmachev SY**. Macrodistribution of plutonium among dosimetric compartments of the human respiratory tract. *Health Physics* 117(6 Suppl 1): 20–21; **2019**.
24. McComish SL, Zhou JY, Martinez F, **Tolmachev SY**. Limitations of cause of death data among autopsied population in the United States Transuranium and Uranium Registries. *Health Physics* 117(6 Suppl 1): 62; **2019**.
23. Strom DJ, Dumit S, Avtandilashvili M, McComish SL, Tabatadze G, **Tolmachev SY**. Cylindrical representations of recycling biokinetic models. *Health Physics* 117(6 Suppl 1): 82–83; **2019**.
22. Dumit S, Strom DJ, McComish SL, Avtandilashvili M, Tabatadze G, **Tolmachev SY**. New biokinetic model simultaneously fits Ca-DTPA affected and non-affected urine bioassay data after plutonium contamination. *Health Physics* 115(Suppl 1): S83; **2018**.
21. **Tolmachev SY**, Thomas EM, Tabatadze G. Analysis of actinides: Important things we forget. 11<sup>th</sup> Conference on Methods and Applications of Radioanalytical Chemistry. Book of Abstracts: 63; **2018**.
20. **Tolmachev SY**. U.S. Transuranium and Uranium Registries: 50 years of research relevant to new biomarker. *Health Physics* 113(Suppl 1): S82–S83; **2017**.
19. Dumit S, Avtandilashvili M, **Tolmachev SY**. Enhancement of plutonium excretion following late Ca-EDTA/DTPA treatment. *Health Physics* 113(Suppl 1): S95–S96; **2017**.
18. Tabatadze G, Avtandilashvili M, **Tolmachev SY**. Plutonium in tissues of occupationally exposed individuals. *Health Physics* 113(Suppl 1): S94–S95; **2017**.
17. Goans R, Iddins C, Toohey R, McComish S, **Tolmachev S**, Dainiak N. The pseudo Pelger-Huet cell – from bats to humans and everything in between. *Health Physics* 113(Suppl 1): S81–S82; **2017**.
16. **Tolmachev SY**, Kathren RL. Estimation of actinide skeletal content from a single bone analysis. *Health Physics* 111(Suppl 1): S40; **2016**.
15. Avtandilashvili M, **Tolmachev SY**. Updating ICRP 70 skeleton weight vs. body height equation. *Health Physics* 111(Suppl 1): S40; **2016**.
14. Dumit S, Avtandilashvili M, Breustedt B, **Tolmachev SY**. USTUR Case 0785: Modeling Pu decorporation following complex exposure. *Health Physics* 111(Suppl 1): S41; **2016**.
13. Tabatadze G, Miller B, **Tolmachev SY**. Digital autoradiography of <sup>241</sup>Am spatial distribution within trabecular bone regions. *Health Physics* 111(Suppl 1): S41; **2016**.
12. Zhou JY, McComish SL, **Tolmachev, SY**. Reanalysis of radiation and mesothelioma in the U.S. Transuranium and Uranium Registries. *Health Physics* 111(Suppl 1): S42; **2016**.
11. Toohey RE, Goans, RE, Iddins CJ, Dainiak N, McComish S L, **Tolmachev, SY**. Red marrow dosimetry for former radium workers. *Health Physics* 111(Suppl 1): S56; **2016**.
10. Goans RE, Toohey RE, Iddins CJ, Dainiak N, McComish SL, **Tolmachev SY**. The pseudo Pelger-Huet cell as a retrospective dosimeter: Analysis of a radium dial painter cohort. *Health Physics* 111(Suppl 1): S57; **2016**.

9. Breustedt B, Avtandilashvili M, McComish SL, **Tolmachev SY**. USTUR Case 0846: Modeling americium biokinetics after intensive decorporation therapy. Health Physics 111(Suppl 1): S58; **2016**.
8. Birchall A, Puncher M, **Tolmachev, S**. The importance of plutonium binding in human lungs. Health Physics 111(Suppl 1): S58; **2016**.
7. Avtandilashvili M, Puncher M, McComish S, **Tolmachev S**. Modeling uranium hexafluoride inhalation. Health Physics 109(Suppl 1): S58; **2015**.
6. Miller B, Tabatadze G, Frost S, Orozco J, Press O, Sandmaier B, Miederer M, **Tolmachev S**. Quantitative single-particle digital autoradiography with the ionizing-radiation quantum imaging detector. Health Physics 109(Suppl 1): S108; **2015**.
5. Tabatadze G, Miller B, **Tolmachev S**. Radionuclide distribution measurement within anatomical bone structures using digital autoradiography. Health Physics 109(Suppl 1): S59; **2015**.
4. Kathren RL, **Tolmachev SY**. Uranium distribution and concentrations in the tissues of whole-body donations to the USTUR. Health Physics 107(Suppl 1): S107; **2014**.
3. Avtandilashvili M, McComish SL, **Tolmachev SY**. USTUR whole-body Case 0212: testing NCRP wound model. Health Physics 107(Suppl 1): S108–S109; **2014**.
2. Breustedt B, McCord SL, **Tolmachev SY**. Modeling of chelation therapy for  $^{241}\text{Am}$  – USTUR Case 0846. Health Physics 103(Suppl 1): S80; **2012**.
1. Khalaf M, Brey R, Tolmachev S. A new leg voxel model in two different positions for simulation of the non-uniform distribution of  $^{241}\text{Am}$  in a leg bones. Health Physics 103(Suppl 1): S18; **2012**.

#### CONFERENCE PRESENTATIONS AND SEMINARS (SINCE 2007)

##### Invited

20. Actinides in humans: 50-year experience at the U.S. Transuranium and Uranium Registries. 68<sup>th</sup> Annual Meeting of the Radiation Research Society; Waikoloa, Hawaii, USA, October 16–19, **2022**.
19. U.S. Transuranium and Uranium Registries: 2010 – 2022 research accomplishments and collaborative efforts. 67<sup>th</sup> Annual Health Physics Society Meeting; Spokane, Washington, USA, July 17–21, **2022**.
18. Radionuclide concentrations in brain segments: Autopsy series. study of One Million Radiation Workers and Veterans – Virtual Symposium; November 6, **2020**.
17. Brain dosimetry and high-LET exposure. NASA Langley Space Radiation Group Seminar Series; September 1, **2020**.
16. Brain dosimetry for internally deposited radionuclides. EURADOS 2020 Annual Meeting; Florence, Italy, January 27–30, **2020**.
15. USTUR today: January 2020 edition. EURADOS 2020 Annual Meeting; Florence, Italy, January 27–30, **2020**.
14. From autopsies to synchrotrons to Mars – why the brain matters. 65<sup>th</sup> Annual Meeting of the Radiation Research Society; San Diego, California, USA, November 3–6, **2019**.
13. Uranium content, distribution, and biokinetics in human body. 74<sup>th</sup> Northwest Regional Meeting of the American Chemical Society; Portland, Oregon, USA, June 16–19, **2019**.

12. Bioimaging of samples from the United States Transuranium and Uranium Registries – shedding new light on the biokinetics, dosimetry, and possible biological effects of actinides in humans. Workshop on Particle Characteristics and Nuclear Forensic; Oslo, Norway, February 5, **2019**.
11. Radioactive actinide particles in occupationally exposed individuals. Workshop on Health Effects Following Severe Nuclear Events; Oslo, Norway, February 3, **2019**.
10. The United States Transuranium and Uranium Registries: Fifty-year history of actinide analyses and biokinetic research. Research seminar at Washington State University, Department of Chemistry; Pullman, Washington, USA, October 26, **2018**.
9. The United States Transuranium and Uranium Registries: Fifty years of contributions to understanding of plutonium in humans. 24<sup>th</sup> Radiation Research Society Conference on Radiation and Health; Chicago, Illinois, USA, September 23–25, **2018**.
8. Radiochemical analysis of plutonium in tissues from former nuclear workers. Research seminar at Oregon State University, School of Nuclear Science and Engineering; Corvallis, Oregon, USA, November 27, **2017**.
7. U.S. Transuranium and Uranium Registries: 50 years of research relevant to new biomarker. 62<sup>nd</sup> Annual Health Physics Society Meeting; Raleigh, North Carolina, USA, July 9–13, **2017**.
6. Uranium content, distribution, and biokinetics in human body. International Workshop on Uranium, Thorium, and Plutonium Sciences; Fukuoka, Japan, December 10, **2015**.
5. The National Human Radiobiology Tissue Repository. 1<sup>st</sup> International Workshop on Sample/Tissue Archiving of Radiobiology (STAR2015); Kyoto, Japan, May 24–25, **2015**.
4. Update on the U.S. Transuranium and Uranium Registries (USTUR) and research. 2015 DOE Annual Occupational Medicine Workshop and Webinar; Washington, District of Columbia, USA, March 16–17, **2015**.
3. The National Human Radiobiological Tissue Repository: A unique resource for scientists. 60<sup>th</sup> Radiation Research Society Meeting; Las Vegas, Nevada, USA, September 21–24, **2014**.
2. The U.S. Transuranium and Uranium Registries: Beyond archiving. DoReMi/STORE Workshop on Sharing Data and Biomaterials from Radiation Science; Rome, Italy, January 25–26, **2012**.
1. Radiochemistry Program at the U.S. Transuranium and Uranium Registries. Joint Symposium between Kyushu Environmental Evaluation Association and Kyushu University Radioisotope Center; Fukuoka, Japan, April 6, **2010**.

### Podium

70. 55 years of the United States Transuranium and Uranium Registries: history, contributions and impact on radiation protection. 2<sup>nd</sup> Annual Health Physics Society Winter Workshop on Internal Dosimetry; Corvallis, Oregon, USA, February 6–9, **2023**.
69. Uncertainty in plutonium internal dose estimates for Rocky Flats workers. 2<sup>nd</sup> Annual Health Physics Society Winter Workshop on Internal Dosimetry; Corvallis, Oregon, USA, February 6–9, **2023**.
68. Is the autopsy report a “gold standard”? 2<sup>nd</sup> Annual Health Physics Society Winter Workshop on Internal Dosimetry; Corvallis, Oregon, USA, February 6–9, **2023**.
67. Hematology profile of a Radium Dial Painter cohort. 2<sup>nd</sup> Annual Health Physics Society Winter Workshop on Internal Dosimetry; Corvallis, Oregon, USA, February 6–9, **2023**.



66. Applicability of a unique USTUR dataset: female nuclear worker treated with chelation therapy after plutonium exposure via inhalation. 2<sup>nd</sup> Annual Health Physics Society Winter Workshop on Internal Dosimetry; Corvallis, Oregon, USA, February 6–9, 2023.
65. ICP-MS measurement of plutonium, uranium, and <sup>241</sup>Am in the hair and nail samples of former nuclear workers. 2<sup>nd</sup> Annual Health Physics Society Winter Workshop on Internal Dosimetry; Corvallis, Oregon, USA, February 6–9, 2023.
64. Beryllium in tissues of former nuclear workers. 67<sup>th</sup> Annual Health Physics Society Meeting, Spokane, Washington, USA, July 17–21, 2022.
63. The neutrophil to lymphocyte ratio shows evidence for chronic inflammation in a radium dial painter cohort. 67<sup>th</sup> Annual Health Physics Society Meeting, Spokane, Washington, USA, July 17–21, 2022.
62. Misclassification of causes of death among USTUR Registrants: death certificates vs. autopsy reports. 67<sup>th</sup> Annual Health Physics Society Meeting, Spokane, Washington, USA, July 17–21, 2022.
61. Revision of the ICRP 141 plutonium systemic model to incorporate the HAT model and the hepatic portal vein. 67<sup>th</sup> Annual Health Physics Society Meeting, Spokane, Washington, USA, July 17–21, 2022.
60. Uncertainties in radiation dose assessment for internally deposited plutonium in support of radiation epidemiology. 67<sup>th</sup> Annual Health Physics Society Meeting, Spokane, Washington, USA, July 17–21, 2022.
59. Biokinetics of highly enriched uranium in a female nuclear worker. 6<sup>th</sup> European Congress on Radiation Protection (IRPA2022), Budapest, Hungary, May 30 – June 3, 2022.
58. Estimation of plutonium concentration in skeleton from occupationally exposed individuals. 6<sup>th</sup> European Congress on Radiation Protection (IRPA2022), Budapest, Hungary, May 30 – June 3, 2022.
57. Analysis of regional retention of plutonium in the respiratory tract of four acutely-exposed workers using scar-tissue compartments. International Conference on Individual Monitoring of Ionising Radiation (IM2022), Kraków, Poland, April 25–29, 2022.
56. EPR dosimetry in tooth enamel of United States former nuclear workers. EPR BioDose Conference; Okayama, Japan, March 27–31, 2022. *Cancelled*.
55. Regional retention of plutonium in the respiratory tract of four acutely-exposed workers can be described using scar-tissue compartments. 2022 IRPA North American Regional Congress, St. Louise, Missouri, USA, February 20–23, 2022.
54. Caveats of plutonium internal dosimetry: from biokinetics to dose estimates. Dny radiační ochrany 2021 (Days of Radiation Protection 2021), Czech Society for Radiation Protection (online). Praha, Czech Republic, November 8–12, 2021.
53. Analysis of long-term retention of plutonium in the respiratory tract of four workers: Bound fraction vs. scar-tissue compartments. 66<sup>th</sup> Annual Health Physics Society Meeting, Phoenix, Arizona, USA, July 25–29, 2021.
52. Latent bone modeling approach to select best combination of bones for estimating plutonium activity concentration in human skeleton. 66<sup>th</sup> Annual Health Physics Society Meeting, Phoenix, Arizona, USA, July 25–29, 2021.<sup>†</sup>



51. Uncertainty evaluation of skeleton plutonium activity concentration estimated from a latent bone model. 66<sup>th</sup> Annual Health Physics Society Meeting, Phoenix, Arizona, USA, July 25–29, 2021.
50. Effect of osteoporosis on latent bone models to estimate plutonium activity concentration in human skeleton. 66<sup>th</sup> Annual Health Physics Society Meeting, Phoenix, Arizona, USA, July 25–29, 2021.<sup>†</sup>
49. Latent bone modeling approach to estimate plutonium activity concentration in human skeleton. 66<sup>th</sup> Annual Health Physics Society Meeting, Phoenix, Arizona, USA, July 25–29, 2021.
48. Comparison of two methods to estimate plutonium skeletal concentrations from limited sets of bones. 66<sup>th</sup> Annual Health Physics Society Meeting, Phoenix, Arizona, USA, July 25–29, 2021.
47. USTUR Whole-body Case 0680: 53-year follow-up of a Manhattan project worker. 66<sup>th</sup> Annual Health Physics Society Meeting, Phoenix, Arizona, USA, July 25–29, 2021.
46. Radium dial painters: An overview. 2021 Health Physics Society Midyear Workshop; Clemson, South Carolina, USA, May 23–26, 2021.
45. Dosimetry for a radium dial painter cohort - past approaches and improvements. 2021 Health Physics Society Midyear Workshop; Clemson, South Carolina, USA, May 23–26, 2021.
44. Uncertainty analysis on organ activities and intakes from occupational exposure to plutonium. 2021 Health Physics Society Midyear Workshop; Clemson, South Carolina, USA, May 23–26, 2021.
43. Long-term retention of plutonium in the respiratory tracts of two acutely-exposed workers: Estimation of bound fraction. Health Physics Society 2020 Virtual Workshop; September 17, 2020.
42. ICP-MS analysis of plutonium and other actinides in brain tissue of occupationally exposed individual. American Chemical Society Fall 2020 Virtual Meeting and Expo; August 17–20, 2020.
41. Case studies in brain dosimetry for internally deposited radionuclides. 64<sup>th</sup> Annual Health Physics Society Meeting; Orlando, Florida, USA, July 7–11, 2019.<sup>†</sup>
40. Accuracy of death certificates among an autopsied population in the United States Transuranium and Uranium Registries. 64<sup>th</sup> Annual Health Physics Society Meeting; Orlando, Florida, USA, July 7–11, 2019.
39. Macrodistribution of plutonium among dosimetric compartments of the human respiratory tract. 64<sup>th</sup> Annual Health Physics Society Meeting; Orlando, Florida, USA, July 7–11, 2019.
38. Cylindrical representations of recycling biokinetic models. 64<sup>th</sup> Annual Health Physics Society Meeting; Orlando, Florida, USA, July 7–11, 2019.
37. Plutonium in human brain: Is more biokinetic detail needed for dosimetry? 3<sup>rd</sup> International Conference on Dosimetry and its Applications; Lisbon, Portugal, May 27–31, 2019.<sup>†</sup>
36. USTUR: Expanding horizons for actinide biokinetics and dosimetry. 12<sup>th</sup> International Conference on Health Effects of Incorporated Radionuclides; Fontenay-aux-Roses, France, October 8–11, 2018.<sup>†</sup>
35. Case studies in brain dosimetry for internal emitters: Is more detail needed for epidemiology? 12<sup>th</sup> International Conference on Health Effects of Incorporated Radionuclides; Fontenay-aux-Roses, France, October 8–11, 2018.<sup>†</sup>
34. Biokinetics of soluble plutonium after wound injury treated with Ca-DTPA. 12<sup>th</sup> International Conference on Health Effects of Incorporated Radionuclides; Fontenay-aux-Roses, France, October 8–11, 2018.

33. Analysis of 'high-fired' plutonium oxide in tissues of occupationally exposed workers. 6<sup>th</sup> Asian-Pacific Symposium on Radiochemistry; Jeju Island, Korea, September 17–22, 2017.<sup>†</sup>
32. Digital autoradiography of bone-seeking radionuclides in human. 6<sup>th</sup> Asian-Pacific Symposium on Radiochemistry; Jeju Island, Korea, September 17–22, 2017.
31. The pseudo Pelger-Huet cell—from bats to humans and everything in between. 62<sup>nd</sup> Annual Health Physics Society Meeting; Raleigh, North Carolina, USA, July 9–13, 2017.
30. Plutonium in tissues of occupationally exposed individuals. 62<sup>nd</sup> Annual Health Physics Society Meeting; Raleigh, North Carolina, USA, July 9–13, 2017.
29. Enhancement of plutonium excretion following late Ca-EDTA/DTPA treatment. 62<sup>nd</sup> Annual Health Physics Society Meeting; Raleigh, North Carolina, USA, July 9–July 13, 2017.
28. USTUR research: Land of opportunity. Annual Meeting of the European Radiation Dosimetry Group; Karlsruhe, Germany, February 27–March 2, 2017.
27. Estimation of actinide skeletal content from a single bone analysis. 61<sup>st</sup> Annual Meeting of the Health Physics Society; Spokane, Washington, USA, July 17–21, 2016.<sup>†</sup>
26. Updating ICRP 70 skeleton weight vs body height equation. 61<sup>st</sup> Annual Meeting of the Health Physics Society; Spokane, Washington, USA, July 17–21, 2016.
25. USTUR Case 0785: Modeling Pu decorporation following complex exposure. 61<sup>st</sup> Annual Meeting of the Health Physics Society; Spokane, Washington, USA, July 17–21, 2016.
24. Alpha-particle digital autoradiography of trabecular bone regions. 61<sup>st</sup> Annual Meeting of the Health Physics Society; Spokane, Washington, USA, July 17–21, 2016.
23. Reanalysis of radiation and mesothelioma in the USTUR. 61<sup>st</sup> Annual Meeting of the Health Physics Society; Spokane, Washington, USA, July 17–21, 2016.
22. The pseudo Pelger-Huet cell as a retrospective dosimeter: Analysis of a radium dial painter cohort. 61<sup>st</sup> Annual Meeting of the Health Physics Society; Spokane, Washington, USA, July 17–21, 2016.
21. Red marrow doses to radium workers. 61<sup>st</sup> Annual Meeting of the Health Physics Society; Spokane, Washington, USA, July 17–21, 2016.
20. USTUR Case 0846: Modeling americium biokinetics after intensive decorporation therapy. 61<sup>st</sup> Annual Meeting of the Health Physics Society; Spokane, Washington, USA, July 17–21, 2016.
19. Analysis of high-fired plutonium oxide and other actinides in MAPEP soil samples. 61<sup>st</sup> Radiobioassay & Radiochemical Measurements Conference; Iowa City, Iowa, USA, October 25–30, 2015.
18. Radionuclide distribution measurement within anatomical bone structures using digital autoradiography. 60<sup>th</sup> Annual Meeting of the Health Physics Society; Indianapolis, Indiana, USA, July 12–16, 2015.
17. Modeling uranium hexafluoride inhalation. 60<sup>th</sup> Annual Meeting of the Health Physics Society; Indianapolis, Indiana, USA, July 12–16, 2015.
16. Quantitative single-particle digital autoradiography with the ionizing-radiation quantum imaging detector. 60<sup>th</sup> Annual Meeting of the Health Physics Society; Indianapolis, Indiana, USA, July 12–16, 2015.

15. USTUR whole-body Case 0212: testing NCRP wound model. 59<sup>th</sup> Annual Meeting of the Health Physics Society; Baltimore, Maryland, USA, July 13–17, 2014.
14. USTUR case study on accidental exposure to uranium hexafluoride. 11<sup>th</sup> International Conference on Health Effects of Incorporated Radionuclides; Berkeley, California, USA, October 13–17, 2013.
13. Biodosimetry of plutonium workers. Plenary Meeting of the European Radiation Dosimetry Working Group 7 on Internal Dosimetry; Bologna, Italy, October 1–3, 2013.
12. Application of microwave-assisted techniques for human tissue samples preparation for actinide analysis. 58<sup>th</sup> Radiobioassay and Radiochemical Measurements Conference; Fort Collins, Colorado, USA, October 29 – November 2, 2012.
11. USTUR studies: An update. Plenary Meeting of the European Radiation Dosimetry Working Group 7 on Internal Dosimetry; Budapest, Hungary, October 1–3, 2012.<sup>†</sup>
10. Biokinetic modeling of chelation therapy for <sup>241</sup>Am–USTUR Case 0846. 57<sup>th</sup> Annual Meeting of the Health Physics Society; Sacramento, California, USA, July 22–26, 2012.<sup>†</sup>
9. Distribution of terminal lung and liver dose rates in United States Transuranium and Uranium Registries Registrants. Plenary Meeting of the European Radiation Dosimetry Working Group 7 on Internal Dosimetry; Ghent, Belgium, September 14–16, 2011.
8. From single bone analysis to total skeleton content. Plenary Meeting of the European Radiation Dosimetry Working Group 7 on Internal Dosimetry; Ghent, Belgium, September 14–16, 2011.<sup>†</sup>
7. Comparison of two leg phantoms containing Am-241 in bone. 56<sup>th</sup> Annual Health Physics Society Meeting; West Palm Beach, Florida, USA, June 26–30, 2011.
6. Distribution of terminal lung and liver dose rates in United States Transuranium and Uranium Registries Registrants. 56<sup>th</sup> Annual Health Physics Society Meeting; West Palm Beach, Florida, USA, June 26–30, 2011.
5. The U.S. Transuranium and Uranium Registries: Forty years' experience and new directions in the analysis of actinides in human tissues. 4<sup>th</sup> Asia-Pacific Symposium on Radiochemistry; Napa, California, USA, November 29 – December 5, 2009.<sup>†</sup>
4. Analysis of beryllium in autopsy tissues from nuclear weapons site worker. Beryllium Health and Safety Committee Meeting; Las Vegas, Nevada, USA, November 3–5, 2009.
3. Beryllium in the tissues of weapons-site workers. 3<sup>rd</sup> International Symposium on Beryllium Particulates and Their Detection; Albuquerque, New Mexico, USA, November 17–19, 2008.
2. Beyond  $\alpha$ -spectrometry for actinide determination in human tissues? 42<sup>nd</sup> Annual Meeting of the Health Physics Society of Japan; Naha, Okinawa, Japan, June 26–27, 2008.
1. Comparison of <sup>241</sup>Am organ activity from radiochemistry and direct measurements. U.S. DOE's Lung Intercalibration Committee Workshop; Jackson Hole, Wyoming, USA, October 26–28, 2007.

<sup>†</sup> Presenter

## Poster

24. Human respiratory tract model to describe long-term retention of plutonium using scar tissue compartments. 6<sup>th</sup> International Symposium on the System of Radiological Protection (ICRP 2021<sup>+1</sup>), Vancouver, British Columbia, Canada, November 7–10, 2022.

23. Comparison of latent bone modeling and simple average method for estimating plutonium activity concentration in human skeleton. 68<sup>th</sup> Annual Meeting of the Radiation Research Society; Waikoloa, Hawaii, USA, October 16–19, 2022.<sup>†</sup>
22. EasySkel: Estimation of plutonium concentration in the skeleton. 68<sup>th</sup> Annual Meeting of the Radiation Research Society; Waikoloa, Hawaii, USA, October 16–19, 2022.<sup>†</sup>
21. Over- and under-classification of underlying cause of death on death certificates from a small all-autopsied population of former nuclear workers. 2021 Annual American Public Health Association Meeting; Denver, Colorado, USA, October 23–27, 2021.
20. Determination of U, Pu, and Am in human keratinous samples using extraction chromatography and ICP-MS. The Great Scientific Exchange (SciX 2019); Palm Springs, California, USA, October 13–18, 2019.
19. New compartmental model for plutonium decorporation therapy. 64<sup>th</sup> Annual Meeting of the Radiation Research Society; Chicago, Illinois, USA, September 23–26, 2018.<sup>†</sup>
18. Update on causes of death among 354 former nuclear workers in the United States Transuranium and Uranium Registries. 64<sup>th</sup> Annual Meeting of the Radiation Research Society; Chicago, Illinois, USA, September 23–26, 2018.
17. Four-decade follow-up of plutonium-contaminated puncture wound treated with Ca-DTPA. 24<sup>th</sup> Radiation Research Society Conference on Radiation and Health; Chicago, Illinois, USA, September 23–25, 2018.
16. New biokinetic model simultaneously fits Ca-DTPA affected and non-affected urine bioassay data after plutonium contamination. 2018 Annual Brazilian Graduate Students and Scholars Conference (BRASCON2018); Columbus, Ohio, USA, June 23–24, 2018.
15. Chelation treatment after occupational exposure to plutonium. 2<sup>nd</sup> Brazilian Graduate Student and Scholar Conference (BRASCON); Los Angeles, California, USA, March 11–12, 2017.
14. Chelation treatment after occupational exposure to plutonium. 10<sup>th</sup> Washington State University's College of Pharmacy Research Day; Spokane, Washington, USA, August 16, 2016.
13. Modeling Pu decorporation therapy following occupational exposure. 1<sup>st</sup> Brazilian Graduate Student and Scholar Conference (BRASCON); Cambridge, Massachusetts, USA, March 12–13, 2016.
12. The National Human Radiobiology Tissue Repository: Human tissue collection at the US Transuranium and Uranium Registries. 15<sup>th</sup> International Congress of Radiation Research (ICRR2015); Kyoto, Japan, May 25–29, 2015.<sup>†</sup>
11. Uncertainty analysis on lung doses for US nuclear workers. 11<sup>th</sup> International Conference on Health Effects of Incorporated Radionuclides (HEIR2013), Berkeley, California, USA, October 13–17, 2013.
10. The U.S. Transuranium and Uranium Registries: A unique human data resource. 58<sup>th</sup> Annual Meeting of the Radiation Research Society; San Juan, Puerto Rico, September 30 – October 3, 2012.
9. An analysis of the microdistribution and long-term retention of <sup>239</sup>Pu(NO<sub>3</sub>)<sub>4</sub> in the respiratory tracts of an exposed plutonium worker and experimental beagles. 58<sup>th</sup> Annual Meeting of the Radiation Research Society; San Juan, Puerto Rico, September 30 – October 3, 2012.
8. The United States Transuranium and Uranium Registries (USTUR). 6<sup>th</sup> Washington State University's College of Pharmacy Research Day; Spokane, Washington, USA, August 10, 2012.

7. Maximum likelihood analysis of refractory PuO<sub>2</sub> inhalation cases. 6<sup>th</sup> Washington State University's College of Pharmacy Research Day; Spokane, Washington USA, August 10, **2012**.
6. A new leg voxel model in two different positions for simulation of the non-uniform distribution of <sup>241</sup>Am in leg bones. 57<sup>th</sup> Annual Meeting of the Health Physics Society, Sacramento, California, USA, July 22–26, **2012**.
5. Elemental imaging of actinides in human tissues using LA-ICP-MS and SR micro-XRF. 15<sup>th</sup> European X-Ray Spectrometry Conference (EXRS-2012); Vienna, Austria, June 18–22, **2012**.
4. Uranium in drinking water: Impact on uranium bone content. 2<sup>nd</sup> International Conference on Radioecology and Environmental Radioactivity (ICRER2011); Hamilton, Canada, June 19–24, **2011**.
3. Elemental bio-imaging of actinides and beryllium in lymph nodes of former nuclear workers. 54<sup>th</sup> Annual Meeting of the Health Physics Society; Minneapolis, Minnesota, USA, July 12–16, **2009**.<sup>†</sup>
2. Determination of U, Pu, and Am in biological samples by SF-ICPMS for biokinetic studies of actinides. 15<sup>th</sup> Biennial Winter Conference on Plasma Spectrochemistry; Temecula, California, USA, January 7–12, **2008**.<sup>†</sup>
1. Determination of Pu and Am in digested bone and soft tissue samples by SF-ICP-MS: Comparison with  $\alpha$ -spectrometry. 53<sup>rd</sup> Radiobioassay and Radiochemical Measurements Conference (RMMC2007); Jackson Hole, Wyoming, USA, October 29 – November 2, **2007**.<sup>†</sup>

<sup>†</sup> **Presenter**