



World Class. Face to Face.

**2010 Annual Meeting: USTUR Scientific Advisory Committee
Hosted by RHUB "TurboMeeting"**

1845 Terminal Drive, Suite 201, Wednesday, July 28th, 2010

FY10 Program Overview: FY11 USTUR 'Core'

by

Anthony C. James, PhD, CRadP

USTUR Director

Research Professor, College of Pharmacy

and

Sergei Y. Tolmachev, PhD

Associate Research Professor

USTUR Director-Designate

tjames@tricity.wsu.edu

stolmachev@tricity.wsu.edu

www.ustur.wsu.edu



***"Learning from Plutonium
and Uranium Workers"***

The USTUR Web Site – www.USTUR.wsu.edu

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Washington State University College of Pharmacy
United States Transuranium & Uranium Registries

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National Human Radiobiological Tissue Repository
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LEARNING FROM PLUTONIUM & URANIUM WORKERS

USTUR registrant death certificates and autopsy reports coded under ICD-9-CM and ICD-10.

Download ICD cause of death codes »

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Visitors

	300		6
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You: Newest:

(since May 17, 2010)

USTUR Director Invited to Visit Japan Atomic Energy Agency's (JAEA) Nuclear Fuel Cycle Engineering Labs

Dr. Tony James will visit JAEA's Tokai Research Center on May 26th and 27th, after giving an invited presentation at the Third Asian and Oceanic Congress on Radiation Protection, Tokyo (on May 24th).

[» Learn More](#)

» View Dr. James presentation to NIAID/NIH entitled "What We Should Learn from Lifetime Follow-up of U.S. Former Plutonium Workers".
» Run streaming video presentation "USTUR: The Fifth Decade of Worker Follow-up"
» USTUR director talks to Hanford Advisory Board (HAB) about plutonium toxicity
» WSU/USTUR receives commendation from DOE's Chief Health Safety and Security Officer
» Two Especially Critical Whole-body Donation Cases

Internal Contamination by Radionuclides – Five Centuries of Human Experience

From "Mountain Sickness" in the 15th century silver mines of Erzgebirge to the 2006 "elimination" of Alexander Litvinenko – what are the links? View Dr. James' lecture to the Spring 2010 WSU/Tri-Cities graduate course on "Radiation Biology & Ecology."
» "Incorporated Radionuclides: Health Effects, Dosimetry and the National Radiobiology Archives (NRA)"

USTUR Lab Manager Appointed Editor of JJHP
Dr. Sergei Tolmachev has been appointed to serve on the Editorial Board for the Japanese Journal of Health Physics.

» [Learn More](#)

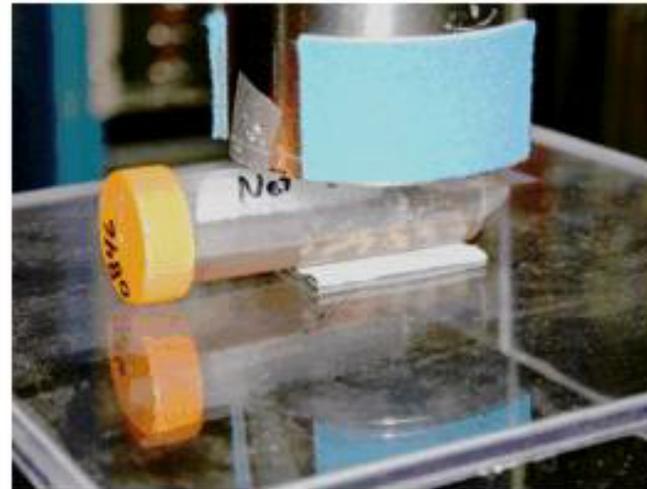
Landauer Memorial

Webmaster: Stacey L. McCord, MS

The U.S. Transuranium & Uranium Registries (USTUR): The 42nd Year of Pu/Am/U Worker Follow-up

USTUR Mission Statement 2010 and Beyond

- Evaluate health outcomes, causes of death, and life expectancy of former nuclear workers (volunteer Registrants) who had documented accidental intakes of uranium and the transuranium elements.
- Obtain, preserve, and make available for future research, samples of tissues at autopsy.
- Conduct radiochemical analyses, as necessary, to validate and develop new state-of-the-art methods for quantifying tissue doses and their associated uncertainties.
- Apply USTUR case study data to refine dose assessment methods for these internal emitters as the bases for reliable epidemiological studies, risk projection, and credible standards for radiological protection.
- Assess adequacy of historical and current U.S. regulatory controls and practices in limiting tissue doses to workers having the greatest health risk from intakes of uranium and the transuranium elements.



Counting ^{241}Am 60 keV gamma emissions from respiratory lymph nodes.

Downloadable Presentations/Documents

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Links

Seminar/Symposium Presentations

Conference Contributions »

2010

- » [WSU College of Pharmacy Faculty Retreat, Pullman, WA on May 13, 2010](#)
- » Joint Symposium between Kyushu Environmental Evaluation Association (KEEA) and Kyushu University Radioisotope Center. Fukuoka, Japan. April 6, 2010.
- » Annual Meeting of the European Radiation Dosimetry (EURADOS) Working Group 7 (Internal Dosimetry). Rome, Italy, February 1-3, 2010.

2009

- » John Horan Memorial Symposium, Salt Lake City, UT, April 25, 2009.
- » Columbia Chapter of the Health Physics Society (CCHPS) Symposium on "Russia's Hanford: Health Studies at Mayak." Richland, WA, April 17, 2009.
- » Seminar at Karlsruhe Institute of Technology's (KIT) Energy Center, Karlsruhe, Germany, April 7, 2009.
- » EURADOS Working Group 7 (WG7) Meeting, Forschungszentrum Karlsruhe GmbH (FZK), Institut für Strahlenforschung (ISF), Karlsruhe, Germany, April 6, 2009.
- » The United Kingdom Health Protection Agency's Centre for Radiation, Chemical and Environmental Hazards (HPA/CRCE), Chilton, Oxfordshire, UK, April 2, 2009.
- » Hanford Advisory Board (HAB) River & Plateau Committee (RAP) and Health, Safety & Environmental Protection Committee (HSEP), Richland, WA, January 8, 2009.

This page was last updated on February 16, 2010. usturwebmaster@tricity.wsu.edu

USTUR, Washington State University, 1846 Terminal Dr. Suite 201, Richland, WA 99354-4959 USA, 1-509-946-6870 or 1-800-375-9317



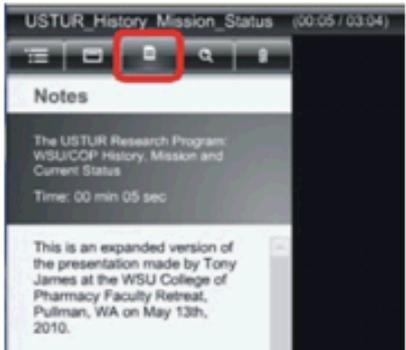
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WASHINGTON STATE UNIVERSITY
Washington State University College of Pharmacy

The USTUR Research Program: WSU/COP History, Mission and Current Status

The USTUR director, Tony James, gave a departmental report at the WSU College of Pharmacy (COP) Faculty Retreat in Pullman, WA on May 13th, 2010. This presentation has been expanded (with explanatory slide notes) and is available for download.



»»» [Download the USTUR departmental COP report](#)

Note: To view slide notes, click the "Notes" tab – top left of the "Flash" presentation screen.

»»» [Download USTUR's 2009 Newsletter to current Registrants \[USTUR-0281-10\]](#)

This page was last updated on May 20, 2010. ustunwebmaster@tricity.wsu.edu

USTUR – Summary of FY2010 Status

- Over the past 5 years, USTUR's research reputation with our USDOE Program Office, national and international scientific peers has **grown steeply**.
- We have **built** the capability to **interpret** (model) and **apply organized** USTUR data to **address current uncertainties in assessment of actinide tissue doses and health outcomes**.
- However, over the same period, USDOE funding of the USTUR grant (from the Office of Health & Safety) has **decreased precipitously**.

Editorial Note: Looking back to the USTUR in 1999!

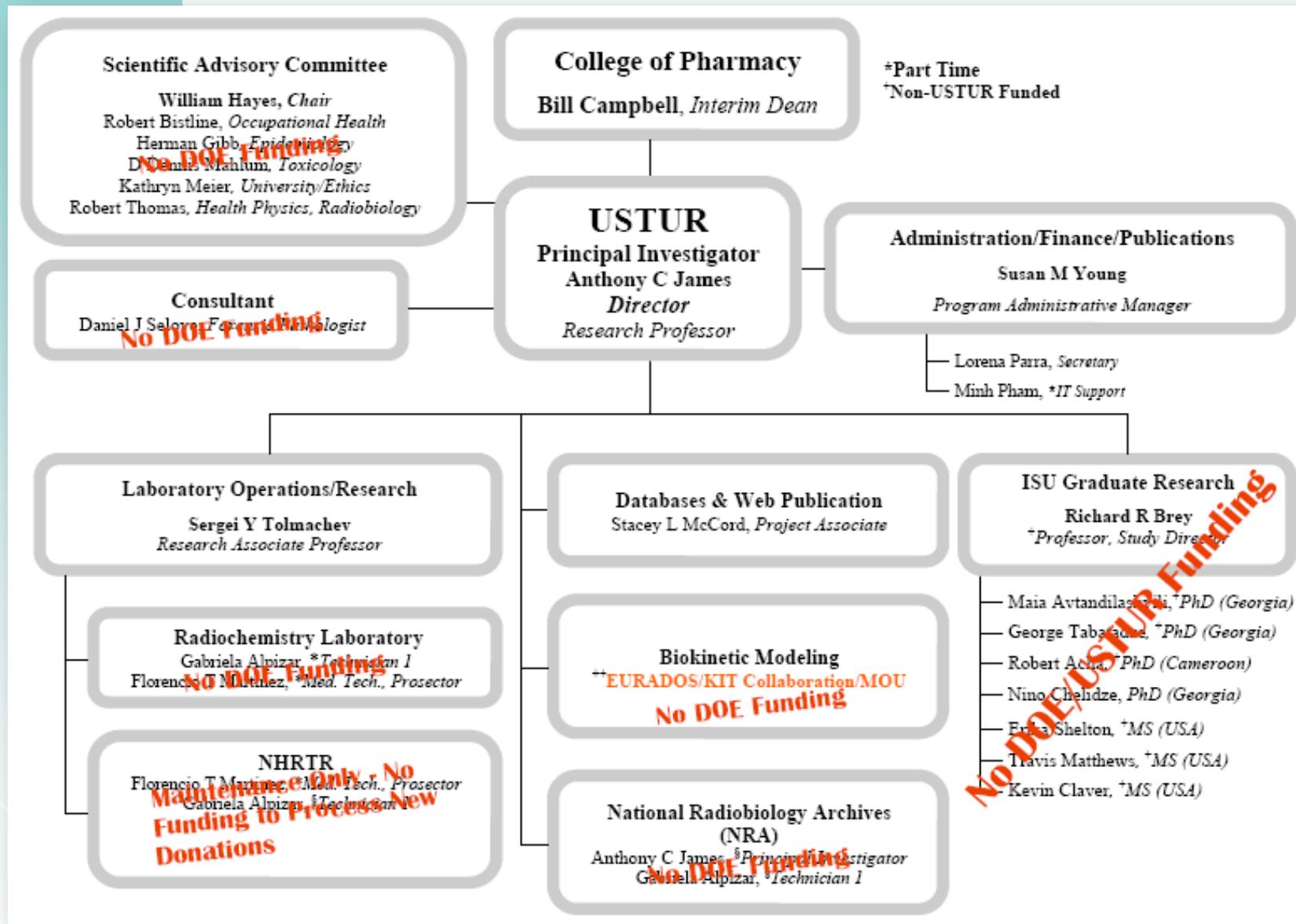


Not shown: seven radiochemistry laboratory personnel at the Nuclear Radiation Center, Pullman.



Current USTUR staff: Front—Stacey McCord, Tony James; Back—Sergei Tolmachev, Susan Young-Wright, Lorena Parra.

USTUR – Where Are We At the End of ACJ’s Directorship?



USTUR: The Next 5 Years – DOE's Directive

Letter from DOE's Chief Health, Safety & Security Officer

Dear [REDACTED]:

Thank you for your letter of May 12, 2010, to Secretary of Energy Steven Chu concerning reduced funding for the United States Transuranium and Uranium Registry (USTUR), which is operated by Washington State University with grant support by the Office of Health, Safety and Security (HSS).

We are grateful to your father as a USTUR donor and to you as a proponent for establishing USTUR during the 1960s. Your insights and institutional memories of USTUR are highly valuable.

The progenitor of what is now USTUR was formally established in August 1968 as the National Plutonium Registry by the Hanford Environmental Health Foundation, a private nonprofit organization under contract to the U.S. Atomic Energy Commission. In 1992, USTUR was transferred to Washington State University, and the funding mechanism was changed from contract to grant. One important consideration was to enhance credibility and academic independence of the Government-funded program, which has been achieved.

It is unfortunate that the USTUR grant has been reduced in recent years due to budget reductions that have impacted many programs. USTUR has been asked to redefine its missions and limit its scope commensurate with the reduced funding. Meanwhile, efforts are underway by USTUR to secure additional financial support from other sources.



Example of Letter Emphasizing USTUR's Scientific Contributions Slide 9

European Radiation Dosimetry Group e.V. • Bundesallee 100 • D-38116 Braunschweig

Glenn S. Podonsky
Chief Health, Safety and Security Officer
Office of Health, Safety and Security
U.S. Department of Energy
1000 Independence Ave., SW
Washington, DC 20585

Your reference:
Your letter dated:
Our letter dated:

Our reference: EURADOS/2010/12/HsMalWr
Phone number: +49 531 592 6500
Fax number: +49 531 592 6505
E-Mail: helmut.schuhmacher@eurados.org
Date: 2010-07-09

Dear Sir,

On behalf of the European Radiation Dosimetry Group which represents European Laboratories involved in the area of the dosimetry of ionizing radiation, we would like to approach the U.S. Department of Energy to support the continuation of USTUR, the U.S. Transuranium and Uranium Registries, considered as a unique source of historic dosimetric data of most interest in the field of dose assessment due to internal exposures.

The USTUR research activities and databases of real autopsy and dosimetric data from U.S. workers internally exposed to transuranics, are considered of great impact not only in the internal dosimetry field, but also in other scientific areas such as retrospective dosimetry and computational dosimetry, especially for validation purposes (e.g., biokinetic and bioassay models for describing the metabolic behavior of incorporated radionuclides over the complete human lifespan and computational methods for in vivo bioassay with application of voxel phantoms). USTUR is also unique in following up health outcomes for Plutonium workers with accurately known tissue doses, and supporting developments of in-vivo measurement techniques.

The analysis of the donor's tissues together with the available monitoring data from U.S. workers exposed to Plutonium and other Actinides represents the only way to truly understand the risk from internal exposures of these radionuclides. This task has been carried out by USTUR so far with great success.

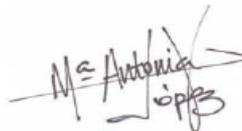
We are convinced that the maintenance of the activities of the USTUR group (here there is a special mention of Anthony James, USTUR director) is a need for the radiation dosimetry community.

Here we do support the continuation of the USTUR group as worldwide scientific resource that will permit to improve the safety and radiation protection of future generations of Uranium and Transuranium workers.

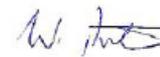
Yours sincerely,



Helmut Schuhmacher,
EURADOS Chairperson



Maria Antonia Lopez
Chairperson WG7 "Internal Dosimetry"



Werner Rühm
Chairperson WG11 "High Energy Fields"

Looking Forward to Sergei's Directorship of the 'Core' USTUR Mission

- Dr. Tolmachev's FY2011-15 grant renewal proposal will:
 - be **positive** and **confident** in USTUR/COP/WSU's technical and organizational ability to fulfill DOE's obligation to our 332 tissue donors (and their families) – and to the 81 currently registered "potential" tissue donors
 - Demonstrate to DOE/HS-13 how this mission will be accomplished with **maximum operational efficiency** – and at **minimum possible cost**
 - Provide a plan for **integrating the USTUR Research Center Program** with externally funded '**Users and Analyzers**' (national and international scientific peers) of the 'core' tissue analysis data, comprehensive USTUR databases and NHRTR tissue materials
 - Express WSU's appreciation of continuing DOE/HS-13 support of this unique research project



The Proposed **Symbiosis** of the USTUR Research Center with **Extramural Research Projects/Collaborators**

USTUR Research Center (Intramural Project)

Sergei Y Tolmachev, PhD, Director, *Associate Research Professor*

Radiochemistry/Mass Spectrometry

Sergei Y Tolmachev, PhD

- Expeditious Analysis of Donated Tissues
- Application of New Actinide Separation Techniques
- Application of Advanced Measurement Techniques

Tissue Repository & Databases

Stacey L McCord, MS

National Human
Radiobiological Tissue
Repository (NHRTR)

Case Narratives, Health
Physics, Radiochemistry,
Pathology

Extramural Projects/Collaborations

- WSU, Pullman (Np, Cm)
- NAU, Flagstaff (U, Pu, Am)
- NWU, Chicago (Synchrotron XRF)
- HC, Ottawa (U, Pu)
- UMB, Norway (U, Pu, Am)
- U. Ghent, Belgium (U, Pu, Am, Be, Asbestos)
- UTS, Sydney (U, Pu, Be, Asbestos)
- U. Laval, Quebec (U, Be)
- SRS, Aiken (Be)

PNNL/Radiation Biology
William F Morgan, *Director*
Christopher E Nielsen, *WSU MS Student*
Additional PNNL Staff/Students

Sabbatical Researcher
Bastian Breustedt, PhD, KIT

WSU, Tri-Cities
Nursing Program
Phyllis Morris, *Director*

ISU Health Physics
Richard R. Brey, *Director*

EURADOS/WG-7
Maria Lopez, *Chair*

EU/SOLO/HPA
John Harrison, *Coordinator*

“Work for Others”

My Personal Indebtedness as USTUR Director FY2005-2010

- To our DOE/HQ Program Managers – Barbara Brooks, Bonnie Richter, Marsha Lawn, Joey Zhou, Gerald Petersen, Pat Worthington.
- To our WSU ‘Home College’ – Kay Meier, Bill Fassett, Bryan Slinker, Jim Kehrer, Bill Campbell, Vicki Burnham – with very special mention of Sarah Kohler.
- To Susan Ehrhart/Young/Young-Wright – for her dedicated service to my predecessor directors, for teaching me the ‘ropes’ of the USTUR program, and for invaluable help with seemingly intractable HR and ‘facilities’ issues.
- To Sergei Tolmachev and Stacey McCord – for rebuilding the ‘CORE’ USTUR research program (frankly, from a very low starting point).
- And, not least, to our Scientific Advisory Committee – for your dedication to the USTUR project and outstanding help.



Thank you – one and ALL!

Discussion?

