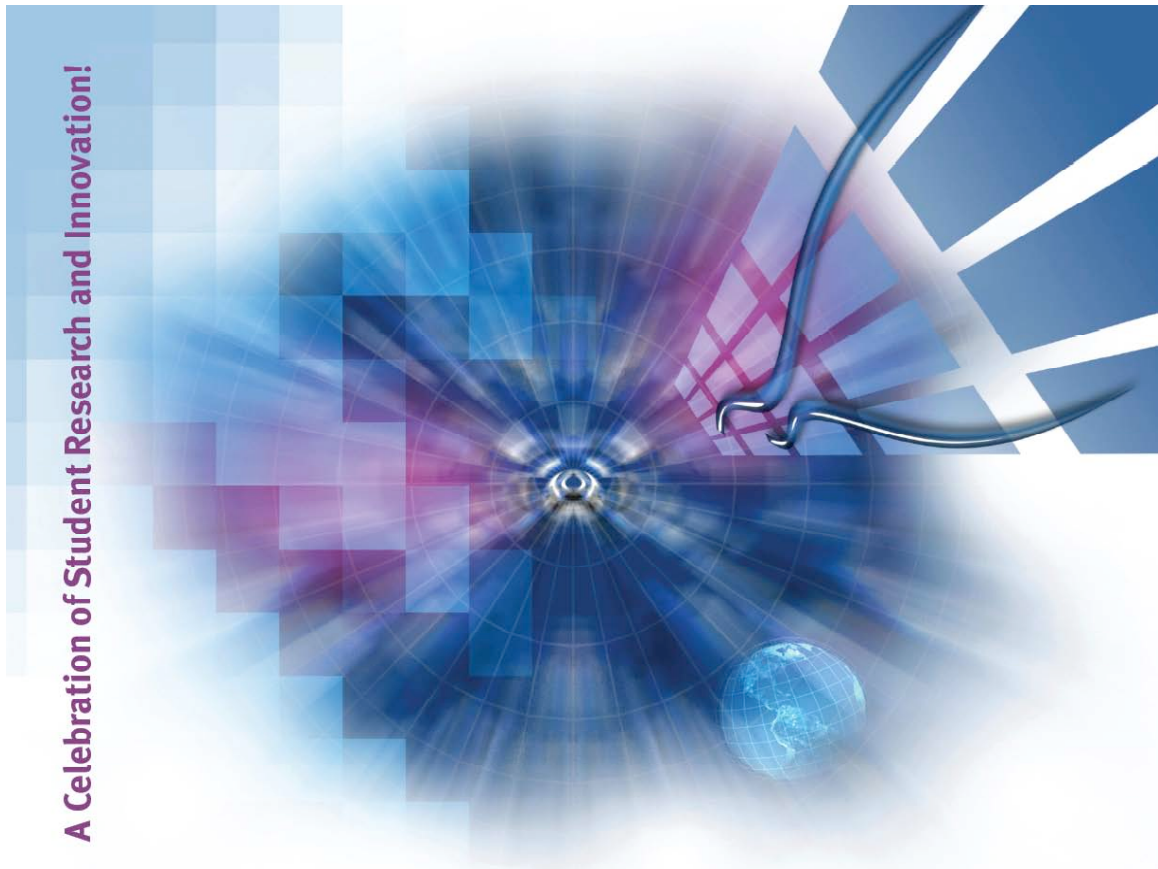


A Celebration of Student Research and Innovation!



TRU Undergraduate Student Innovation & Research Conference

MC92356

MARCH 19-20, 2010

PROGRAM

THOMPSON RIVERS  UNIVERSITY

FRIDAY, MARCH 19, 2010

**11:30-12:30 pm – Discovery Luncheon, Panorama Room
(Sponsored by NSERC)**

12:30-5:30 pm – Science Posters, Panorama room

**3:00-5:30 pm – Opening Reception and Displays,
International Building Atrium**

6:00-10:00 pm – Conference Banquet, Culinary Arts Cafeteria

**6:00-7:00 pm Cocktail hour and presentation on
“Sustainable Dining” – NRS students**

**7:00-9:00 pm – Dinner featuring sustainable regional menu
prepared by Level 3 Culinary Arts students**

**9:00-10:00 pm – Dessert Theatre
An excerpt from “UNITY (1918)” by Kevin Kerr
performed by TRU Performing Arts students,
directed by Heidi Verwey**

What happens when fear comes home to live, and a town turns on itself? The play, set in the Saskatchewan town of Unity, is a vivid recounting of the effects of the Spanish Flu epidemic in the final days of WW I. Written by Kamloops own Governor General’s Award winning Kevin Kerr, *Unity (1918)* is a surprisingly funny tale of devastating loss and bittersweet ties on the Canadian prairies

Student Cast:

**Beatrice-Lucy Pratt Johnson
Sissy-Katie McKee
Sunna-Dianna Springford
Hart-Michael Hogg
Michael-Grant Kowaleski
Glen-Bradley Munro
Mary-Kelsey Gilker
Rose-Kathleen Dobson
Doris-Chelsea Isenor
Stan-Dan Erickson
Ardele/Ted-Kari Larson**

**Technicians:
Stage Manager
Cheryl Delling**

**Assistant Stage Managers
Allysha Fisher
Brigitte Ganger**

FRIDAY 12:30-5:30 pm – Panorama Room

Science Poster Session

- | | |
|---|--|
| Tory Anchikoski
Biology Honours | <i>The effect of eutrophication on the abundance of snails and the frequency of amphibian deformities</i> |
| Elizabeth Andruson and Natasha Pitt
Chemistry | <i>Synchrotron analysis for structural elucidation of metal-lantibiotic complexes</i> |
| Brennan Arduini
Chemistry 448 | <i>Separation and detection of four closely related lantibiotics using liquid chromatography/mass spectrometry</i> |
| Marisa Azad
Biology Honours | <i>Design and bioactivity of α-helical antimicrobial peptides with N-terminal glycine "caps"</i> |
| Amy Bos
Biology 448 | <i>The influence of abiotic factors on the distribution and abundance of <i>Serpular columbiana</i> in Barkley Sound, B.C.</i> |
| Kyle Burns
Chemical Biology Honours | <i>Isolated <i>Lupinus albus</i> cells infected by <i>Bradyrhizobium lupini</i></i> |
| Hazel Cameron-Inglis
Biology Honours | <i>To bee or not to bee: on pollen limitation and reproductive mode in an early flowering buttercup</i> |
| Jared Curle
Chemistry 448 | <i>Interaction of lantibiotics with transition metals: An electrospray ionization mass spectrometric study</i> |
| Alexa Daneluk
Biology 448 | <i>The search for new antimicrobial agents in Wells Gray Provincial Park's cave soil</i> |
| Brittany Dever
Chemical Biology Honours | <i>Binding studies between lantibiotics and divalent transition metals using affinity capillary electrophoresis</i> |
| Arvin Dwarka
Chemical Biology Honours | <i>Identification of a gender-specific marker in the Dwarf Mistletoe (<i>Arceuthobium americanum</i>) using random amplified polymorphic DNA (RAPD) analysis</i> |

FRIDAY 12:30-5:30 pm – Panorama Room

Natasha Hayden Chemical Biology Honours	<i>Binding characteristics between lantibiotics and transition metals by affinity capillary electrophoresis and the method of continuous variation</i>
Trevor Hedges Biology 448	<i>LC-MS analysis of conjugated linoleic acid from beef samples raised on different production systems</i>
Nicole Heim Biology 448	<i>Factors affecting productivity of Western Burrowing Owls (<i>Athene cunicularia hypugaea</i>) in the Nicola Valley Region of British Columbia</i>
Ian Heppner Chemistry 448	<i>Liquid chromatography–mass spectrometry method for the determination of catechins in tea</i>
Adam Hockin Natural Resource Science Honours	<i>Litter decomposition rates along a grassland to forest ecocline</i>
Silver Irvine Chemistry 448	<i>Cation Analysis of Saline Soils</i>
Dustin Jones Chemistry 448	<i>Separation of indolicidin alanine derivatives using capillary electrophoresis</i>
Samantha Keller Chemistry 448	<i>Capillary electrophoresis frontal analysis of interactions between lantibiotics and cholesterol</i>
Kayla Kirechuk Biology 448	<i>Developing a stable, target-protein producing cell line for use in future RNA interference studies</i>
Carley MacIntyre Biology Honours	<i>RNA interference as a tool for studying lipid storage in <i>Drosophila</i> tissue culture</i>
Lyssa Martin Biology 448	<i>Evaluating the effects of kinetin and auxin concentration on <i>Arceuthobium americanum</i> cell cultures</i>
James Matthews Biology Honours	<i>Cloning and sequencing of Rhodococcal genes involved in organo-sulfur metabolism</i>

FRIDAY 12:30-5:30 pm – Panorama Room

Alysa McCall Biology Honours	<i>Water as a limiting factor for deer mice (<i>Peromyscus maniculatus</i>) in a semi-arid environment</i>
Andrew Owusu Biology 448	<i>Extraction of proteins from Dwarf Mistletoe: A basis for gender differentiation and comparison</i>
Megan Perkins Chemistry CUEF	<i>Optimization of extraction and analysis of gluco-sinolates for species within the Brassicaceae family</i>
Tijan Pinnock Biology Honours	<i>Cloning sequencing and expression of a gene believed to code for arylsulfatase in JVH1</i>
Corey Roberts-Reynolds Biology Honours	<i>Effect of landscape structure on the movement behaviour of two terrestrial Isopod species (<i>Armadillidium vulgare</i> and <i>Porcellio scaber</i>)</i>
Amanda Schmidt Biology 448	<i>Grassland ant species over a productivity gradient in Lac du Bois Provincial Park and surrounding areas</i>
Aubrey Shannon Biology 448	<i>Investigation of KPC-type carbapenemase production in strains of <i>E. coli</i> and <i>K. pneumoniae</i> from RIH</i>
Lucie Stofanik Biology Honours	<i>Characterization of genes used by <i>Rhodococcus</i> sp. strain JVH1 in the desulfurization of PFPS</i>
Thomas Walkem Biology 448	<i>Meat composition from grass-fed beef cattle grazing native range grass in the southern Interior of British</i>

FRIDAY 3:00-5:30 pm – IB Atrium

Visual Displays and Posters

**Andrea Baigent, Kyle Boyd,
Conrad Hergott, Tristan
Hopkins, Paul Muzillo,
Tiffany Peters and Clint Sully**
Geography

Fantasy walks through global small cities

Scott Foubister
Physics CUEF

*Using an inverted pendulum as an instrument for control
theory research and education*

Ann Hanson
Journalism

*Aboriginal self government and the Indian Act:
A contradiction in terms?*

Sara Impey Visual Arts

“Amalgamated Me”

Brad Kempster
Psychology

*Implications of reliability and validity measures
concerning a word completion task*

John Kennedy
Physics 448

Microbial Fuel Cell

Susan Kinnburgh
Mathematics

Ergodic Theory

Stephanie Lauer
Natural Resource Science

Sustainable Seafood Choices

Brady Nelson
Respiratory Therapy

*The DI, KDI and magnitude of blood pressure in
obstructive sleep apnea*

Jennifer Palma
Psychology

Beliefs in Dangerous Worlds

Donna Simon
Social Work

International Adoptions

Laura Teshima
Mathematics

A survey of particle swarm optimization

**Max Winkleman and
Karmen Fisch**
Psychology,
Williams Lake

*Olympic year impact on leisure-time physical activity
rates within and across Canadian Provinces and
Territories: A transdisciplinary and complex
phenomenon*

**Shane Zanella and Nathan
Green**
Physics 448

*Design, Construction and Evaluation of a
Plasma Speaker*

SATURDAY, MARCH 20

11:15 am - 12:30 pm - Session 2

IB 1020 - Potpourri

Becoming an employer of Choice - **Melissa VanderSpoel, Ruvimbo Chinyangana, Ali Pink and Kyri Coulombe** (Human Resource Management)

"Amalgamated Me" - **Sara Impey** (Visual Arts)

My student experience as the designer of the 2010 YWCA/CHBA Green Dream Home - **Jody Martens** (Architectural and Engineering Technology)

Molecular Gastronomy - **Lillie Turner, Scott MacKenzie and Shannon Devries** (Culinary Arts)

12:30-1:30 pm - Lunch Break – Panorama Room

1:30-2:40 pm - Session 3

IB 1020 - BC Communities

Urban Hens: An arts based exploration of youth activism in a small city - **Bonnie Klohn** (Geography)

The more we get together: Anywhere theatre as a shared cultural experience - **Jeremy Avery** (Theatre)

The importance of community newspapers in small communities - **Gregory Sawisky** (Journalism)

The paradoxical presentation of urban areas in British Columbian literature - **Ian Lauder** (English)

IB 1019 - Mathematical & Computational

Signal enhancement of antibiotics using capillary electrophoresis - **Brittany Dever** (Chemistry)

Study of the effects of heavy water on acid-base equilibria - **Tiffany Fransbergen** (Chemistry)

Ergodic Theory - **Susan Kinniburgh** (Mathematics)

A survey of particle swarm optimization - **Laura Teshima** (Mathematics)

SATURDAY, MARCH 20

2:45-3:45 pm - Session 4

IB 1020 - Philosophical Views

The theatre of Aboriginal storytelling- **Norah Gillis** (Canadian Studies)

From Nietzsche to Huxley: An exploration of the literary worldview - **Luke Kernan** (Philosophy)

Transcending natural disaster and despair: An argument for the existence of god-
Tara Chambers (Philosophy)

IB 1007 - Contradictions & Conflict

A climate of conflict— An analysis of the military industrial complex and its effects on the environmental crisis - **Alexander Dirksen** (Political Science)

The trouble with Huck: doing good never felt so bad - **Ellen Ramsay** (English)

Aboriginal self government and the Indian Act: A contradiction in terms?-
Ann Hanson (Journalism)

IB 1019 - Forests & Grasslands

*Water as a limiting factor for deer mice (*Peromyscus maniculatus*) in a semi-arid environment* - **Alysa McCall** (Biology)

Throughfall variability in Mayson Lake forest stands - **Andrew Pillar** (Geography)

To bee or not to bee: On pollen limitation and reproductive mode in an early flowering buttercup - **Hazel Cameron-Inglis** (Biology)

3:45-4:00 pm - Light Refreshments - Atrium

SATURDAY, MARCH 20

4:00-5:00pm - Session 5

IB 1007 - Economic Forecasting

*Canadian poverty, geography, gender and age: A paper in applied forecasting–
Brant Shapka* (Economics)

*Forecasting distance and online enrolments-A methodical approach to predicting
future enrolment for TRU Open Learning - Melissa Schuurman* (Economics)

Forecasting of new car sales in Canada-Maria Bezymyannya (Economics)

*Olympic year impact on leisure-time physical activity rates within and across
Canadian provinces and territories - Max Winkelman & Karmen Fisch*
(Psychology, Williams Lake)

IB 1019 - Cells & Genomes

*Cloning and sequencing of Rhodococcal genes involved in organo-sulfur
metabolism - James Matthews* (Biology)

*Identification of a gender specific marker in the Dwarf Mistletoe (Arceuthobium
americanum) using Random Amplified Polymorphic DNA (RAPD) analysis –
Arvin Dwarka* (Biology)

Isolated Lupinus albus cells infected by Bradyrhizobium lupini - Kyle Burns
(Biology)

*Evaluating the effects of kinetin and auxin concentration on Arceuthobium
americanum cell cultures - Lyssa Martin* (Biology)

5:00 pm-Session 6 & Closing Reception- Panorama Room

5:30 pm - Creative Writing Open Mic

“At the mercy of the bullets: A trip to 100 Mile” - Will George

“Worlds”- Carmen Wojdak

“Making love”- Jessica Hill

Closing Reception & Awards