

Office of the Vice
President Research



frontier

A Journal of Research and Discovery → Issue 05 → Fall/Winter 2008

EAST MEETS WEST

The impact of UBC research on Asia

LOST IN TRANSLATION

*Unraveling cultural interpretations
of international law*

SERENDIPITOUS SCIENCE

*A rare pharmaceutical discovery
offers hope to thousands*

THE POLITICS OF PRESERVATION

*Why preserving authentic digital
records matters*

04 Mercury rising

According to Marcello Veiga, artisanal gold mines are rife with opportunity for migrant workers – and exposure to environmental and health risks

06 Culture clash

The interpretation of international law by different cultures spurs disputes over human rights and trade. Pitman Potter is seeking a common ground

08 Leashing Leishmaniasis

A serendipitous discovery by Kishor Wasan could give hope to thousands afflicted with a fungal infection in North America and a parasitic infection in the developing world

11 The air up there

Delhi's reputation for poor air quality is infamous. Milind Kandlikar is working to expose its root causes

12 The future of fir

The alarming decline in yield among fir trees in China could have severe economic consequences; it's a trend Adam Wei is looking to reverse

14 Shadow of doubt

Why organizations and governments are approaching Luciana Durantí for help on preserving authentic digital records

16 Grape expectations

Wine production is on the rise in B.C. How Hennie van Vuuren and Steven Lund are improving winemaking techniques

18 Breaking the surface

Find out how Andrea Damascelli is breaking new ground in harnessing the power of superconductors

20 Word by word

After two decades at the UBC Press, Jean Wilson shares her insight on the future of scholarly publishing in Canada

Cover photo > GMB Akash/Panos
This page > Veer

EYES ON ASIA

From the great Mongolian plains to the skyward reach of the Himalayas, from Arctic winter to tropical monsoon, from the dawn of humanity to present day, Asia hosts an unparalleled diversity of peoples, places and cultures.

The world's largest and most populous continent has borne witness to the great migrations of human history, offering a vast canvas upon which we have etched an age of exploration, conquest, civilization and innovation. This history continues unabated today, as the world witnesses the emergence of two of the world's strongest developing economies in India and China.

As East and West seek to reconcile past differences, a new common understanding emerges. Opportunities abound for international collaboration and innovation, for the exchange of knowledge, and for partnerships that seek to solve common problems amid myriad cultural contexts. Like pebbles in a pond, the five UBC researchers profiled in the following pages are creating ripples of discovery and understanding that resonate outward to touch lives across Asia and beyond.



A MESSAGE FROM THE VICE PRESIDENT RESEARCH

British Columbia is often heralded as Canada's gateway to Asia. International trade with our partners across the Pacific Ocean is thriving, and our province's local culture – as well as that of UBC – is infused with the traditions of thousands of new Canadians who have immigrated from all over Asia, especially China. It is no surprise, then, to find UBC engaged in a number of collaborative research projects with Asian partners. What is surprising is the scope of this research, both academically and geographically.

In this issue of *frontier* we venture far beyond the Pacific Rim to profile five UBC researchers working in Asia to improve human health and potentially save lives, reduce environmental damage, bolster trade and improve international relations. Each of these interdisciplinary research projects touches on a very human theme – not of North American know-how saving the world, but rather of collaborations between peers who seek to address similar issues despite diverse cultures and political ideologies.

Closer to home, the Canadian wine industry – along with its global counterparts – stands to benefit from a UBC-led international research collaboration that aims to improve wine production at the molecular and biochemical level. Another global research project, also based at UBC, seeks to protect and maintain a broad spectrum of digital records in the face of rapidly advancing data storage technology. Finally, this issue of *frontier* celebrates the symbiotic relationship between publishing and research, highlighting the

contributions of UBC Press and Canada's scholarly presses toward furthering knowledge.

Just as Vancouver is considered a gateway to Asia, university research provides a gateway to discovery, understanding and innovation. This issue of *frontier* explores the impact of these research efforts, both at home and half a world away.

Dr. John Hepburn,
Vice President Research

SUBSCRIBE

For your complimentary subscription to *frontier*, please call 604.822.1995 or email info.frontier@ubc.ca

frontier www.research.ubc.ca
A Journal of Research and Discovery

Published By Office of the
Vice President Research,
The University of British Columbia

Fax 604.822.6295

Email info.frontier@ubc.ca

Writing and Design kaldor.com

Circulation 4,000

All rights reserved

Printed in Canada



Mixed Sources
Product group from well-managed
forests, controlled sources and
recycled wood or fiber
www.fsc.org Cert no. SW-COC-1563
© 1996 Forest Stewardship Council

This magazine is printed on 10% post-consumer recycled fibre that is FSC certified and uses 187 lbs. of post-consumer waste instead of virgin fibre.

*Environmental savings: Number of trees saved 1;
Water (gallons) 112; Solid waste (lbs.) 102;
Greenhouse gases (lbs.) 185; Electricity (kWh) 146;
Hazardous Air Pollutants (HAPs), Volatile Organic
Compounds (VOCs) and Absorbable Organic
Compounds (AOX) combined (lbs.) 1.*

Publications mail agreement no. 41268533
Return undeliverable Canadian addresses to:
University of British Columbia
Office of the Vice President Research
Room 224, 6328 Memorial Road
Vancouver, BC Canada V6T 1Z2