

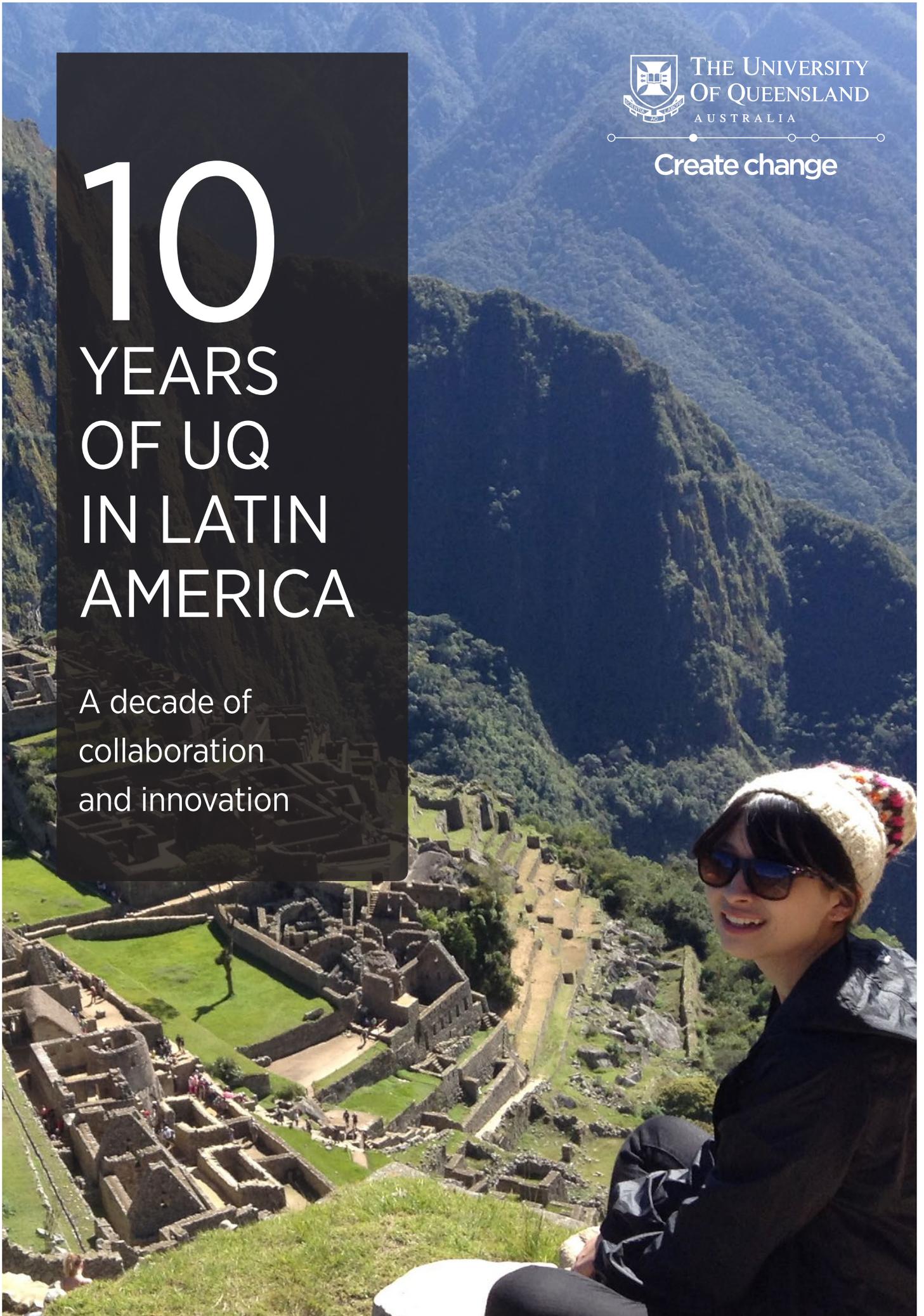


THE UNIVERSITY
OF QUEENSLAND
AUSTRALIA

Create change

10 YEARS OF UQ IN LATIN AMERICA

A decade of
collaboration
and innovation



Message from the Vice-Chancellor and President

This year, we are delighted to be celebrating a decade of Colloquiums – now 10 years since UQ first gathered dignitaries, researchers, students, and industry representatives to showcase, celebrate, and explore collaborations between Australia and Latin America. However, our long and proud history with Latin America goes back much further.

Since the early 1980s, UQ has fostered engagement with Latin American universities, government agencies, corporate networks, and non-governmental organisations, with representatives on the ground to build UQ's profile and to support alumni. As a result, we've welcomed an increasingly large cohort of Latin American students on to our grounds in the past few years, and a very active Latin American Student Association ensures the vibrant colours, sounds, and tastes of the region are never too far away.

Since this event began, we have witnessed significant changes to the levels of partnership and engagement between Australia and Latin America. Throughout the past decade, the number of Latin American students enrolled across the Australian education system has more than doubled, higher education enrolments have boomed, and PhD candidates have tripled.

This is something we are enormously proud of.

Successful innovation almost always relies on national and international partners outside universities who understand the needs of their communities and follow through on promises. This desire to encourage and enable partnerships between our two growing regions is a key driver of this event, and of UQ's global strategy.

As we consider economic development in the next five to 10 years, it's clear other regions, including ours, mirror the priorities and challenges for Latin America. We are both working towards good governance, high level education for all citizens, food security, and sustainable energy. We are all aiming to up-skill our workforces, and to build capabilities.



I can tell you, with confidence, UQ is well positioned to support solutions to these challenges.

You can count on UQ to be an important part of the Australian-Latin American future; we are already heavily engaged in the region, and we look forward to expanding our academic partnerships, technological innovations, and trade relations with such an opportunity-filled part of the world.

I would like to extend sincere thanks to the Australian-Latin American Business Council (ALABC), the Department of Foreign Affairs and Trade, our speakers, guests, and UQ colleagues for their contribution to this Colloquium. This event presents a unique opportunity to celebrate previous successes, and exchange ideas for the future that will bring mutual benefit to our regions.

I would also like to take this opportunity to thank all of the supporters, speakers, and collaborators who have been involved in past 10 years. Without this enthusiasm for building engagement with Latin America, the UQ-Latin American Colloquium would not have been possible.

Thank you.

Professor Peter Høj
Vice-Chancellor and President

UQ world rankings:



UQ-Latin America: Decade snapshot

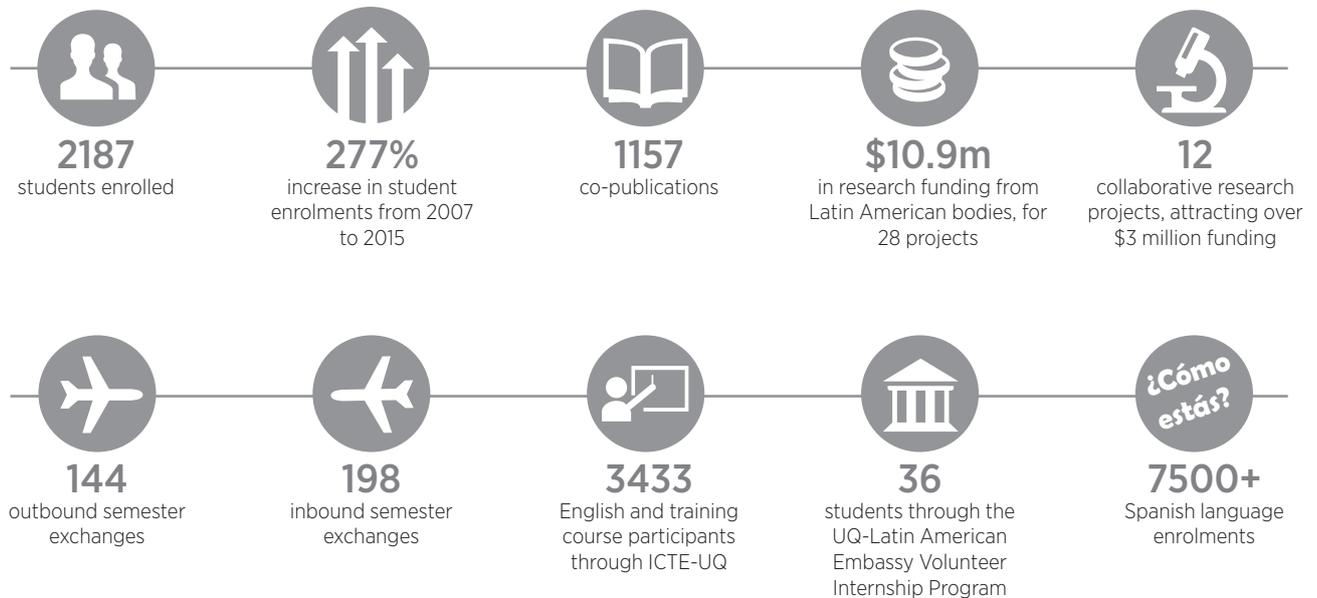
Latin American and Caribbean students since 2007:



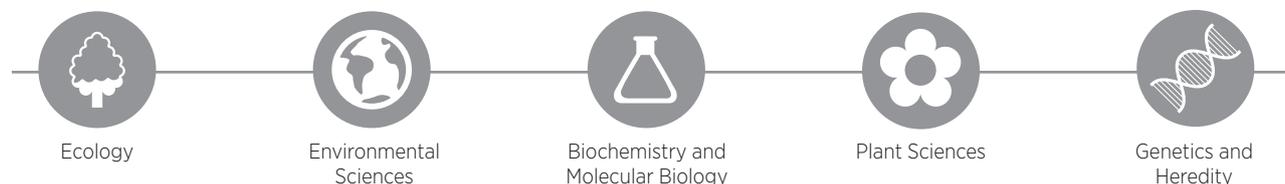
Latin America and the Caribbean is home to:



Engagement by numbers, since 2007:



Top co-publishing research areas:



Australia and Latin America

Highlights of our regional cooperation throughout the past decade



1st Australian-Latin American FTA signed

The Australia-Chile Free Trade Agreement (FTA) was signed in 2008 and came into effect the following year.



Mercosur cooperation enhanced

In 2010, the Joint Declaration on Further Collaboration between Australia, New Zealand, and Mercosur was issued.



Australian Embassy reopens in Lima, Peru

In 2010, Australia reestablished its diplomatic presence in Peru. The original embassy had opened in 1968 and was closed in 1986.



1st Latin America Down Under Conference

In 2012, DFAT, with Austrade and the Department of Resources, Energy, and Tourism, supported this conference, which has since become a key mining event.



1st visit to Brazil by Australian Prime Minister

In 2012, Prime Minister Julia Gillard attended the UN Conference on Sustainable Development, and signed a Strategic Partnership with Brazil.



1st Central American resident embassy opens

In 2012, El Salvador opened an embassy in Canberra, followed by Guatemala in 2014.



Australia becomes observer of the Pacific Alliance

In 2012, Australia achieved observer status at the Pacific Alliance. In 2015, Foreign Minister Julie Bishop attended the 10th Summit of the Pacific Alliance in Peru.



Australia and Mexico meet for trade and development talks

In 2014, Foreign Minister Julie Bishop met President Peña Nieto, and attended the 1st High-Level Meeting of the Global Partnership for Effective Development Cooperation.



1st Australian business mission to Cuba

In 2016, Special Envoy for Trade Andrew Robb led Australia's first business mission to Cuba, where there is increasing interest in trade, investment, and tourism.



Australia and Mexico diplomacy hits 50 years

In 2016, Mexican Deputy Foreign Minister Carlos de Icaza visited Australia to open an exhibition celebrating the 50th anniversary of diplomatic relations.



The Australia Now festival takes place in Brazil

In 2016, the largest Australian cultural event to ever take place in Latin America showcased creative talent through more than 100 performances.



1st visit to Latin America by Australian Governor-General

In 2016, Sir Peter Cosgrove visited Mexico, Brazil, Uruguay, Argentina, and Chile, as well as the Olympic and Paralympic Games in Rio de Janeiro.

UQ and Latin America

UQ has enjoyed a long and successful bilateral relationship with Latin America dating back to the early 1980s. With strong research and industry links already in place, UQ's goal for the next five years is to further develop priority partnerships with Latin American government agencies, industry, and education institutions.

UQ is the only university in Queensland to offer a minor in Latin American Studies as part of its undergraduate program in the Faculty of Humanities and Social Sciences. By recognising such a colourful, culturally rich, and diverse region of the world, this exciting new field of study will enable students to engage with Latin America in a productive and meaningful way.

It is not only the student cohort that is benefiting from the UQ-Latin America alliance. Industry is also being improved through research and development at all levels of the supply chain.

With energy and resources of critical importance to many Latin American economies, research into sustainable mining practices is high on the agenda. The Sustainable Minerals Institute (SMI) has established an International Centre of Excellence in Chile to exchange research and technology with the world's largest copper producer CODELCO (pg 8-9). Meanwhile, the Institute of Continuing & TESOL Education (ICTE-UQ) is helping Chile's mining regions improve English language capacity – an essential building block towards internationalisation (pg 12-13).

The School of Earth Sciences has joined forces with Brazilian mining giant, Vale, to turn waste into economically viable materials, while also reducing risk to the environment (pg 10-11). And, for those who make a living in the fields rather than in the mines, the Queensland Alliance for Agriculture and Food Innovation (QAAFI) is looking to multi-cropping as a way to improve the productivity and profitability of maize and wheat systems (pg 14-15).

An initiative to support the development of formalised collaboration between UQ and Brazil's São Paulo State University (UNESP) has been awarded \$10,000 funding under the UQ Global Strategy and Partnerships Seed Funding Scheme. The initiative, "AgCollab – Enabling state-

of-the-art agriculture projects between UQ and UNESP", will involve a series of technical workshops to be held later in the year to explore technology in the areas of agricultural genomics, animal nutrition, agronomy, and animal health and biosecurity. The second activity is a series of workshops, bringing together UQ and UNESP scientists working in the four discipline areas to develop collaborative projects. It is anticipated these workshops will result in the development of six major UQ-UNESP projects and recruit RHD students for joint supervision. The initiative is led at UQ by QAAFI Director Professor Stephen Moore, and involves the School of Agriculture and Food Sciences (SAFS), and the School of Veterinary Science (SVS). QAAFI, SAFS, and SVS each contributed \$5000 to the initiative, and UNESP has allocated \$30,000 to host the workshops and cover local travel and accommodation for UQ participants.

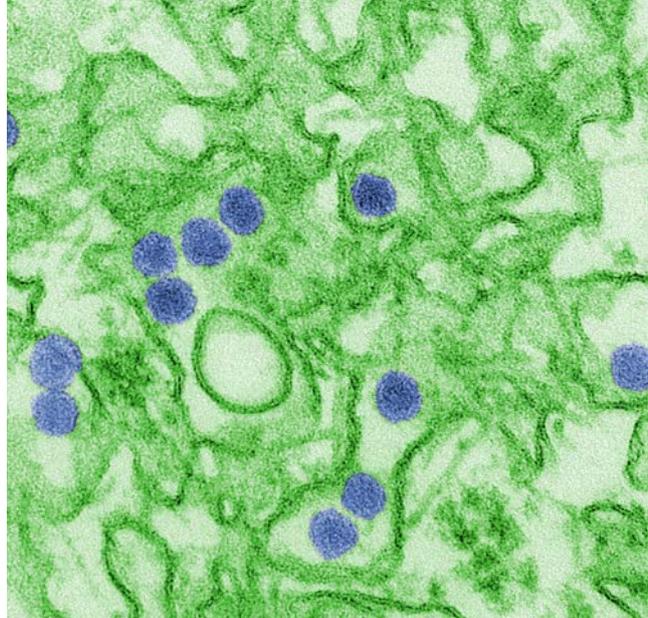
UQ's Triple P Positive Parenting Program has been implemented across Latin America. Developed by UQ and distributed under exclusive licence by Brisbane-based Triple P International, the world-renowned initiative is designed to help parents understand their child's development and behaviour, and to encourage positive family relationships. A proposal for a population-level roll-out is currently being evaluated by the Panamanian Government, and collaborations have been established with Universidad Latina around a body of Triple P research and possible student exchanges. In Brazil, discussions are underway with the Mayor of Sorocaba (São Paulo) about funded group Triple P evaluation in low income neighbourhoods, while, in Chile, UQ is collaborating with Universidad Los Andes and Fundación Cuida Futuro to examine Triple P effectiveness in a local, culturally-appropriate context. Relationships have also been established with Costa Rica's Fundación DEHVI for an evaluation project, while a proposal project is being developed to train 18 local non-government organisations.

Triple P program founder and UQ Parenting and Family Support Centre Director Professor Matt Sanders said the initiative is just one example of how collaboration between UQ and Latin America is making life easier, safer, and happier for millions of people.

"The projects UQ and Latin American universities, governments, and industries have been involved in throughout past decade have been recognised on a global scale. The Triple P program was represented at the Global Summit on Child Education, held in Costa Rica earlier in the



Above: Confluence of the Iguazu and Parana rivers, Misiones, Argentina | Right: Zika virus



year, to examine the potential role of engaging parents,” he said, adding Triple P International completed its first training with Mexico’s Fundación Techo Comunitario this year to assist communities in Juárez City, Chihuahua, to reduce crime and violence.

With 56 formal research and academic agreements with federal and state government agencies, universities, and private companies across the region, the scope of UQ-Latin American engagement is extensive and diverse.

Agreements exist with 13 institutions in Brazil, 10 in Chile, five in Peru, and four in both Colombia and Mexico. There are also agreements with institutions in Cuba, Ecuador, El Salvador, and Uruguay. The output in the field of biochemistry and molecular biology is particularly strong, with exclusive publications also covering biotechnology and applied microbiology, marine and freshwater biology, veterinary sciences, and environmental sciences, among other categories.

Since 2007, UQ has collaborated with 11 Latin American organisations on 12 research projects – six active in 2016 – attracting more than \$3 in million funding. What’s more, 28 projects have been funded by Latin America and Caribbean-based organisations including CIMMYT, Templeton World Charity Foundation, Codelco, Minera Escondida Ltda, Vale, Complejo Metalúrgico Altonorte Glencore, SuKarne, Dow Brazil, BHP Chile, and Fundação Arthur Bernardes. Seven projects are active in 2016.

Ten years of strong collaboration in Latin America has been recognised in the most recent round of Council on Australia Latin America Relations (COALAR) grants. Of the 14 grants awarded, UQ was the recipient of four – testament to the University’s commitment to enhancing Australia’s economic, political, and social relations with Latin America. The four recipients are as follows:

Establishing a Centre of Excellence in Sustainable Mining in Bogotá

This project will form the initial phase of the establishment of a Centre of Excellence in Sustainable Mining as a joint venture between SMI, Universidad de los Andes (UA) in Bogotá, and the Colombian Government. Through the development and delivery of four collaborative research projects, the Centre will target Colombian government, mining industry, and education sectors as they face major safety, resources, and organisational challenges.

Building capacity for Zika virus control in Colombia and Brazil

As Zika virus infections continue to spread throughout Brazil and Colombia, this partnership with UQ, the Universidad Nacional de Colombia, Colombia’s National Institute of Health, Brazilian R&D institution Fundação Oswaldo Cruz, and Brazil’s Ministry of Health, will help local authorities will deliver much needed research training and effective control. This project will enable knowledge transfer, which will assist local authorities identify hot-spots and communities most at risk of infection. The project will also be directly beneficial to Australia by allowing researchers to have a better understanding of the factors that need to be taken into account should Zika virus come on-shore.

Healthy river catchment management training seminars

To support the changing economic conditions in Argentina following the recent change of government, and Uruguay’s small but attractive and stable market, UQ will deliver a series of interactive training seminars in Argentina and Uruguay on how to evaluate, monitor, visualise and communicate the health of a specific river catchment or bay. This builds on the 2015 UQ Water Mission to both countries, which identified collaborative opportunities to fill knowledge gaps and enhance economic development based on clean and secure water sources for mining, agriculture, and expanding urban populations.

4th Chilean Graduate Conference: Advanced knowledge to enhance Chile’s development

For the first time, the UQChile association will host the Chilean Graduate Conference in Australia. It represents a series of efforts of the Chilean Graduate Associations to expand, develop, and enhance academic and industry linkages between Chile and Australia, and is already receiving support from UQ Global Engagement and the Chilean Embassy in Australia.

The project will congregate researchers, students, entrepreneurs and Chilean government officers providing a valuable space for collaboration and discussion among them. With the goal to identify and promote research collaborations and foster Chilean development, this is an important relationship-building event, and will support closer engagement between the two county’s academic institutions and government.

Innovation in sustainable mining

Globally, the energy and resources industries are in the midst of significant economic, environmental, and social challenges. However, the transfer and exchange of innovative research and technology between UQ and Latin America is opening up new opportunities for the world's largest copper producer, Chile.

UQ's long and rich history of mining-related research and education is being exported to Latin America through the Sustainable Minerals Institute's (SMI's) International Centre of Excellence (SMI-ICE-Chile). The establishment of the Centre followed UQ's successful application for funding through the Chilean Government's Economic Development Agency (CORFO), under the initiative "Attraction of International R&D Centre for Competitiveness". The partners in the Centre, UQ, JKTech South America S.p.A (JKSpA), and the Universidad de Concepción (UdeC) have developed a multi-year platform for research and capacity building that will engage with industry, government, universities, research organisations, and communities to address the major challenges facing the country's minerals sector.

Knowledge sharing will deliver demonstrable benefits to the Chilean people. As the country produces more than a third of the world's copper, identifying productivity improvement pathways through new technologies and optimising efficiencies in procedures and processes will help ensure mining continues to provide the revenue and opportunity for the economy.

Beyond the research programs in the production area that are developing the next generation of concentrators

and smelters, the Centre also has a major emphasis on the environment, and specific projects around tailings, water and energy are in the pipeline. Given the high-profile of global incidents associated with mine tailings storage facilities in recent history, a greater understanding the technical, environmental, and community aspects of managing facilities is paramount. The Centre is currently engaged with companies and research partners, including Fundación Chile, to explore how environmental, health and safety, and community risks can be mitigated.

The creation of such a Centre by the Chilean government, co-supported by industry sponsors, signals an era of improved prospects for the country as a whole, including the tens of thousands of Chileans working in the sector.

According to SMI's Acting Director Professor David



Above: signing agreement for SMI-ICE-Chile with Chilean Government

Top: Torres del Paine, Patagonia, Chile



UQ is one of the first universities in the world to sign an agreement with **CODELCO**, the world's largest copper producer

Mulligan the Chilean mining industry is poised to develop the opportunity to establish itself as a world leader in sustainable mining.

“SMI-ICE-Chile will build upon extensive expertise that already exists in Chile in many areas of mining research, and UQ’s involvement and contribution through the Centre will be a facilitating mechanism for Chile to generate a strong international profile in the area of sustainability,” he said.

“Importantly, the Centre of Excellence will progressively attract, train and develop an increasing number of highly skilled Chilean professionals across a spectrum of disciplines – ensuring intellectual capital will remain within the country.”

The Centre will be established as a world-class platform for the commercialisation of SMI-ICE-Chile research. With a collaborative framework and a proven model of good governance, Professor Mulligan said the initiative deepens the productive relationship between university centres and private industry stakeholders.

“By extending SMI’s business model from Australia, the Centre will be self-sustaining and will continue to grow and extend its reach well beyond the end of the current CORFO co-contribution in 2023. The involvement of JKTech, combined with SMI’s globally-tested and recognised technology transfer frameworks, will see an introduction of multiple and multi-faceted pathways and new dynamic approaches to research commercialisation and technology implementation in Chile,” Professor Mulligan said.

The National Copper Corporation of Chile (CODELCO) – the world’s largest copper producer – is among the companies actively engaging with the Centre and UQ across a number of areas. There are currently collaborative projects underway

or in development that include diagnosing issues and identifying potential points of intervention to improve tailings and water management practices, hydrogeological investigations to minimise risks of contamination pathways to groundwater, and building better predictive models from climate and hydrology datasets to allow climate-resilient water supply options for mines to be developed.

In a collaboration with TAFE Queensland, SMI-ICE-Chile and CODELCO are close to finalising an agreement that will see a new training centre established and the implementation of a Human Capital Training Model that will play a key role in the transition of the Chuquibambilla copper mine from what is now the largest open-pit copper mine in the world by excavated volume (and the second deepest) to an underground development.

SMI researchers working with SMI-ICE-Chile recently presented Australia’s response to the *Chile Technological Roadmap in Mining: The UQ experience* at an event in Santiago co-organised by the National Mining Program Alta Ley and UQ, in collaboration with Austrade and the Centre for Copper and Mining Studies (CESCO).

“Other speakers included Chile’s Vice-Minister for Mining and the Australian Ambassador to Chile and, with an audience of more than 220 from government, industry, and academe, this was an important showcasing and exposure of UQ’s strengths and value as a contributor to Chile’s progressive and future development of the sector” Professor Mulligan said.

“SM-ICE-Chile will bring new skills, experience, expertise, and networks into the Chilean innovation system – and the potential and opportunities of this collaborative relationship between UQ, the Chilean industry and associated ecosystem is far-reaching.”



Above: Inside a canga cave, photo by Dr Gerald Hartig | Below: Anicia Henne in the field | Right: photo by Dr Gerald Hartig

Microorganisms hold macro potential

UQ's School of Earth Sciences is involved with two \$2.5 million industry partnerships with Brazilian mining giant Vale, the world's largest iron ore and nickel producer.

The alliances were formed in 2012 to design and deliver world-class coal geosciences and geomicrobiology research, as well as education and training programs. The funding has seen two Vale-UQ Coal Geosciences and Geomicrobiology Laboratories established at UQ's St Lucia campus, and students have already recorded advances in coal basin analysis, mine safety, paleoenvironmental reconstruction, and in microbiology related to mining.

Knowledge sharing between UQ and Vale has significant scientific, economic, and environmental importance. Of particular interest to UQ's geomicrobiology researchers are biotechnological innovations that leverage natural processes – developments that have the potential to create a raft of new sustainable mining practices.

Led by Professor Gordon Southam, the Vale-UQ Chair of Geomicrobiology, microorganisms found in deposits from Vale's current operations are being investigated for potential industrial applications. With a goal of establishing field trials of promising technologies, Gordon and his team are mapping the microorganisms' genomes, and investigating mechanisms for optimising their metal processing functions.

Professor Southam is among a core group of UQ

geomicrobiology researchers who travel to Brazil annually. He said research and the pursuit of innovation is critical to a sustainable mining future.

"Visits to Brazil have focused on sampling Vale's properties to launch the research program, conference attendance to build the alliance network, and teaching a workshop on geomicrobiology at the Instituto Tecnológico Vale in Sustainable Development in Belém, PA, Brazil," Professor Southam said.

"Funding from Vale, which support School of Earth Sciences Postdoctoral Research Fellows Dr Emma Gagen and Dr Carla Zammit, has been leveraged against two ARC linkage projects that are supporting four PhD students, Heike Bostelman, Alan Levett, Anicia Henne, and Anat Paz."

One the research projects – "Bioleaching of copper in tropical systems" – is focused on bioleaching of chalcopyrite, to recover copper from sub-economic low-grade ore. Conventional mining processes are too energy-intensive to economically extract copper from low-grade ores. However, these waste ores are still subject to natural, bacterial leaching, which harm the environment. By removing key limitations in bacterial colonisation of metal sulphides, the UQ research team hopes to enhance bioleaching of low-grade ores.

The research has the potential to make these materials economically viable, while simultaneously reducing risk to the environment.

"It's a win-win scenario," Professor Southam said.

Researchers are investigating microorganisms found in deposits from **Vale's** current operations for potential industrial applications





Building up educators

With more than 375 million primary English speakers around the world, there is an imperative across Latin America for high quality language training. More and more Spanish and Portuguese native speakers are opting to learn English with the goals of studying abroad, widening job prospects, and becoming part of the global economy. But who teaches the teachers?

For more than a decade, UQ's Institute of Continuing & TESOL Education (ICTE-UQ) has worked with local university, government, and industry partners to build the capacity of English teachers throughout Latin America. Through language learning theory and methodology, applied to real classroom-based practice, ICTE-UQ has helped raise the standard of English language teaching throughout the region.

Established in 1981 as the first ELICOS (English Language Intensive Courses for Overseas Students) centre in Queensland, and operating from a single teaching room, ICTE-UQ has grown to become an award-winning global institute. Today, it offers a wide range of onshore and offshore programs and services to more than 6500 participants from more than 60 countries each year – and its portfolio is growing.

“The institute’s achievements throughout the past decade – and right back throughout its 35-year history – have been an exciting and diverse showcase of flexibility, ingenuity, and commitment to excellence in teaching, learning, and support services,” ICTE-UQ Deputy Director Phillip Fredericks said.

“A plethora of initiatives have come out of collaboration between ICTE-UQ and Latin American institutions. The story to date is impressive – but even more exciting is the promise of what’s to come as we forge new connections in such a dynamic region of the world.”

ICTE-UQ led UQ’s contribution to the Australian Government-funded Public Sector Linkages Program, “Andean Trilateral Project for Higher Education Governance and Institutional Strengthening” in Chile,

Ecuador, and Colombia in the fields of English Language Policy, TESOL Management and Capacity Building. The program consisted of roundtable discussions at UQ for senior ministry representatives followed by a series of professional development workshops in Chile and Ecuador for government and university staff.

After more than a decade of collaboration, ICTE-UQ maintains strong and mutually beneficial long-term relationships with partners, and is continuing to contribute to the development of English language teachers in Latin America.

Chile

ICTE-UQ has worked closely with the Chilean Ministry of Education’s English Opens Doors (EOD) Program to deliver English language and teaching methodology to more than 150 university students. Students who have completed the English for Specific Purposes: TESOL program have gone on to launch their own teaching careers with confidence, while others have since engaged in EOD training sessions, run throughout the country.

The UQ-Universidad Católica del Norte English Language Institute (UQ-UCN ELI) earned the support and recognition of EOD for being the first institute of its type in Chile to promote bilingualism – a national objective. As a joint-venture capacity development initiative, UQ-UCN ELI successfully delivered a range of projects to improve English language skills in Antofagasta, Chile, from 2008 to 2016. Xstrata (now Glencore) and BHP Billiton provided seed funding to establish the Institute which, in its eight years of operation, tailored programs for local communities, English teachers, government workers, and



those engaged in industry – including miners.

ICTE-UQ has also collaborated with not-for-profit organisation Fundación Minera Escondida from 2006 to 2012. The partnership saw a range of projects delivered for English language teachers, including a three-phase professional development program with pre-departure training in-country, along with an English and Methodology for TESOL Purposes program at UQ, and further training and monitoring of classroom teaching in Chile.

Ecuador

ICTE-UQ has delivered 10- and 12-week professional development programs sponsored by SENESCYT, as part of a national strategy to build science and technology capacity. The programs introduced 36 academics and English language teachers from public universities in Ecuador to a range of new methods and approaches, and included two intensive Content and Language Integrated Learning (CLIL) modules focused on teaching language and academic content simultaneously. Such programs have been an essential building block in improving the quality of English language teaching in public universities, and in preparing Ecuadorian students to pursue international study at postgraduate level.

Brazil

In 2014, ICTE-UQ delivered two intensive programs for academic staff from Universidade Federal de Viçosa (UFV) and the Universidad de Brasília – two of the country's biggest universities. The programs were developed to help internationalise the universities' curricula with English-language courses, as well as to attract international students from English-speaking countries and to prepare

Brazilian students for globally engaged careers.

UFV was sponsored by the US Government, and was one of three Brazilian universities to secure funds in the first round of 100,000 Strong in the Americas – President Obama's signature education initiative. With the goal of supporting a globally aware and culturally competent workforce, the initiative aims to increase the number of US students studying in the Western Hemisphere to 100,000, and the number of Western Hemisphere students studying in the US to 100,000 by 2020.

Colombia

In 2011, the National Ministry of Education invited ICTE-UQ to present at the inaugural Higher Education Institutions Conference on Improving Foreign Language Learning as part of the Government's "Quality Education: a Path to Prosperity" policy. ICTE-UQ presented on putting policy into practice, and how English supports professional development opportunities. A year later ICTE-UQ was invited back to present a teacher development workshop on "Maximising Mobility: Practical Tools and Ideas for the Digital Language Classroom".

Mexico

In 2004-2005, ICTE-UQ delivered a four-week English and Methodology for TESOL Purposes for the Secretaría de Educación Pública to train English language teachers in applied teaching methodology, and to enhance their own English language skills. The Institute also provided a series of workshops for 50 English language teachers from the state of Jalisco at the second Tlahtolli Seminar, in collaboration with the Secretariat of Education in Guadalajara.



Latin links, global issues

UQ and the International Maize and Wheat Improvement Center (CIMMYT) share a vital goal for the developing world: to foster the productivity and sustainability of maize and wheat cropping systems.

CIMMYT is an internationally funded, not-for-profit organisation that works to improve the productivity and profitability of farming systems, and to sustain natural resources.

Although headquartered in Mexico, CIMMYT has provided UQ with more than \$6.1 million in research grant funding for projects around the world – with active projects focused on sustainable and resilient farming systems in the eastern gangetic plains (Bangladesh, India, and Nepal), and Eastern and Southern Africa.

One notable project looked at the role of multi-cobbing for rain-fed corn production. Completed this year, the CGIAR Research Program MAIZE sought to mobilise resources to achieve a greater strategic impact on farming systems in Africa, South Asia, and Latin America. The international

collaboration involved more than 300 partners including CIMMYT and the Queensland Alliance for Agriculture and Food Innovation (QAAFI), an institute of The University of Queensland jointly supported by the Queensland Government.

QAAFI Research Fellow (crop physiology) Dr Joseph Eyre said the project has global implications, and has already improved farming methods in Australia.

“Throughout the past few decades, there has been considerable investment from the private and public sector in genetic improvement of sorghum hybrids, but the high yield potential of these new genotypes is not always achieved in farmers’ fields. Matching these new genotypes to seasonally optimised crop management has the potential to increase productivity,” Dr Eyre said.

“Clear guidelines on how to match hybrids and management across environments and expected seasonal condition would allow growers to increase yields and profits while managing risks.”

QAAFI Research Partnerships Manager Robert Landon, who will be travelling to CIMMYT in December, added crop models



Above: QAAFI Research Fellow (crop physiology) Dr Joseph Eyre (right) at the Summer Grains Field Walk 2016, Gatton Research Station, Queensland



provide valuable insight.

“One of the best ways to determine a hybrid’s yield potential in a specific location, but also to identify best hybrid by environment by agronomic management combinations and to demonstrate benefits and trade-offs between productivity, investment and risks, is to use a crop model. This is one of the key research areas UQ and CIMMYT are working on,” Mr Landon said.

QAAFI is also in the process of developing an initiative across the CG network, instigated by CIMMYT, to consider how to best introduce modelling capability into their selection/ breeding systems.

“It’s an exciting space to be in, and I look forward to seeing what we can come up with in the next few years,” Mr Landon said.

“While our role has been to support modelling and empirical experimentation in Eastern and Southern Africa, the results of the program will help develop information and communication technology (ICT) tools for farmers around the world, including in Latin America and the Caribbean.”

Headquartered in Mexico, **CIMMYT** has provided UQ with more than \$6.1 million in research grant funding for projects around the world

Cultural connections

UQ students can engage with Latin American culture through one of the largest Spanish language programs in Australia, along with a variety of immersion opportunities onshore and abroad.

Latin American languages and cultures

Spanish is the second language for global communication with an established and growing presence in arts, business, and science. As Australians increase their engagement with Latin America, language skills will give graduates a knowledge base to participate in an informed and thoughtful way with this diverse part of the world.

Through the School of Languages and Cultures, students can take courses from introductory to advanced level, covering Spanish language, Latin American and Spanish literature, film

and cultural studies, applied linguistics, and translation studies.

School staff are committed to the highest standards of teaching and research in languages and the cultures in which they are spoken. UQ Spanish teaching staff include Dr Roberto Esposto, Corresponding Fellow for the Argentine Academy of Letters.

For the wider community, UQ's Institute of Modern Languages offers Spanish and Portuguese classes and a NAATI-accredited workforce for translation tasks.



Above: Bachelor of Laws/Arts student Rebecca Earl in Mexico
Top right: Australian Award students from around the world, including Latin America

"I had such a great time in Spanish class, and the tutors really engaged my passion for learning. They taught me about all of the world's Hispanic cultures, from Mexican to Chilean to Spanish, as well as the language skills that I'd need in those countries.

When I finally got to travel to South America, I could connect with the locals on a deeper level thanks to linguistic and cultural skills. And when I came back, I thought, why not take a step further and write a PhD thesis based on my experiences overseas? The degree in Spanish set me on this path of discovery and learning, one that I hope will continue for many years."

- Zac Braxton-Smith, PhD Candidate

UQ exchange partners in Latin America



UQ Latin American Embassy Volunteer Internship Program

Now in its fourth year, the UQ Latin American Embassy Volunteer Internship Program allows students to learn first-hand about Australia-Latin America relations. Each summer and winter, UQ awards \$1000 travel grants to help participants travel to Canberra where they volunteer at the embassies of Ecuador, Peru, Cuba, Uruguay, and El Salvador. The program has supported 36 students so far.

The program offers meaningful networking opportunities and exposure to the working environment of an embassy. Students support embassy staff with a variety of tasks and projects, such as consular services, translation, event coordination, and research.

Exchange and global experiences

Through global experiences, students gain transferable skills such as adaptability, autonomy, and enhanced communication and organisational abilities, not to mention a global network of lifelong friends. UQ has a thriving exchange program, including six university partners in Latin America. There is also the option to undertake short-term overseas study in semester breaks, or apply for a UQ Advantage Grant of up to \$1000 to support internships, volunteering, and other co-curricular activities that enhance academic and career development.

Student representation is strongest in Mexico, with 214 students (131 inbound and 83 outbound) recorded from 2007-2016. However, exchanges are also an important part of the student experience in Chile (42 inbound and 38 outbound), Colombia (9 inbound and 15 outbound), Brazil (9 in bound and 5 outbound), and Peru (7 inbound and 3 outbound) since 2007.



“Due to opportunities at UQ I have developed a number of transferable skills such as presentation, interpersonal, problem-solving, and networking skills, and confidence in Spanish language.”

– Emma Hofstetter, former UQ Latin American Embassy Volunteer Internship Program participant and exchange student to Pontificia Universidad Javeriana, Colombia



Paving the path to success

Since 2007, more than 1300 Latin American students have studied at UQ under a scholarship. Between 2007 and 2015, sponsored enrolments increased each year – from 38 to more than 500.

The UQ Global Engagement International Scholarships team manages a range of services for sponsor agencies and scholarship recipients, from point of application through to student graduation and beyond.

Working with stakeholders across UQ, in addition to government agencies and corporate partners, UQ Global Engagement's International Scholarships unit has demonstrated experience and expertise in capacity building through partnerships. The approach is one of identifying needs in consultation with partners and delivering timely outcomes to ensure success.

The team works with more than 80 sponsors and students from around 72 countries. Student representation is strongest from Brazil, with 720 students receiving scholarships to study at UQ from 2007-2016, largely due to the Science Without Borders program. Scholarship numbers have also been strong from Chile (206 students), Ecuador (201), Mexico (59), Colombia (48), and Peru (38). UQ looks forward to enabling further student success through sponsor partnerships.

Sponsors we work with

Australia:	Australia Awards Fellowships Endeavour Postgraduate Award
Brazil:	CAPES CNPq, Ministry for Science and Technology PETROBRAS Energy Company
Chile:	CONICYT
Colombia:	COLFUTURO (Colombia) COLCIENCIAS
Ecuador:	SENESCYT
Mexico:	CONACYT
Paraguay:	BECAL
Peru:	PRONABEC
USA:	Rotary Foundation

Notable UQ alumni in Latin America

Professor Victor Cubillos Godoy, education leader (Chile)

Former Rector of Austral University of Chile, Professor Godoy is an internationally respected veterinary science academic and researcher. He was the first Chilean national to receive a PhD in Australia and was the UQ International Alumnus of the Year in 2006. He holds a Doctor of Philosophy in Vet Pathology from UQ.

Dr Jeffrey Dawes, CEO of Komatsu Latin America (Chile)

Dr Dawes is responsible for the Komatsu-owned distributors in Latin America, as well as the Komatsu regional entity. He is committed to improving the lives of those in communities where Komatsu operates, and his innovative approach to corporate philanthropy is a leading example of corporate social responsibility. He is also the President of the Australian Cancer Society and the Chairman of the Queensland Cancer Fund.

Kate Brown de Vejar, Partner at Curtis, Mallet-Prevost, Colt & Mosle LLP (Mexico)

Kate has been featured in *Who's Who Legal: Mexico* as one of Mexico's leading lawyers for arbitration and has been named one of Latin America's Top 100 Female Lawyers (Latinvex 2016).

Dr Nérida Gómez Quintero, consultant and business partner, Saber Panama Consulting (Panama)

Dr Gómez Quintero is an expert in innovation and technology commercialisation. In her current role, she provides consultant services as a science advisor, strategy consultant and innovation strategist. She is also the consultant for

SENACYT, the National Secretariat for Science, Technology and Innovation, and is the Commercial & Advancement Officer for WiSy, a Panama Technology Startup. Dr Gómez Quintero completed her Master's Degree in Technology and Innovation Management at UQ.

Dr Alex Winter, Chief Engineer, Redflow (Argentina)

Leading up to the foundation of Redflow, Alex spent six years working on research and development of flowing electrolyte batteries using his expertise in fluid dynamics and mechanical design. He is responsible for product development and design for manufacturing within Redflow. He manages a team of nine engineers and technicians. Alex holds a Bachelor of Engineering with first class honours and a Doctor of Philosophy in the field of Mechanical Engineering, both from UQ.

Samia Tacle, President and Founder of Ecorpmax S.A. (Ecuador)

Samia's company, Ecorpmax S.A., is dedicated to technical advice, training and digital advertising. She is also on the Board of Directors for Wikot Ecuador, a fully integrated agency that focuses on creating relevant and engaging experiences between people and client's brands. Samia has a Graduate Certificate in Research Commercialisation from UQ.

Emiliano Valente Reyes, CEO of FLIN, Executive Director of Metro Network and Founder and CEO of VREYES Telecomunicações (Brazil)

Emiliano is a young telecommunications entrepreneur. He holds a Master of Business Economics from UQ.

Largest Latin American alumni communities



"I want to contribute to the development of my country, Nicaragua, by working on a project, or with an NGO or international organisation, that focuses on alleviating poverty and inequality in my country or the Latin American region."

– Adrianova Carrion, Master of Economics and Public Policy graduate (2015), sponsored by Australia Awards



Prepared by UQ Global Engagement

UQ Global Engagement supports the development and implementation of the University of Queensland's Global Strategy and enhances the reputation of UQ as a leading global university through the management of international partnerships, programs and projects.

The office builds and maintains a network of strategic international relationships and collaborations and provides expert support and advice to stakeholders, with the aim of identifying and prioritising opportunities that will showcase and extend UQ's research, teaching and learning, and engagement activities.

Contact



Dr Jessica Gallagher
Deputy Director and Head (Global Engagement)



global.engagement@uq.edu.au



+61 7 334 67869



The University of Queensland
Brisbane QLD 4072 Australia



global-engagement.uq.edu.au

Thank you for your support

UQ Global Engagement would like to express sincere thanks to speakers, UQ Colleagues and all others, who have contributed to the development and delivery of this year's Colloquium program. A special mention must be made of the Latin American Diplomatic Corps, Mr José Blanco, Australia Latin America Business Council, COALAR, and the Department of Foreign Affairs and Trade for their counsel and continued support.