

### Inquiry into Australia's relationship with Mexico

**TR** point "**d**": scope for increased collaboration in the education sector and the potential for extending scholarship programs to Mexico;

"Submission into the establishment of an Innovation, Science and Technology Fund to promote collaboration between Australia and Mexico"

Dr. Victor Del Rio Australia, New Zealand and Mexico Chamber of Commerce and Industry (ANZMEX-Australian Chapter)

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"Somewhere, something incredible is waiting to be known."

Carl Sagan



### **Executive Summary**

Innovation, Science and Technology (IST) and in particular "Big Science projects" (BSP) have proven to be effective and catalytic tools for developing international research teams and strengthening academic, research and trade relationships between two or more countries<sup>1</sup>. The signing of the Transpacific Partnership on the 6<sup>th</sup> of October 2015 will reinvigorate the bilateral relationship Australia- Mexico in all fields, innovation and science will be at the centre of it.

In this brief submission we propose the establishment of 'Innovation, Science and Technology Fund Australia-Mexico (ISTF)' to foster bilateral collaboration and exchanges in mutually identified strategic areas and towards the implementation of Recommendation "1" of the 2007 House of Representatives Inquiry regarding the revival of the Joint Australia-Mexico Commission for Scientific and Technological Cooperation, as stated in the 1981 Australia and Mexico Basic Agreement on Scientific and Technological Cooperation.

This submission provides evidence of the role that science and big science collaboration plays in strengthening relationships between countries and provides insights and lessons learned from a particular project involving the Australian Synchrotron that is achieving these strong links. It also provides evidence of strong support in Mexico from research institutions to work with Australia in this initiative, and one State Government's Minister in particular, Dr. Brenda Valderrama, Minister of Innovation, Science and Technology of the State of Morelos<sup>2</sup> who has committed her Ministry to do whatever be necessary in Mexico to achieve the goals of this proposal (see attached Letter of Support).

<sup>&</sup>lt;sup>1</sup> Part of the information elaborated in this Submission was drawn from a recent article by Victor del Rio, "The Magic of Big Science in Forging Collaborative Relationships: Australia, Latin America and the Australian Synchrotron Initiative". This article forms part of the book *Australian-Latin American Relations New Links in A Changing Global Landscape*, edited by Dr Elizabeth Kath from the School of Global, Urban & Social Studies, RMIT University. The book is in press (with a projected publication date of March, 2016). <a href="http://www.palgrave.com/page/detail/australianlatin-american-relations-elizabeth-kath/?sfl=barcode&stl=9781137501929">http://www.palgrave.com/page/detail/australianlatin-american-relations-elizabeth-kath/?sfl=barcode&stl=9781137501929>

<sup>&</sup>lt;sup>2</sup> There are 28 research centres in the State of Morelos. The State has more researchers per capita than any other State in Mexico.



#### We propose:

- 1 Setting up a one million dollars Innovation, Science and Technology Fund (ISTMX) to foster bilateral relationships between Australia and Mexico following the business model of FUMEC<sup>3</sup>.
- 2 The proposed ISTMX fund could be administered jointly by the Australian Academy of Science in Australia, the ARC, the CSIRO and representatives of the States in Science and Technology and Universities Australia.
- 3 To negotiate with Mexico (Mexican Academy of Science, Conacyt, States in Mexico) the creation of a twin fund to achieve the stated purpose, drawing attention to the approaching 50th Anniversary of the establishment of diplomatic relations Australia-Mexico in 14th March 1966.
- 4 That the Australian Government, through the Department of Education, Science and Training, reactivates scientific and technological cooperation with Mexico (Recommendation 1, 2007 Inquiry)
- 5 To include "Research Collaborations" as part of Austrade's top trade priorities in Latin America. This point may entail the creation of a crossover entity/program formed by Austrade, the ARC and the CSIRO.
- 6 To explore with Universities Australia the possibility of counting published journal papers, written in Spanish for Mexican and other Latin American academic journals, authored by Australian researchers, in Australian universities' metrics for academic performance and considerations around academic promotion.

 $<sup>^3</sup>$  FUMEC is a science fund that operates between United States and Mexico: http://fumec.org/v6/index.php?lang=en



### Introduction

Innovation, science and technology international collaborations are one of the most effective diplomatic and economic engagement tools available to foster relations between two countries, even in those cases where other narratives may be alluding them as 'enemies'. For instance the project Synchrotron-Light for Experimental Science and Applications in the Middle East (SESAME)<sup>4</sup> is one of the few 'big science initiatives' that have countries that are in political conflict (like Israel, the Palestinian Authority, Pakistan, Cyprus, Egypt, Iran, Turkey and Bahrain) working together in peace towards a common goal.

There is much evidence to suggest that Big Science projects are "effective and catalytic tools for developing international research teams and strengthening academic, research and trade relationships between two or more countries, and such projects are becoming more prevalent."<sup>5</sup>

Wutchy, Jones and Uzzi 2007<sup>6</sup> observe "that teams increasingly dominate solo authors in the production of knowledge". The authors note that this was observed in particular in the sciences, where team size has grown steadily each year and nearly doubled, from 1.9 to 3.5 authors per paper, over 45 years (1955 to 2000). Other researchers like Wagner and Leydesdorff (2004) agree on the extraordinary growth in scale of scientific collaborations over the past 25 years, with a clear increase in international collaboration.

A degree of research collaboration already exists between Australia and Latin America. Recent work by Angel Calderon highlights a number of useful statistics in relation to Australia's research engagement with Latin America,

[O]f the 354,586 collaborative research papers published by Australian researchers between 2009 and 2013 and indexed by Scopus' Elsevier

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<sup>4</sup> http://www.sesame.org.jo/sesame/

<sup>&</sup>lt;sup>5</sup> Del Rio, V. (2016-in press) Ibid. The Magic of Big Science in Forging Collaborative Relationships: Australia, Latin America and the Australian Synchrotron Initiative"

<sup>&</sup>lt;sup>6</sup> Wutchy, Stefan, Benjamin F. Jones, Brian Uzzi. "The increasing dominance of teams in production of knowledge". Science, 316, pp. 1, 2007



(www.scopus.com), 77% of them were published as a result of collaboration between two or more researchers. Of these collaborative papers, 8,816 (or 3.2%) involved researchers from Latin American countries. The majority of Australian collaborations with Latin American countries occurred with researchers from Brazil (3,219), Chile (1,483), Mexico (1,246) and Argentina (1,184). On a country-by-country basis, Australian collaborations with Brazil stand overall 21st, with Chile being 35th, Mexico 38th and Argentina 39th. The main subject areas of research collaboration are in medicine, followed by agricultural and biological sciences followed by physics and astronomy.

The 1992 Inquiry on the importance of scientific collaboration was noted in recommendation:

Recommendation forty seven: The Committee recommends that, as one means of achieving the objective in Recommendation one of this Report the Department of Education, Employment and Training establish an institutional links program, based on the model developed for the Asian region, to assist universities to establish collaborative research and exchange arrangements with universities in Latin America.

The current Australia –Mexico papers' collaboration is a "drop of water in the ocean" (less that 3% of researchers) if we take into consideration that according to the World Bank, in 2015, Mexico has almost 47,000 full time equivalent researchers dedicated to research and development, Australia has 102,720. There is far more that we can do in this field.

### Strong Innovation, Scientific and Technological (IST) organizations in both countries

There are other science funds that aim at fostering scientific collaboration already operating successfully. The USA and Mexico have FUMEC8. The Chair of FUMEC, the American congressman Congressman George E. Brown Jr. explains FUMEC as: "... The United States-Mexico Foundation for Science (FUMEC) is a binational nonprofit organization created in 1993, in the context of the negotiations of the North American Free Trade Agreement (NAFTA). Our mission is to promote bi-

<sup>7</sup> Calderon, Angel. "The changing nature of Australia and Latin America relations: A view through the lens of trade in educational services", In Australian-Latin American Relations New Links in a Changing Global Landscape, Edited by Elizabeth Kath. In press (March 2016)

<sup>8</sup> http://fumec.org/v6/index.php?lang=en



national collaboration in science and technology, in order to contribute to the solution of problems of common interest, especially those which support economic and social development of Mexico". FUMEC has a good business model to take into consideration for any future science initiative Australia-Mexico.

Australia and Mexico have mature IST organizations. Both have Academies of Science (both Academies signed an MOU on the 24<sup>th</sup> of April 2015<sup>9</sup>). Their leaders, Professor Andrew Holmes <sup>10</sup> and Professor Jaime Urrutia, have expressed their intention to foster further collaboration between both countries.

Both countries have similar organizations that promote Science and Technology in their respective nations. Australia has the Australian Research Council (ARC)<sup>11</sup> and Mexico has el Consejo Nacional de Ciencia y Tecnologia (CONACyT)<sup>12</sup>. In the tertiary education sector, Australia has Universities Australia and Mexico has ANUIES<sup>13</sup>.

In terms of the researcher networks and recognition of first class researchers, the ARC runs the "Australian Laureate Fellowships and the Future Fellowships" programs<sup>14</sup> and Mexico's CONACyT has the "Sistema Nacional de Investigadores" (SNI)<sup>15</sup>.

Some State Governments in Mexico have Innovation, Science and Technology Ministries. There are some State Governments in particular that have expressed their strong interest in fostering IST relationships with Australia. We are attaching one letter of support from Dr Brenda Valderrama<sup>16</sup>, Minister of IST from the State of Morelos. The State of Morelos is an Innovation, Science and Technology hub in Mexico. It hosts 28 research centres from biotechnology to energy, chemistry etc<sup>17</sup>.

 $<sup>^{9}\</sup> https://www.science.org.au/publications/newsletter-101/mexico-australia-scientific-exchanges$ 

<sup>&</sup>lt;sup>10</sup> The Australian Academy of Science indicated to me on the 25<sup>th</sup> of September 2015, that they would be elaborating a submission to the Senate Inquiry.

<sup>11</sup> http://www.arc.gov.au

<sup>12</sup> http://www.conacyt.mx

<sup>13</sup> http://www.anuies.mx

<sup>14</sup> http://www.arc.gov.au/australian-laureate-fellowships

<sup>&</sup>lt;sup>15</sup> http://www.conacyt.mx/index.php/el-conacyt/sistema-nacional-de-investigadores

 $<sup>16\,</sup>$  Dr. Brenda Valderrama attended the Melbourne Latin America Education Symposium  $16\,$  organized by the Victorian Government on the 12- $14\,$  of March  $2014\,$ 

 $<sup>17 \</sup> http://cloud.morelos.gob.mx/mapa/CentrosdeInvestigacionMorelos.pdf$ 



The State of Morelos is the leader behind the project to construct the first Mexican Synchrotron.

We are also attaching one letters from one of the biggest IST NGO Research Centers in Mexico (Centro Kappa)<sup>18</sup>. Centro Kappa is organising one of the most ambitious IST events in the history of Mexico to be carried out in Guadalajara, Mexico in April 2016<sup>19</sup>. The event will attract thousands of IST delegated from around the World. We also attached a Letter of support from the Director of this event.

In both countries, there are strong organisations, the willingness of their leaders, strong similar programs and a pool of first class IST researchers that could be benefited from research grants provided by the new fund.

#### Scholarship Programs in Mexico and Australia (IST disciplines)

Both Australia and Mexico have strong scholarship programs. The Mexican Government, through CONACyT has just announced the funding of 60,000 vocational, education and training (VET), Master's Degrees and Doctoral and Post-Doctoral scholarships<sup>20</sup> to support the implementation of Mexico's Energy Reform Agenda. This is by far the biggest increase in scholarships of its kind in the history of Mexico. There is neither the capacity in Mexico to absorb this number of scholarships nor the expertise to cover all the topics than the Mexican Government wants to achieve. Australia has strong expertise in the Energy and Oil sectors and in the sustainable disciplines associated with these and has, overall, the capacity to collaborate with Mexico to achieve its goals in this area. One of the main barriers for Australia to access this market is the lack of either language skills from the prospective Mexican candidates and/or Spanish skills from the training workforce in Australia. Australia could do more by offering English scholarships to the IST Mexican community and offering Spanish Language training opportunities to the IST teaching and research workforce in Australia. There are also opportunities to better utilise the current Spanish-speaking workforce in Australia (3,600 Mexicans and more than 10,000 Latino Americans plus people born in Australia and/or other countries with Spanish Language skills).

<sup>18</sup> http://ckconocimiento.com

<sup>19</sup> http://innovationmatchmx.com/language/en/

<sup>20</sup> http://mexicoenergetico.com.mx/60000-becas-para-el-sectorenergetico-en-mexico/



#### Others Strategies to catalyse IST bilateral Collaboration

There are no incentives in the Australian Academic context to publish in IST Academic Journals written in languages other than English. Unless any of these Journal already appeared in the top ranking journals (usually indexed by Elsevier Scopus<sup>21</sup>) recognized in the English academic world. For example few Universities used the Journal and Country Rank (SJR)<sup>22</sup> to identify top scientific journals in Latin America (as a metric to measure academic performance for academic promotion purposes and to get research funding -i.e from the ARC).

It would be desirable to explore with Universities Australia the possibility of acknowledging and counting published journal papers, written in Spanish for Mexican and other Latin American academic journals authored by Australian researchers in Australian universities' metrics for academic performance and considerations around academic promotion.

We could accelerate the rhythm of bilateral IST collaboration if/when researchers perceive that their collaborative work with Mexico would be acknowledged and recognized Australian wide.

#### The Synchrotron's Latin American's initiative

The idea of linking the synchrotron to further the relationships between Australia, Mexico and Latin America was conceived in March 2011 by Dr Keith Nugent, then Director of the Australian Synchrotron and Deputy Vice-Chancellor of Special Projects at the University of Melbourne while having some brain storming conversations with me. The basic concept was to donate a beamline to Latin American countries with the idea that it could be used by Mexican and other Latin American scientists to conduct experiments and to foster international scientific collaboration with Australia. The Latin American countries in question would pay for the cost of building the necessary laboratory and equipment and the running costs to make this beamline operational. It was conceived that the Australian synchrotron could also provide some support and training for emergent Latin researchers. This

<sup>21</sup> https://www.elsevier.com/solutions/scopus

<sup>&</sup>lt;sup>22</sup> http://www.scimagojr.com/journalrank.php



proposal was in line with the spirit demonstrated in the past by the world synchrotron's community which relies on strong collaboration networks to help other countries to prepare for the future building of a synchrotron in their own respective entities. According to Creagh 2013, Australia was in the past the beneficiary of a similar gesture from Japan when the Australian scientist Stephen Wilkins "spent a month in Japan around November 1985, meeting scientists, and at the KEK he received a formal invitation from Professor Chikawa to establish an Australian beamline at the Photon Factory" <sup>23</sup>. Australia accepted this invitation and the BL20B beamline became operational in 1993. The beamline operated for twenty years and was decommissioned on the 23 February 2013 (as the Australian Synchrotron became fully operational). Australia also had access to a beamline in the Advanced Photon Source in the USA. Other synchrotrons have also followed the same path. For instance, the Spanish government, in preparation for the construction of their synchrotron, built two laboratories, the BM25 and the BM16 at the European Synchrotron (ESRF) in Grenoble, France<sup>1</sup>. The access by researchers to beamlines is seen as a pre-requisite to the construction of a synchrotron in their own countries, not just to conduct experiments but also to train future scientists and technicians on how to maintain and operate a complex machine of this kind. On the Australian side this Latin initiative was going to help the construction of more beamlines at a time where the future funding of the Australian Synchrotron was uncertain.

Dr Nugent and I agreed that this Latin beamline would be a first great step towards the goal of achieving stronger Australian research collaboration ties with Mexico and other Latin American countries. Professor Nugent proceeded to gain the endorsement of this idea from Glynn Davis, Vice-chancellor of the University of Melbourne and Susan Elliot, Deputy–Vice-chancellor, Global Engagement and the approval from the Australian Synchrotron Board of Management and Investors.

### The Australian Synchrotron proposal (a case study)

Professor Nugent developed some key points pertaining to the way this scientific collaboration could take form. These would form the basis from which to begin

<sup>23</sup> Creagh, Dudley. "The Decommissioning of the Australian National Beamline (Bl20b) at the Photon Factory Kek Tsukuba Japan". I R P S Bulletin Newsletter of the International Radiation Physics Society Vol. 27 No 1 March, 2013



negotiating with Latin American countries. The main points, which were included in the Australian Synchrotron's letter of invitation to collaborate, were (AS refers to the Australian Synchrotron and MLAC refers to a collaborative group formed by Mexico and the other Latin American Countries).

- 1. MLAC would fund the construction of a new beamline at the AS. The capital cost of such a beamline would be in the range \$A5-10m. The time to build the beamline would be 2-3 years.
- 2. The MLAC would provide sufficient resources to cover the running and upkeep of the beamline. The level of such costs would be the subject of discussion.
- 3. As part of such an agreement, AS would recommend that MLAC select and employ project scientists with the expectation that their experience could be used to develop the MLAC synchrotron community and prepare them for a leadership role in a future MLAC synchrotron facility.
- 4. The scientific goals of the MLAC beamline should be selected by the two communities so as to be consistent with the strategic visions of them both.
- 5. In return for its commitment, MLAC would be provided with an agreed guaranteed fraction of access to all beamlines at the AS. AS users would also have access to the MLAC facility.

According to this plan, the MLAC community would gain access to the resources of a state-of-the-art synchrotron facility and be able to pursue its own long-term scientific and user community development. The AS would expand the range of facilities offered to its user community. Both MLAC and the AS would have access to the expertise of each other's scientific community.



Dr Nugent and I also discussed some ethical and time sharing principles under which the AS and MLAC should operate:

- The research conducted at the AS should be approved by an MLAC's Ethics Committee
- No research for military purposes should be conducted in the AS
- The MLAC members should allocate at least 10% of beamline's time for the use of other Latin American researchers who are not members of the MLAC group.

#### Mexico

I visited Mexico from 1-4 August 2011 with the objective to promote this initiative and encourage a delegation of Mexican key decision makers and scientists to travel to Australia to converse *directly* with the Australian Synchrotron authorities the form and nature of a potential scientific and academic collaboration. This delegation would only take place *if* and *when* enough interest was registered from a critical mass of scientists. It was seen as desirable to have this delegation visiting Australia as soon as possible (before the end of September 2011) in order to avoid the political constraints that may be imposed by the political context in Mexico (as there were presidential elections in July 2012 and drawing from past experiences, the public administration tends to stop making major decisions or approving new initiatives one year before this political landmark date).

During my visit I talked to more than 50 administrators and scientists from the Mexican scientific sector approximately. On the administration side I held discussions with the National Council for Science and Technology (CONACyT)<sup>ii</sup>, the National Autonomous University of Mexico (UNAM), the National Polytechnic Institute (IPN), the Centre of Research and Advanced Studies of the IPN (CINVESTAV), Monterrey's Institute for Technological Advanced Studies (ITESM), and the Mexican Synchrotron users community. Although I had no time to meet with the heads of the scientific areas of UNAM, these top researchers received a brief on the initiative from the UNAM's Global Engagement group. This list includes some of the most important academic institutions in Mexico. ITESM is the most prestigious private university in Mexico, and UNAM is Mexico's biggest university, with a



student population equivalent to the combined population of the universities of Melbourne, Monash, Sydney and the Australia National University.

It was clear during my discussions with the Mexican scientific community that they had a strong interest in building the first Mexican synchrotron and that the Australian beamline's proposal was a positive step towards achieving this goal.

We also shared the view that in order to persuade any politician and/or administrator to approve a project of this magnitude it was necessary:

- To provide evidence demonstrating the scientific, economic and social benefits resulting from inter-disciplinary research; and
- To provide evidence demonstrating the technical capacity and enough trained human resources (capability) to design, build and manage such a complex technological project.

The proposed synchrotron's beamline could play a fundamental role in demonstrating both points, in particular because it would facilitate the high level training of people to manage a project of this complexity. It would be very valuable if the opportunity arises to increase the access to other additional beamlines from countries like Spain and/or Brazil.

#### **Outcomes of my activities in Mexico (beamline donation)**

I registered a great level of interest and enthusiasm among administrators and scientists about the beamline donation initiative. At the same time we identified a number of challenges associated with implementing the initiative in the short term related to its funding options. The scientists and administrators recognised that the then political context in both Mexico and Australia could either inhibit or delay the implementation of this initiative (coming presidential elections in Mexico-2012 and/or funding uncertainties at the time related to the AS).



#### **Scientific Administration-Conacyt**

The Conacyt's authorities requested and received a letter from the synchrotron counterparts in order take the next step in the form of organising and sending a delegation to Australia. This letter was produced and sent by the Director of AS, Professor Keith Nugent to Dr. José Enrique Villa Rivera the Director of Conacyt on 24 August 2011. The letter spelled out the points described in the AS proposal. The presidential election in Mexico seemed to have delayed any actions from Conacyt in relation to this proposal. The Conacyt's authorities also expressed some concerns about building a piece of Mexican scientific infrastructure in another country. However the authorities acknowledge that this was not an unsurpassable obstacle. But we run out of time as the electoral machines of the political parties in Mexico had an early start and no decision from Conacyt came in time to proceed with the planned delegation. The idea was put in the "next to do basket".

A number of positive outcomes resulted from this first attempt to implement this proposal:

- The scientists acknowledged clearly the positive and constructive intention of Australia and the Australian synchrotron's authorities to collaborate and support the Mexican and Latin-American scientific and technological advancement.
- A constructive dialogue between the scientific and non-scientific community
  was created where both parties discussed freely and in non-scientific language,
  the benefits of a synchrotron's beamline. This dialogue represents, in itself, a
  major achievement as it brought the issue of building a synchrotron back into
  decision-makers' attention.
- The scientists recognised the synchrotron's potential to generate either revenue or savings for the country that it could run into the hundreds of millions of dollars, as a source of high quality content for top scientific journals and the registration of patents (as demonstrated by the Australian synchrotron).
- The scientists acknowledged that this initiative would facilitate the training of the human resources required to manage, maintain and operate a future Mexican synchrotron.
- It was estimated that the academic and scientific exchange between Mexico



and Australia, as a result of the beamline's proposal, could increase substantially with at least 500 scientific exchange visits per year. This number of scientific exchanges will revolutionise the IST research collaboration between Mexico and Australia.

The increase in academic exchanges between Mexico and Australia would add
weight to the need to establish a direct air link. Both countries have agreed in
principle to do so, but commercial airlines have to be persuaded about the
financial viability of this move.

However, the scientists were also concerned in relation to a number of issues including:

- That Mexican financial decision makers could transfer money, coming from already approved and/or ongoing scientific projects to fund this initiative. This possibility could debilitate the cohesion among scientists supporting in principle this initiative, as it could either delay and/or stop the implementation of other key scientific projects for many years to come.
- That Mexican financial decision makers may adopt the view that by having a
  beamline, the scientific needs of Mexico in this field would be covered,
  thereby thwarting the possibility of building a synchrotron in Mexico.
- That cohesion amongst scientists may be shaken by the process of determining what type of light beam is required.
- That cohesion amongst scientists may be shaken by the process of determining governance issues and the way synchrotron's time would be allocated across the diverse number of scientific organisations.

The fact that the synchrotron is in the current scientific and political conversation in Mexico is in itself a great achievement. In September 2011, the *Scientific Journal of Research and Development (Investigacion y Desarrollo-INVEDES*) <sup>24</sup> published an article on the AS proposal. This article was available to hundreds of Mexican scientists, many of whom contacted me to express their

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<sup>24</sup> Del Rio, Victor. "Linea de conocimiento entre Mexico y Australia". Investigación y Desarrollo. México, Septiembre de 2011 | Número 286, año XIX | www.invdes.com.mx



individual support for this initiative<sup>25</sup>. The 10<sup>th</sup> of July of 2015, INVEDES published a second article related to the Synchrotron project<sup>26</sup>.

In fact in November 2013, seed funding was approved by Conacyt towards the development of a business and technical plan to build the first Synchrotron in Mexico. The leaders of this project are UNAM and the State of Morelos. The Mexican Synchrotron business case Report highlighted Australia, Spain and Mexico as potential partners in this scientific venture. In June 2015, the leaders of the project in Mexico organised the Conference "Grandes Proyectos Científicos: Sincrotrón" having as its main speaker the Nobel Prize Winner Brian Kobilka, the Directors of three Synchrotrons in the World and as an special invitee, the Hon Tim George, Australian Ambassador in Mexico. On the 30th of September 2015 the Mexican Senate organise a Conference on this topic.

# The Joint Australia-Mexico Commission for Scientific and Technological Cooperation

In 1981, Australia and Mexico signed the Basic Agreement on Scientific and Technological Cooperation in order to strengthen bilateral relations in the science and technology field. The 2007 House of representatives' Inquiry<sup>27</sup> highlighted the following point in relation to this agreement:

2.17 The primary mechanism for consultation under this agreement is the Joint Australia-Mexico Commission for Scientific and Technological Cooperation. According to the agreement, a Joint Commission shall meet every two years alternatively in each country to discuss the cooperation in science and technology. DEST's Mexican partner agency in the joint commission is the Mexican National Council for Science and Technology

<sup>&</sup>lt;sup>25</sup> INVEDES-Investigacion y Desarrollo is circulated to 110 newspapers, magazines and scientific media in Mexico and internationally (for instance the newspaper La Jornada). Every month 240 electronic copies are circulated to a variety of Mexican media and 3,900 to foreign journalists. The scientific magazine is also distributed electronically to 25,000 subscribers.

<sup>26</sup> INVEDES. México a la caza de crear su primer sincrotrón, 10<sup>th</sup> of July 2015

<sup>27</sup> Inquiry into Australia's trade with Mexico and the Region Trade Sub-Committee, House of Representatives Joint Standing Committee on Foreign Affairs Defence and Trade, August 2007, Canberra



(CONACYT).

The last meeting of the Joint Commission was held in Mexico City in 2000.

The 2007 Inquiry recommended:

#### **Recommendation 1**

"The Committee recommends that the Australian Government, through the Department of Education, Science and Training, reactivate scientific and technological cooperation with Mexico"<sup>28</sup>

As the Agreement is still valid, the revival of this Joint Commission is a matter of the relevant Ministers to approve. This decision could be taken as soon as the Australia and Mexico Governments deemed appropriate an in time for the  $50^{th}$  Anniversary of the establishment of diplomatic relations between Australia and Mexico.

#### Recommendations

The following recommendations were drawn from the experience obtained during the AS beamline implementation's phase and could guide future research collaboration projects with México:

- 1 Setting up one million dollars Innovation, Science and Technology Fund (ISTMX) to foster bilateral relationships between Australia and México following the business model of FUMEC.
- 2 The ISTMX proposed fund could be administer jointly by the Australia Academy of Science in Australia, the ARC and representatives of the States in Science and Technology and Universities Australia.
- 3 To negotiate with México (Mexican Academy of Science, Conacyt, States in Mexico) the creation of a twin fund to achieve the stated purpose, in the lights of the 50th Anniversary of the establishment of diplomatic relations Australia-Mexico.
- 4 To include "Research Collaborations" as part of Austrade's top trade priorities

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<sup>28</sup> Ibid, page



in Latin America. This topic may entail the creation of a crossover entity/program formed by Austrade and the ARC.

- 5 To include "Research Collaborations" as part of Austrade's top trade priorities in Latin America. This point may entail the creation of a crossover entity/program formed by Austrade, the ARC and the CSIRO.
- 6 To explore with Universities Australia the possibility of counting published journal papers, written in Spanish for Mexican and other Latin American academic journals authored by Australian researchers in Australian universities' metrics for academic performance and considerations around academic promotion.

#### **Attachments**

Letter of Support, Minister Innovation, Science and Technology, State of Morelos,
 Mexico

- 2 Letter of Support from the Director of the Centre IST "Kappa Centre"
- 3 Letter of Support from the Director of Innovation MatchMx 2016



### Letter of Support, Minister Innovation, Science and Technology, State of Morelos, Mexico



Dependencia:	Secretaría de Innovación, Ciencia y Tecnología
Depto.:	
Sección	
Oficio No.:	SICyT/371/2015

October 7th, 2015

### HONOURABLE SENATE OF THE AUSTRALIAN FEDERAL PARLIAMENT

Dear members.

Innovación is a transversal concept underlying all public policies of the Government of Graco Ramirez in the State of Morelos in México. We understand that only science and technology will lead us into a knowledge society and through this path, become a more competitive economy.

In consequence, we are sure that the creation of the Innovation, Science and Technology Fund Australia-Mexico (ISTF) will be of great utility and benefit to both countries as an excellent opportunity to develop and strengthen high level human resources, to disseminate scientific and technological work of both nations and, above all, as a tool to search and find advantages pro bilateral diplomatic relations and mutual trade.

Hence, the Ministry of Innovation, Science and Technology of Morelos is committed to making each and every one of the necessary steps to contribute to the implementation of the ISTF. We commit to bring the project into consideration of all local and federal authorities who have the power to make decisions regarding public resources in favor of the creation of the ISTF.

Undoubtedly, the existence of the ISTF will strengthen the excellent relationship that has existed between Mexico and Australia bringing with it economic, social, educational, commercial and diplomatic benefits.





SECRETARÍA DE INNOVACIÓN, CIENCIA Y TECHOLOGÍA

BRENDA VALDERRAMA, PHD.
MINISTER OF INNOVATION, SCIENCE AND TECHNOLOGY
GOVERNMENT OF THE STATE OF MORELOS.

Archivo/Minutario MBVB/agb



VISIÓN MORELOS

www.sicyt.morelos.gob.m



#### 2 Letter of Support from the Director of the Centre IST "Kappa Centre"



October 5, 2015

#### Senator Alex Gallacher

Chair
Senate Foreign Affairs, Defence and Trade References Committee
PO Box 6100
Parliament House
Canberra ACT 2600
Australia

The *Centro Kappa de Conocimiento, S.C.*, an experienced institution in the innovation area, welcomes the Senate Inquiry into the Australia's relationship with Mexico. El Centro Kappa supports any initiative that promotes the scientific and technological cooperation exchanges between our two countries.

The Centro Kappa is monitoring, through ANZMEX Australia, the outcomes of the enquiry that your honorable Senate Committee is conducting and, is committed to contribute to the process of strengthening our scientific and technological links and projects in any form possible.

Warm Regards

**Dr. Eduardo A. Ramírez González** General Director

Cc. Dr. Víctor Del Rio, President of ANZMEX Australia



#### 3 Letter of Support from the Director of Innovation MatchMx 2016



# ARTICULANDO CONOCIMIENTO GLOBAL



1er Foro Internacional de Talento Mexicano

October 5, 2015

#### Senator Alex Gallacher

Chair
Senate Foreign Affairs, Defence and Trade References Committee
PO Box 6100
Parliament House
Canberra ACT 2600
Australia

**Innovation Match Mx, A.C.**, is a Global Institution in the innovation area, integrated by Mexican experts around the world, welcomes the Senate Inquiry into the Australia's relationship with Mexico. El Centro Kappa supports any initiative that promotes the scientific and technological cooperation exchanges between our two countries.

The Organization Innovation Match, A.C. is very keen, through ANZMEX Australia, in the outcomes of the enquiry that your honorable Senate Committee is conducting and, is committed to contribute to the process of strengthening our scientific and technological links and projects in any form possible.

Warm Regards,

#### M.C. Alejandra Rodríguez Gutiérrez Operation Manager

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