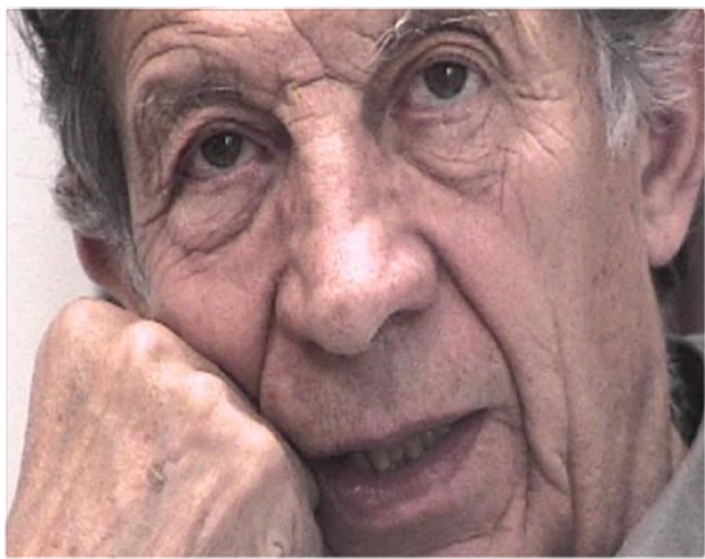


HOMAGE & CELEBRATION OF HIS LIFE



Prof. Dr. Gustavo Zubieta-Castillo

May 20, 1926 - September 17, 2015

The Mountain Guru - Bolivian visionary
who loved art and Science

Word Class Pioneer and defender of life and medicine at
High Altitude

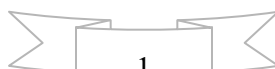
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Some of his scientific lifetime production

Prof. Dr. Gustavo Zubieta-Castillo “spending his 90s” as he used to affirm, left this physical world on Sep17, 2015 leaving behind: everything he used, personally created, his thoughts, his questioning attitude, his severe criticism of what he considered wrong or misleading, his inquisitive mind, his courage and tenacity, his kind and generous attitude, his extraordinary teaching abilities, his visionary intelligence, his defense of life at high altitude, his poems, his capturing literary production, his paintings in oleo, his discipline, his tolerance with the arrogant, and even his own organism.

A member of the Bolivian Academy of Sciences, the Bolivian Literature Academy a branch of the Royal Spanish Literature Academy, yet simple and friendly. He organized the First World Congress on High Altitude Medicine and Physiology that started in La Paz, Bolivia and moved on to Cusco, Peru – Matsumoto, Japan – Arica, Chile, Barcelona, Spain, Xining, China & Lhasa, Tibet and many other cities – countries that we lost track of.

On July the 9th, 1970, he founded the first High Altitude Clinic in the world in the city of La Paz with the name of “IPPA” (Instituto Privado y Patología de la Altura – The High Altitude Pathology Institute) to be dedicated to high altitude research in physiology and pathology and to treat patients suffering from acute or chronic hypoxia. As its director and active investigator along with its members, his scientific work spread around the globe.

In Bangalore, India he was named with the generous sponsorship of Dr. Thuppil Venkatesh (the “lead man of India”), at the Saint John’s University, as the “Parvatha Guru” (Mountain Guru) a unique distinction and honor.



We constructed the Chacaltaya Pyramid (glass) Laboratory at 5300m (the highest in the world).





He was the leader that crystallized the highest soccer (football) game played on the summit of Mount Sajama (6542m) proving that sports at that high altitude was possible, denoting the extraordinary capacity of the Aymaras, thereby defending Bolivia to play the world cups in its own grounds in La Paz (3600m).

His original and unique views on what was called Chronic Mountain Sickness, a term he proposed be discarded and be rather expressed as PolyErythroCythemia (as a more precise symptomatic description of multiple pathologies in the hypoxic environment of high altitude, was a subject of controversy but of his absolute certainty based on his over 50 years of physician at high altitude. He opposed the obsolete concept of reducing the red blood cells with archaic treatments such as phlebotomy or the use of toxic drugs such as Phenylhydrazine, an OMS proscribed drug. He interrupted its use saving thousands of Polycythemia patients

from a guaranteed fatal outcome. He often considered this his most outstanding feat.

He created the “Triple Hypoxia Syndrome” an essential description to explain momentary decrease of PaO₂ in Polyerythrocythemic patients.

His concepts of hypoxia gave rise to the formulation of the High Altitude Adaptation Formula.

Upon arrival to La Paz, from a sea level trip, in spite of the fatigue, he would insist that tests be performed on ourselves to observe adaptation. This gave rise to the paper “Adaptation to high altitude through hematocrit changes”.

As a young professor of physiology at Universidad Mayor de San Andres, in La Paz, he performed isolated heart perfusions in dogs and proved that heart surgery could be successfully carried out at high altitude.





He also affirmed back in 1964 that the hearts at high altitude were more resistant than at sea level. This visionary observation is currently subject of innumerable papers of the favorable effects of hypoxic exposure on heart function.

CON EXITO SE REALIZO UNA DEMOSTRACION CIENTIFICA EN EL INSTITUTO DE FISIOLOGIA DE LA FACULTAD DE MEDICINA DE LA UNIVERSIDAD MAYOR DE SAN ANDRES

Con las auspicias del Instituto de Fisiología de la Facultad de Medicina de la Universidad Mayor de San Andrés, el profesor de la materia, Dr. Gustavo Subieta Casilla, discípulo del profesor Hottel, premio Nobel de Fisiología, y el personal de dicho Instituto, realizaron ayer una interesante experiencia científica para demostrar que a cuatro mil metros de altura perfectamente se puede practicar sin alteraciones, operaciones del corazón. Además el objetivo fue demostrar algunas especulaciones con relación al problema de la altura.

Las demostraciones se hicieron con la cooperación de instrumentos rudimentarios facilitados por el personal del Instituto, pues hay escasez de muchos aparatos o son costosos para eficiente labor en un instituto de esta naturaleza. Se trata de un Instituto único en el país, donde pese a la deficiencia de material y equipo, el personal realiza importante labor de investigación científica para su aplicación en la ciencia médica. El Instituto está inmerso en la cooperación sin embargo de la importancia que reviste, para la Universidad Mayor de San Andrés, la organización alguna vez construida a expensas de las deficiencias materiales con que trabaja ese centro científico.

LA DEMOSTRACION

La interesante demostración se hizo exactamente a las 15 horas en los laboratorios del Instituto. Un personal especializado cooperó al Dr. Subieta, director del Instituto y catedrático de Fisiología de la Facultad de Medicina; el Dr. Sergio Madariaga, profesor adjunto de la materia; el Dr. Abela Arakaki Salazar, jefe de trabajos prácticos y el universitario Albino Pérez, alumno de último curso de la Facultad de Medicina.

De acuerdo con el programa preparado las demostraciones se iniciaron con el aislamiento del corazón de un perro. Para esta experiencia se utilizaron tres especímenes, uno del que se extrajo el corazón; otro perro donador de



Los profesionales que intervinieron en la demostración científica. De izquierda a derecha, el Dr. Abela Arakaki Salazar, jefe de trabajos prácticos de la cátedra; el alumno Albino Pérez del último curso; y el Dr. Gustavo Subieta Casilla, director del Instituto de Fisiología y profesor de la materia en la Facultad de Medicina.

sangre para la circulación extracorpórea y un tercero que sirvió para el registro curado el corazón. Trabajó normalmente, cuando lo hicieron en condiciones y cuando se dio el trabajo. Todos estos registros se registraron o se realizaron a través de un electrocardiograma.

Al iniciar la demostración el científico profesor de la materia, intervino en primera con algunas explicaciones teóricas para mejor ilustración del público que observó la operación. Como primer ejemplo, el corazón de un ratón con la circulación del corazón se extrae ese órgano vital y con todo el cuidado necesario para mantener el corazón en condiciones normales, vivo, se lo sostuvo en una solución mediante instrumental especial.

FARO DE 45 MINUTOS

Seguía a este proceso otro ratón preparado para la extracción de las arterias artificiales. Se había luego un circuito cerrado en

la cooperación de un perro donador que aportó sangre. Tras la medida del flujo coramario mediante un rudimentario bajómetro se mantuvo en vida el corazón aislado gracias al perro donador y de esta manera se estableció la circulación extracorpórea.

Los científicos produjeron luego un paro de 45 minutos en el corazón objeto de la experiencia y tras ese lapso volvió a restablecer la vida del órgano vital mismo.

FIBRILACION

Vino luego en el mismo corazón el proceso de la fibrilación. Los médicos y ayudantes, bajo la dirección del Dr. Subieta, produjeron la fibrilación para luego recuperar al órgano mediante excitaciones eléctricas. El Dr. Subieta al realizar esta parte de la demostración explicó que la fibrilación consiste en una alteración grave del corazón que conduce a la muerte en caso de no intervenir oportunamente. Agregó que todos los institutos

señalados a las intervenciones que se pueden realizar en el corazón humano con los mismos riesgos que en el animal.

APERTURA DE LAS CAVIDADES

El último proceso de la demostración científica fue el de la apertura de las cavidades y su aplicación en la cirugía de corazón en la altura. Siguiendo esta parte del programa se provocó una herida extensa en el corazón, que permitió visualizar sus cavidades y cerrar los defectos dentro del órgano. Para realizar estas intervenciones y recibir comodidad el corazón fue paralizado durante el tiempo necesario que se requirió para cerrar las alteraciones. Después de concluida esta delicada operación de las suturas externas y externas del órgano, el corazón volvió a funcionar y se restituyó a su normalidad. Explicó en este punto el científico que una intervención de esta naturaleza en el corazón cuando se encuentra en el tórax, es decir en su lugar normal, es menos riesgosa y más fácil que en la posición aislada. De esta manera concluyó con esta interesante demostración que permitió despejar versiones empíricas sobre el problema de la altura en el organismo.

IMPORTANCIA

El profesor de la materia, al concluir la experiencia científica, dijo que "estas intervenciones experimentales que realiza el personal del Instituto de Fisiología de la UMSA tienen importancia extraordinaria porque constituyen los pasos iniciales que se deben dar para las operaciones de esta naturaleza en el país en un corazón abierto mediante la técnica de la circulación extracorpórea".

Agregó el Dr. Subieta que por las observaciones que él viene haciendo, los corazones de las personas habituadas a la altura son mucho más resistentes a la anoxemia es decir a la falta de oxígeno con relación de los corazones habituados a la costa.

Además dijo que parte de la importancia ya referida el Instituto de Fisiología de la UMSA persigue la solución de problemas de orden científico relativos a nuestra biología que tiene características propias. Se refirió también al temor que existe fuera del país a la vida en las alturas, que se justifica en gran parte, "pero no se olviden" dijo, "las ventajas que la misma altura tienen en el organismo humano".

La demostración de ayer que concluyó a las 16:30 horas empleó también una bomba de aspiración artificial, un fluorómetro construido por la cátedra, construido y fabricado en el laboratorio, un electrocardiograma y otros.

Manifestó finalmente el Dr. Subieta que las deficiencias del Instituto que está al servicio de la ciencia del país podrían ser subsanadas si hubiese cooperación sobre la valiosa labor científica que realiza.

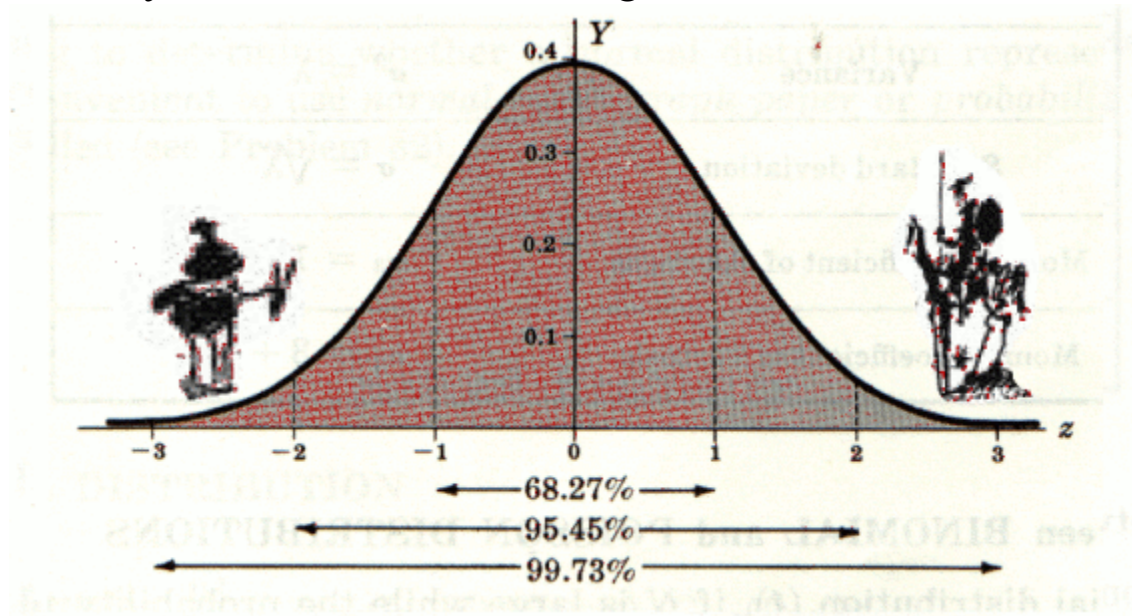
Following the observation of the low levels of P a O₂ in patients with

Agregó el Dr. Subieta que por las observaciones que él viene haciendo, los corazones de las personas habituadas a la altura son mucho más resistentes a la anoxemia es decir a la falta de oxígeno con relación de los corazones habituados a la costa.

Dr. Zubietta added that according to the observations he has been making, the hearts of high altitude residents are much more resistant to hypoxia, the lack of oxygen, than sea level residents.

PolyErythrocythemia at high altitude, the soccer game on Mount Sajama (6542m), the fetal PaO₂, he formulated the theory that man can adapt to live at the summit of Mount Everest. His last conference on this was given this February 2015 at the Conference Internacional de Medicina de Altura (CIMA) in Puno, Peru in a joint effort of the Peruvian Medical and Bolivian Medical

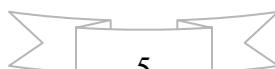
Colleges. He was awarded distinctions that he much enjoyed. Thank you to all those that recognized his talents.



He wrote a unique article entitled “The mathematics in the structure of Literature”, showing how Miguel De Cervantes description of Don Quijote and Sancho Panza were extremes in a Gauss curve. Several of his books on essays are a delight to read (in Spanish).

We jointly created the First High Altitude Pathology course in La Paz, Bolivia. We then went on to create the Congress on the Effect of Hypoxia on Diseases at high altitude that later evolved to be, held every two years, up to the V Chronic Hypoxia Symposium. We then went on to create the International Society of Chronic Hypoxia (ISCH) with several colleagues attending the II Chronic Hypoxia Symposium. The Wilderness and Environmental Medicine Journal kindly published our abstracts, for which we are most profoundly grateful.

One of the most interesting achievements was his concept that in regards to Chronic Mountain Sickness, it was unacceptable to talk



about loss of adaptation. He strongly affirmed: “there is no loss of adaptation!!”.

Consequently he wrote:

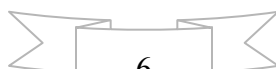
” The organic systems of human beings and all other species tend to adapt to any environmental change and circumstance within an optimal period of time, and never tend towards regression which would inevitably lead to death”.

In fact we had a dissenting point of view in the International Consensus for the Definition of High Altitude Diseases, that eventually stopped the use of the term loss of adaptation.

We created the “Science, Honor and Truth” award and a medal which says “defeating hypoxia”. The most distinguished scientists that truly follow these forgotten concepts are awarded every two years.

We wrote the first book published in English in Bolivia called “High Altitude Pathology at 12000 ft”. It was dedicated to: “Those of short breath at high altitude”.

Our research and publications, never received one sole grant (being them nonexistent in Bolivia), and all science was produced with our own funds acquired at the High Altitude Pulmonary and Pathology Institute (the first altitude clinic in the world, founded 45 years ago), from treating our patients. This became his contribution to the well-being of the residents of high altitude. In order to carry out such feats, we constructed our own equipment using very basic and inexpensive materials, writing our own software, and giving all our time and effort with satisfaction thereby having “the Joy of seeing the light” as our dear friend and outstanding physiologist Poul-Erik Paulev affirmed. We jointly



created the Poul-Erik High Altitude Diving Laboratory in his honor and we developed high altitude diving tables.

His publications are cited in many papers around the globe and have recently shot up in the number of downloads and views are available at ResearchGate. Don't miss them, they are historic.

See part of his lifetime achievements at:

<http://altitudeclinic.com/blog>

He had an absolute certainty that after he left, he would receive recognition for his work and for his theories of which he never doubted. That is left to be seen if he was right!

Natalia Zubieta DeUrioste, his granddaughter created and founded the High Altitude Museum in Oct 20, 2010 (the first in the world). He strongly supported it and felt very proud of her being the director. Now his ashes (with the potassium, sodium, iron, chloride, calcium, phosphorous, magnesium and other atoms, he last used within the depth of his ingenious and extraordinary high altitude neurons), remain in his memorial at this museum. Retrospectively, he was like a “Nova Star” that shinned his creative, inquisitive and questioning mind upon us and when he left he became a “Black Hole”, attracting many other stars!!

Thank you father, mentor, professor, wise mountain Guru for having left us a legacy, and a school of thought that Natalia, Rafaela, (my two daughters), Lucrecia my wife, Nancy. Luis and Rosayda (my brother and sisters), Clotilde (my mother, his attentive and unconditional supporter and lifetime companion), Joyce, Andrei, Gustavo, Katia, Luis Andres and Sebastian, (his other grandchildren) and even his first grandson Thomas Andrew Jenkins will spread and continue.



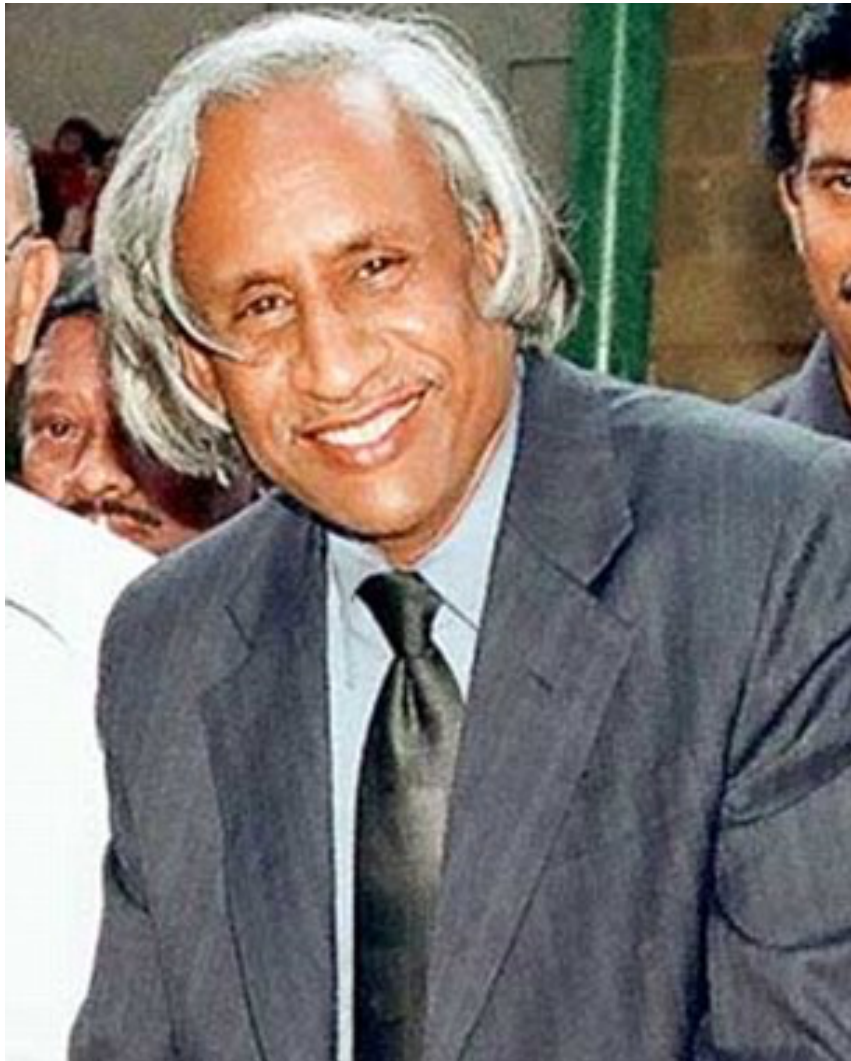
CONDOLENCES



“His work has always been inspirational to me and the line of research I carry to this day, enthusing younger generations and the next ones to come through my laboratory at Cambridge. Therefore, Prof. Dr. Gustavo Zubieta-Castillo leaves a trans-generational legacy of international interest in life at high altitude that few have achieved and many aspire to. It is a sad day for science and an enormous loss to all.”

Dino A. Giussani
Prof. of Developmental Cardiovascular Physiology & Medicine
Department of Physiology Development & Neuroscience
University of Cambridge
Director of Studies in Medicine
Gonville & Caius College

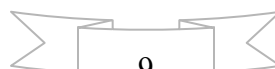




“We lost one of the most valuable and p r e c i o u s personalities... a great loss to the world scientific community. I wish to institute a great Flour oration with a contribution from my side. Every Hypoxia meeting will be having an oration in the memory of our Great Guru by world-renowned scientist in the future.”

“I always keep thinking how two individuals (you and your Dad) with no resources could bring the world together to have a rethinking about the Physiology at High altitude as a way of life and not as sickness. I admire and hats off to you both.

**Prof. Thuppil Venkatesh
St. John’s Medical College
Bangalore, India advisor
WHO advisor
The Lead Man of India**





“I have just received your superb summary of your father’s life and discoveries with great affection for both you and him. It has been many years since the last meeting that I attended in La Paz.”

John Severinghaus
USA



Foto with Michiro Nakashima (izq) y Toshio Kobayashi (der)

“I feel very sorry to hear this sad news that dear Prof.Dr.Gustavo Zubieta-Castillo has passed away. Please accept my sincere condolences. I cannot forget his kind considerations for me forever. I, from bottom of my heart, I would like to send my deep sorrow, but at the same time, my many thanks that he gave to my heart.”

Dr. Michiro Nakashima
Kyoto, Japan



“Gustavo Sr. was an incredible icon in science and medicine, but he lives on! Not many of the big ones

made sure that they leave a legacy – but Gustavo Sr. did! It is terribly sad to lose a friend and inspiration – but inspirations are eternal!”

Nino and Erika and the kids
Director
Center for Integrative Brain Research
Seattle Children’s Hospital
USA



“I retain a brilliant and lively memory of your great father as well as a delicate painting.”

Giuseppe Miserochi
Vice Direttore del Dipartimento
Professore Ordinario Fisiologia Umana
Dipartimento de Medicina Sperimentali
Univesita Degli Studi Di Milano
Milano, Italy



“He was a remarkable man and our discipline has lost a giant.”

John West
Respiratory Physiology
University of California in San Diego
USA



“It is an honor for me that I had the opportunity to meet with Professor Dr. Gustavo Zubieta-Castillo and he will always remain in my memory.”

Sergei Stroev
Moscow, Russia



“He was clearly a great man...we can be happy that he lived to a good old age and lived life to the full. I am happy to know that his work will not be forgotten.”

Jim Milledge
Honorary Professor
University College
London, England



“I fondly remember the freshness and innocence that Dr.Gustavo Sr left on anyone who met him. I recollect his charm, childlike smile and his capacity to relate with all of us without any inhibition.”

Madan Gopal.M
Bangalore, India



“He leaves quite a legacy. I think you are right, that his work will be more and more recognized as truly pioneering. He was a visionary.”

Peter Hackett MD
Director, Institute for Altitude Medicine



“I cherish my memories with Dr. Gustavo Sr.”

Dr H S Virupaksha, MBBS., MD., FIAMS.,
Bangalore, India



“I have been so lucky to have met him so many times and interacted with him.”

Gobind Babu
Oncologist
Bangalore
India



“In the very short time that I knew him, he struck me as a wonderful man.”

Brian Moran
Anthropologist
The University of Hong Kong
Copenhagen Business School
Denmark



“He will forever remain in my heart as a gifted man who believed in me and inspired my own imagination and creativity.”

Michael Moretti
Anthropologist
Chevy Chase, Washington
USA



“Aren’t you lucky to have such an inheritance? Your father was truly a remarkable man.”

Kirsten McCord
Copenhagen, Denmark



“What an empty space when wisdom and vision, curiosity and creativity, open mindedness and reflection, love and laughter, musicality and mystery, down to earth no bullshit attitude and analytical sharpness and so so much more no longer flows out from the extraordinary Gustavo Sr.”

Morten and Henriette
Former Danish Ambassador to Bolivia



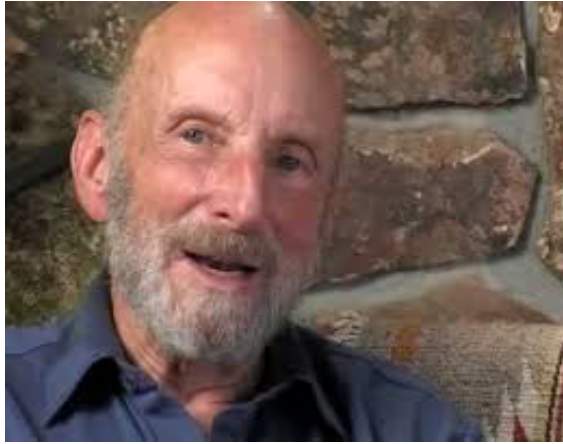
“What a brilliant person He was! How many sparkling crystal faces! How much of kindness combined with fortitude! What a Wise Man left us! We will remember Him forever. These people move the world civilization forward.”

Tatiana Serebrovskaya
Bogomoletz Insitute of Physiology
Kiev, Ukraine



“Bright personality and scientist! We will think that he go on living during all our life.”

Drs., Profs.
Yu.V.Arhipenko and T.G.Sazontova,
Lomonosov Moscow State University
Laboratory of Adaptive Medicine



“Your father truly milked this life for the adventure it had to offer and touched the lives of so many during his journey.”

Tom Hornbein



“I was amazed by his wisdom, wit, energy and kindness.”

T.A. Varkey and Sorada
Cochin Area, India - MD, Medilab Speciality Laboratories | MD,
QIndia Consulting | President, Medical Laboratory Owners
Association
India



“An unforgettable friend, philosopher and guide. I always feel that I got an opportunity to spend unforgettable moments with our beloved Guru.”

Prof. Nanjundiah Shashidhara
St. John's University
NRCLPI
Bangalore, India



“He was a great character and will be remembered by many for a long time.”

Vidyasagar Casikar
Neurosurgeon
Australia



“Relatives and friends, all of Bolivia and all progressive mankind! We have lost a great organizer, inspirer and active movement of the creative action of force for which we can always, Condole.”

Leonid Bogatyrchuk
Member of the World Economic Forum in Davos
academicianhypoxia,
Ukraine

“Please accept my condolences, and pass them on to your mother, there rest of your family, your friends, and everyone involved with high altitude research and treatment of the conditions involved.”

Arthur Morgan
Anaesthesiologist, Johannesburg, South Africa





“End of an era”

Alex Vessel
Anesthesiologist
Vancouver, Canada



“He was a pioneer in the field of high altitude biology and he will always be remembered for his many contributions in this area.”

Ashok K.Srivastava, PhD,
Professor of Medicine,
University of Montreal and
Director, Laboratory of Cell Signaling,
Montreal Diabetes Research Centre,
Centre Hospitalier de l' Universite de Montreal



“What a wonderful man, scientist and memories!”

Alan R. Hargens, Ph.D.
Professor of Orthopaedic Surgery
University of California, San Diego
UCSD Medical Center

“Your father was a wonderful man and I was privileged to spend even a short amount of time with him.”

David Preiss
Canada and USA





“I will always remember Prof. Dr. Gustavo Zubieta Castillo and his enthusiasm for science and altitude!”

Marat Slessarev
Canada



“I will remember Gustavo as an enthusiastic high altitude researcher and expert, a person with a warm soul.”

Marco Maggiorini
President Swiss Society of Intensive Care Medicine
Switzerland

“I’m so sorry to hear about the death of Prof. Dr. Gustavo Zubieta-Castillo.”

Masako Horii M.D. Ph.D.
Japanese Society of Mountain Medicine

Member of UIAA Medical Commission(2009~2012)





“I will keep in my memory his joy with the life and enthusiasm for science.”

Benedito H. Machado
Brazil



“For me it has been a privilege to work with him.”

Poul-Erik and Kisner Paulev
Physiology
University of Copenhagen
Denmark



“It was an honor to meet him at the Conferencia Internacional de Medicina de la Altura CIMA at Puno, Peru.”

Teobaldo Llosa
Director psiquiatra
CocaMedica Srl.
Peru



Foto: (Gustavo Jr, Luc
Teppema, Guiseppe
Miserocchi, Gustavo Sr.
And Frantisek Kolar

“We will never forget the nice talks we had with him and the trips we made together.”

Luc Teppema (in red)
Physiology
Leiden Univeristy
The Netherlands
drs. C.W.G.P. (Winny) van Pelt
Projectleider Accreditatie Tweedegraads Lerarenopleidingen
Instituut voor Lerarenopleidingen
Hogeschool Rotterdam

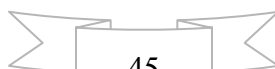


“May your father memories and his achievements bring you comfort at this difficult time.”

Mietek Pokorski & Maria
Polish Academy of Sciences
Warsaw, Poland

“What a great man he was even for us here in South Asia.”

Bhudda Basnyat
Katmandu, Nepal



“Even the stars are extinguished sometimes, but always light up the new.”

Liudmila Tikhomirova.
Physiology
Moscow, Russia





“Homage to the great bolivian scientist of high altitude medicine.”

Dr. Cesar Palomino
Decano
Colegio Médico del Perú



**“Noteworthy physician, high altitude medicine specialist,
University professor, research scientist and endearing friend.”**

Dr. Edgar Villegas Gallo
Presidente
Colegio Médico de Bolivia



“May he Rest in Peace in the great height, higher tan Chacaltaya and Huascarán, where only the great arrive.”

Fernando Fernández Quispe
Presidente
Comité-de-Educación-Médica-Continua-del-Consejo-Nacional
Colegio Médico del Perú



“Acknowledgement of his scientific labor in the field of High Altitude Medicine. Cuzco recognizes him, and so does the whole great Country (Peru).”

Dr. Carlos Rios Cuadros
Miembro Comité de Educación Médica Continua del Colegio
Médico del Perú



“...always as a great master of High Altitude Medicine... may he rest in peace, the great Bolivian Master of High Altitude Medicine. The Guru of High Altitude Medicine.”

Aquiles Monroy
La Oroya



“Yesterday, with the students of Human Medicine of the Universidad Nacional Daniel Alcides Carrion ‘ Human Physiology II, we rendered homage to the trajectory of the great DR. ZUBIETA CASTILLO that showed us the road to follow in High Altitude Medicine from High Altitude.”

Juan Amilcar Tinoco Solorzano
Medico Intensivista
Universidad Nacional Daniel Alcides Carrion
Cerro del Pasco
Perú



“...he deserves your father and you as a son, an example and the new route to follow. Success and forward ahead.”

Byron Canelos-Estrella
Sociedad Ecuatoriana de Neumologia
Quito, Ecuador



“I met him with you in Lasash (India) and he seemed to me, and extraordinary person. It is sad that these people cease to exist. His work remains and it has been important and extensive.”

José Lopez-Barneo
Instituto de Biomedicina de Sevilla
Edificio IBiS
Hospital Universitario Virgen del Rocío
Avda. Manuel Siurot, s/n
41013, Sevilla
España



“Great men, never die...”

Jackeline Barriga
Poetisa
La Paz, Bolivia



“...that the scientific community of the city of Cusco, Peru feels sad and expresses our most felt condolences for such an irreplaceable event.”

Dr Wilfredo Villamonte
Presidente del Curso Internacional de Medicina de la altura



“Great hypoxia pioneer and scientist, he never lacked energy and humor to treat mundane and ancestral, academic and historic subjects especially about Bolivia that he loved dearly. He wrote narrative and even elaborated pictured art that entertained him and kept him company. He talked without adjectives, in a synthetic way, with a precise gaze and gesture; he also appreciated and stressed-out ideas in the same way. The international acknowledgement to his multiple activities and human dispositions remain as proof.”

Jorge V. Ordenes L.
Academia Boliviana de la Lengua



“Excellent recognition to the work performed by Gustavo to science and to the country. Pride for the family.”

Gral. de Div. Aérea Germán Calleja Fuertes
Ex-Comandante de la Fuerza Aérea Boliviana
Tarija, Bolivia



”He will be heavily missed by the whole high altitude research community.”

Frantisek Kolar
Czech Academy of Sciences
Prague, Czech Republic



“He was a great man”

Dr. Jorge Asin
Professor

Universidad Tecnológica Privada de Santa Cruz
Bolivia



“I cherish having a good time chatting with him - a great man.”

Srirangapatna Srikrishna

Cardio-vascular surgeon

Bangalore, India



“...Such distinguished Doctor and scientist. No one can replace him, but, as your message well stated, he will continue to live in the memory of the people and through his production.”

Clara Whyte
Sr Economist & Policy Analyst - Biodiversity, Agrifood & Global
Governance
Canada

“...humble and generous man in his speciality, he was an example for his children and all humanity, untiring in his research.”

Rosalia vda. del Dr. Emilio Marticorena

Lita (hija)

Dr. Jose Marticorena (hijo)

Lima, Peru





“He was Big to the end, and did not want us to see him when he had left, but rather as always, with his always optimist charming laugh. A researcher, thinker and above all a friend. His work as a great researcher is left to us in one of his books: “An Interview with Sherlock Holmes” (in Spanish). And proving his theories, not only in the field of medicine, but also “living” the human behavior at high altitudes, in a soccer game at 6542m on top of the Mount Sajama. And he talked about it with a smile.”

Cnl. Ing. Federico Paz Lora
Miembro de la Academia Nacional de Ciencias
Primer Presidente y Pionero de la Comisión Boliviana Nuclear

The Bolivian Medical College, The Peruvian Medical College, the Bolivian Academy of Sciences, the Bolivian Literature Academy corresponding to the Spanish Literature Academy and the High Altitude Pulmonary and Pathology Institute (IPPA) invite everyone to attend the

Mass-Homage

in honor of the late Prof. Dr. Gustavo Zubieta-Castillo.

Friday Oct 30

Time: 19:00

Location: The Auditorium of the Bolivian Academy of Sciences

El Prado - La Paz, Bolivia

Dear Gustavo and family

Our thoughts will be with you all

This will be a very memorable event

And so good that your national societies will support this - I know this means a lot!

We wish you a lot of strength for the celebration of this great scientist, cultural pillar and human legend

Yours sincerely

Nino-Erika and family

Dear Gustavo,

I'm sorry I won't be able to attend but I certainly look forward to seeing the video. Again, condolences but also good wishes for having been lucky enough to have such a wonderful father.

best wishes, frank

Frank L. Powell, Ph.D.
Professor, Dept. of Medicine
Chief, Division of Physiology
University of California, San Diego-0623
Office: [\(858\) 534-4191](tel:(858)534-4191), Mobile [\(619\) 985-2997](tel:(619)985-2997)
fpowell@ucsd.edu

Dear Gustavo,

Although we cannot be with you physically, we will be thinking of you, Gustavo Senior and the family in silent prayer.

Best wishes,

Inder

Inder Anand, MD, FRCP, D Phil (Oxon.)
Professor of Medicine, University of Minnesota Medical School,
VA Medical Center Minneapolis MN and San Diego, CA
Mobile: [612-865-4854](tel:612-865-4854)
E-mail: anand001@umn.edu

Dear Gustavo

Even though the distance in kilometers is too big to overcome physically in such a short time, I will participate mentally commemorating the great Gustavo Zubieta Castillo.

Best wishes

Hans Petter

Hans Petter Hougen, MD, PhD, DMSc, MPA
Professor of Forensic Medicine, Chief Forensic Pathologist
University of Copenhagen
Faculty of Health Sciences
Department of Forensic Medicine
Section of Forensic Pathology
Frederik Vs vej 11
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hougen@forensic.ku.dk
<http://retsmedicin.ku.dk>



FACULTY OF HEALTH SCIENCES
UNIVERSITY OF COPENHAGEN

Dear Doctor Gustavo,

Although unable to attend, our thoughts will be with you. What a beautiful way to celebrate your father's life.

Kindest regards,

Nadia

Nadia Sallese | Member Services

IAMAT – International Association for Medical Assistance to Travelers

An honor Gustavo to meet you and more so that you come from such noble ascendance. I join you in the distance and hope to follow, step by step, the evolution of events.

José Antonio Carmona Suazo PhD
Intensivist
Mexico City

Estimado Gustavo

Te agradecemos todos, por la invitación a este gran homenaje póstumo en memoria del gran Profesor Gustavo.

Mi familia y yo estaremos acompañándolos espiritualmente en esos momentos.

*Que nuestro Dios, morador de las Grandes Alturas....
acojan el alma inmortal de nuestro gran amigo Gustavo....
en su eterno ascenso*

Familia Emilio Marticorena

May God bless his soul and others to continue his efforts.

Vinod George PhD
India

Dear Dr Gustavo Calleja

Thank you for the information about the Homage. We respectfully remember the great contribution of our Great Parvatha Guru-- Dr. Gustavo Zubieta - Castillo in the field - Art, Science and Technology more than that he was a great humanist with a great values.

Regards
Shashi
Bangalore, India

Dear Gustavo! Dear Friend!
Wish all the Best for the programme.

We in BANGALORE LOOK FORWARD TO THE YOUTUBE . PLEASE DO TELL US HOW DID IT GO. ALSO SHARE SOME PHOTOS OF THE EVENT
Kindly convey my sincere Respects to your Dear Mother!

yours ever

Parthasarathy , Bangalore



HOMAGE to GUSTAVO ZUBIETA-CASTILLO

**1926-2015
IN MEMORIAM**



To the family and his son Dr. Gustavo Zubieta-Calleja (La Paz, Bolivia) of the **Illustrious Honorable Professor Dr. Gustavo Zubieta-Castillo MD** (May 20 1926 to September 17, 2015, 89 years old) bolivian physician, high altitude medicine expert, physiologist, military surgeon, writer, painter, named the “Mountain Guru” at the Medical College of Saint John’s in Bangalore, India (1).

He worked in high altitude physiology. Born at 3800m in Oruro, Bolivia and after studying medicine in the Universidad Mayor de San Andres in the city of La Paz, at 3513m above sea level, he focused all his work on high altitude physiology and later evolved to the study of

pathology resulting from high altitude. He proposed new concepts and the understanding of what is known as Chronic Mountain Sickness. This pathology observed at high altitude, with values above the normal ones for such altitude, is characterized by an increase of the number of red blood cells, cyanosis, ventilatory insufficiency and respiratory alterations with pulmonary hypertension and right ventricular hypertrophy, that was initially considered to “loss of adaptation”. Professor Gustavo Zubieta-Castillo changed this interpretation and he was firmly convinced that “*The organic systems of human beings and all other species, tend to adapt to any environmental change and circumstance in an optimal period of time, and never tend towards regression, which would unavoidably lead to death*” (2). This concept has changed the way how disease is interpreted at high altitude.

On July 9th, 1970, he created the first high altitude clinic in the world, that is found in the city of La Paz, Bolivia with the name “ Instituto de Patología en la Altura” (‘High Altitude Pulmonary and Pathology Institute’). One of his theories is that man has the extraordinary capacity to adapt to live in a hypoxic environment even in the highest point on planet earth, the summit of Mt. Everest 8842m (3).

Consequently, it is for us, the Andean America gathered into the ‘Red Latinoamericana de Investigación de Medicina Intensiva, en la Altura’ – RELAMI-Altura, (“Latin-American Network of High Altitude Intensive Care Research”) to offer this posthumous homage to such an illustrious Bolivian colleague and professor, showing our gratitude for having had the honor of sharing the sublime learning and for showing us the road to follow in High Altitude Medicine.

Sincerely,

FIRST JOINT DIRECTIVE COMMITTEE

Dr. Manuel Jibaja Vega. COORDINADOR GENERAL,

Dr. E. Enrique Maraví Poma. COORDINADOR EUROPA.

Dr. José Antonio Carmona Suazo. COORDINADOR MÉXICO.

Dr. Guillermo Ortiz Ruiz. COORDINADOR COLOMBIA

Dr. Ignacio Vladimir Granda Luna. COORDINADOR ECUADOR.

Dr. Amilcar Tinoco Solórzano. COORDINADOR PERÚ.

Dr. Freddy Sandi Lora. COORDINADOR BOLIVIA.

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¹ <http://altitudeclinic.com/blog/2010/01/the-mountain-guru/>

² <http://altitudeclinic.com/blog/2010/07/forever-loss-of-adaptation-does-not-exist/>

³ Zubieta-Castillo G, Zubieta-Calleja GR, Zubieta-Calleja L, Zubieta-Castillo N (2008). "Facts that Prove that Adaptation to life at Extreme Altitude (8842m) is possible". In *Adaptation Biology and Medicine*, Suppl 5: 348–355. Editors: L. Lukyanova, N. Takeda and P.K. Singal. Copyright © 2008 Narosa Publishing House Pvt. Ltd., New Delhi, India. 26.

What a very full life he led and what a lot he achieved.

I well remember during my prolonged stay with you being taken to sit outside in the sun, and your father bringing some of his art works to show me.

I am sure all your family and many others will miss him.

With very kind thoughts, and happy memories,

Sue Handscomb

Dear Gustavo:

I am really very sad to receive that message.

I keep him warm in my memories and we should use our time to improve what he has started.

Best wishes from China.

HC

Prof. Dr. Hanns-Christian Gunga

Charité – Universitätsmedizin Berlin, CCM

CharitéCrossOver (CCO)

Direktor

Institut für Physiologie

Zentrum für Weltraummedizin Berlin

Charitéplatz 1

10117 Berlin

Dear Dr. Zubieta-Calleja,

In memory of your father Prof. Gustavo Zubieta-Castillo, the excellent, famous scientist, we ask you permission to publish your message 'Prof. Dr. Gustavo Zubieta-Castillo's last breath in his beloved high altitude La Paz, Bolivia' in the latest issue of the Ukrainian scientific Journal "Medical Hydrology and Rehabilitation".

We share your deep sorrow and pay tribute to an outstanding researcher of high altitude.

Yours sincerely,

Alla G. Portnychenko, MD, PhD, DrSci

Editor-in-Chief

Head of Lab of Molecular Biology

International Centre for Astronomical, Medical and Ecological
Research, NAS of Ukraine

4 Bogomoletz Str.

01024 Kiev

Ukraine



Please accept our condolences and the expression of deep sorrow for this irreparable loss for the Family, Bolivia and the World.

Very cordially

Edda and Luiz Gilberto

Sorry to hear the sad news. Please accept my heartfelt condolences.
Colin

Colin A. Nurse [B.E.Sc.](#), Ph.D.
Professor
Department of Biology, McMaster University
1280 Main St. West,
Hamilton, Ontario, Canada L8S 4K1

Scientific Publications

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And several others...

In Memoriam
Prof. Dr. Gustavo Zubieta-Castillo
May 20, 1926 - September 17, 2015

He was born in Oruro, Bolivia and attended the Bolivar and Saracho high schools. His medical degree was from the Universidad Mayor de San Andres (UMSA) in La Paz, Bolivia. He was a fellow in Mexico, Brazil, Argentina, United States. He was a founding member of the Latin American Association of Physiological Sciences, an initiative of Nobel Prize Bernardo Houssay. He was a Visiting Professor at Tulane University, New Orleans, LA. Professor of Physiology at the faculties of medicine, dentistry and pharmacy UMSA, during 20 years. Member of the "International Consensus Group on the Definition of Diseases at High Altitude". Academician of the Bolivian Academy of Sciences. Academician of the Bolivian Academy of Language, corresponding of the Royal Spanish Academy. Founder of the Instituto Boliviano de Biología de la Altura with the French mission. Founder and Director of the Instituto de Patología en la Altura - Clínica IPPA (High Altitude Pathology Institute).

Author of many scientific papers of high altitude physiology and pathology. Founder of the International Society of Chronic Hypoxia. Colonel Surgeon of the Bolivian Armed Forces DAEN.

Thinker, philosopher, physician, scientist, writer, polyglot, artist and critic. In 1964 after his observations of the perfused heart in dogs, he affirmed that the hearts of high altitude residents are much more resistant to hypoxia than those at sea level. He clarified misconceptions about lung diseases at high altitude, which were improperly termed “loss of adaptation”, creating an international controversy. He was interviewed on National Geographic magazine in April 1987. He was named “The Mountain Guru” at St. John's Medical College in Bangalore, India. He said that life is possible even at 8842m above sea level on the summit of Mount Everest, if adequate temperature and food are provided. He never did things in order to compete, but rather to pursue a natural aptitude and inclination . Here is one of his paintings "Imitating Renoir"

