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PLACE OF BIRTH: La Paz, Bolivia

DATE OF BIRTH: October 12, 1955

MARITAL STATUS: Married. Two children.

CURRENT ACTIVITY: Director of IPPA - President of Zubieta University, Vice- President of International Society of Chronic Hypoxia. Past Visiting Professor at University of Copenhagen and current Visiting Professor at Era University, Lucknow, India and American University at Barbados. Coordinator of Research Cooperation with BLDE University in Vijayapur, India.

## **EDUCATION**

June 1967 - Dec 1972: High School studies in the AMERICAN COOPERATIVE SCHOOL in La Paz, Bolivia.

Jan 1973 - Awarded an exchange scholarship to CENTRAL HIGH SCHOOL in Little Rock, Arkansas.

May 1973: Graduated from CENTRAL HIGH SCHOOL in Little Rock, Arkansas.

June 1973: Member of the NATIONAL HONOR SOCIETY of the American Cooperative School in La Paz, Bolivia.

June 1973: Named the “Most Outstanding Science Student” in the American Cooperative School.

June 1973 - June 1974: Initiate Pre-med studies at the UNIVERSITY OF ARKANSAS in Fayetteville, Arkansas. Two Scholarships awarded: 1) The freshman scholarship and 2 ) The exchange student Scholarship.

June 1974: Transfer to the UNIVERSIDAD MAYOR DE SAN ANDRES for personal reasons.

May 1981: Medical Doctor degree from the UNIVERSIDAD MAYOR DE SAN ANDRES in La Paz, Bolivia.

May 1982: The Bolivian University grants the M.D. title in "Provision Nacional".

May 1981 - May 1983: Residency in Internal Medicine and Pulmonary Function at The HIGH ALTITUDE PATHOLOGY INSTITUTE IPPA.

Sept 1983: Pulmonary Function Department in HOPITAL MARIE-LANNELONGUE in Paris, France.

Oct 1983 – Dic 1985: Degree in Pulmonary function and High Altitude Medicine at the HIGH ALTITUDE PATHOLOGY INSTITUTE IPPA.

Jan 1982 - Dic 1986: Bioengineer computer programming training at the HIGH ALTITUDE PATHOLOGY INSTITUTE IPPA.

Jan 1985 - Dic 1985: Researcher of the BOLIVIAN ACADEMY OF SCIENCES.

May 1986 - June 1986: Department of Medicine. UNIVERSITY OF CALIFORNIA IN SAN DIEGO, under the supervision of Dr. John B. West.

Jun 1986: Member of the AMERICAN THORACIC SOCIETY, U.S.A.

June 1990: Member of the ASOCIACION BOLIVIANA DE GESTION TECNOLOGICA.

Dic 1992: Member of the INTERNATIONAL SOCIETY FOR MOUNTAIN MEDICINE.

Dic 1992: Member of the WILDERNESS MEDICAL SOCIETY, U.S.A.

Jan 2012: Fellow of the PULMONARY VASCULAR RESEARCH INSTITUTE, UK.

## **ACTIVITIES**

May 1986 - to Date: Director and Principal physician in charge of initial consultations of residents and foreign visitors to La Paz, Bolivia. Also doing research in physiology and pathophysiology of high altitude in the pulmonary department.

1991: Organizer and speaker of the FIRST COURSE ON HIGH ALTITUDE PATHOLOGY in La

(Paz, Bolivia).

1994: Co-organizer, secretary and founder of the FIRST WORLD CONGRESS ON HIGH ALTITUDE MEDICINE AND PHYSIOLOGY in La Paz, Bolivia.

Jan 1998 to Date: IAMAT (INTERNATIONAL ASSOCIATION FOR MEDICAL ASSISTANCE TO TRAVELLERS) certified physician.

Jan 2000 to Date: Member of the Editorial Board of the Journal "HIGH ALTITUDE MEDICINE AND BIOLOGY"

Jan 2003 to Date: Editorial reviewer at WILDERNESS AND ENVIRONMENTAL MEDICINE and several other Journals including as invited reviewers at the Lancet Neurology.

2001: Member of the Children at high altitude: an international consensus statement by an ad hoc committee of the International Society for Mountain Medicine.

2005: Member of the International consensus statement on chronic and subacute high altitude diseases.

2005: Organizer of the I Symposium on the effect of Chronic Hypoxia on Diseases at High Altitude (La Paz, Bolivia).

<http://zuniv.net/symposium/>

2004 to 2008: Visiting Professor at University of Copenhagen, Denmark.

2004 to 2017: Writing Scientific articles with Prof. Poul-Erik Paulev, attending invitations to speak in different medical centers and Academy of Sciences in Europe and Latin America.

2007: Adaptation of the highlanders retina to Sea Level and its application to the treatment of Diabetes. Joint research at the Glostrup Hospital under the direction of Prof. Michael Larsen and in collaboration with Peter Kofoed.

2007: Creator of the Poul-Erik Paulev High Altitude Diving Laboratory.

2007 to 2008: Participating in research at Glostrup Hospital (Copenhagen, Denmark).

2008: Organizer and Scientific Committee: II Symposium on the effect of Chronic Hypoxia on Diseases at High Altitude (La Paz, Bolivia).

<http://zuniv.net/symposium2/>

2010: Organizer and Scientific Committee: III Symposium on the effect of Chronic Hypoxia on Diseases at High Altitude (La Paz, Bolivia).

<http://zuniv.net/symposium3/>

2012: Co-organizer of The Global Hypoxia Summit & 4th International Conference on Chronic Hypoxia (New Dehli, India).

<http://altitudeclinic.com/blog/2012/08/4th-chronic-hypoxia/>

2014: Organizer and Scientific Committee: V Chronic Hypoxia Symposium (La Paz, Bolivia).

<http://zuniv.net/symposium5/>

2016: Organizer and Scientific Committee: VI Chronic Hypoxia Symposium (La Paz, Bolivia).

<http://zuniv.net/symposium6/>

## **BOOKS**

Book: High Altitude Pathology at 1200 ft., Imprenta Publicidad PAPIRO, La Paz-BOLIVIA, 1989.

Chapter in a Book: “Facts That Prove That Adaptation To Life At Extreme Altitude (8848m) Is Possible” Adaptation Biology and Medicine: Health Potentials. Volume 5, 2007. Editors, L.Lukyanova, N. Takeda and P.K. Singal. Narossa Publishing House. New Delhi, India.

Book: New Human Physiology Editors: Poul-Erik Paulev & Gustavo Zubieta-Calleja. <http://www.zuniv.net/physiology/book/index.htm>.2008.

Book: Human adaptation to high altitude and to sea level: acid-base equilibrium, ventilation and circulation in chronic hypoxia – April 30, 2010. VDM Verlag Dr. Müller Publishers.

Chapter in a Book: “High Altitude Research and its Clinical Application” in Translational Research in Environmental and Occupational Stress. Editors: Shashi Bala Singh, Nanduri R. Prabhakar and Srinivas N. Pentylala. Springer India, 2014.

## **CONGRESSES, CONFERENCES AND SEMINARS ATTENDED.**

Invited speaker to the THIRD INTERNATIONAL CONGRESS OF HIGH ALTITUDE MEDICINE in Xining, Quingai, People's Republic of China.

Invited speaker to the SECOND WORLD CONGRESS ON HIGH ALTITUDE MEDICINE AND PHYSIOLOGY in Cusco, Perú. 1996.

Invited to the CONGRESS OF PHYSIOPATHOLOGY in Kiev, Ukraine.

Invited speaker to the THIRD WORLD CONGRESS OF MOUNTAIN MEDICINE AND HIGH ALTITUDE PHYSIOLOGY AND THE 18TH JAPANESE SYMPOSIUM ON MOUNTAIN MEDICINE in Matsumoto, Japan. 1998.

Invited to the "bodas de Platino" de la FEDERACION VASCA DE MONTAÑA, en San Sebastian, España, Oct 1999.

Invited speaker to the 3RD UKRANIAN CONGRESS OF PATHOPHYSIOLOGISTS in Odessa Ukraine, May 2000.

Invited speaker 4TH WORLD CONGRESS ON MOUNTAIN MEDICINE AND HIGH ALTITUDE PHYSIOLOGY, in Arica, Chile, 2000

Invited speaker to the BERLIN FREI UNIVERSITY FISIOLGY CONFERENCE in 2005.

Invited speaker to the 5TH WORLD CONGRESS ON MOUNTAIN MEDICINE AND PHYSIOLOGY in Barcelona, Spain. 2002.

Invited speaker by Michael Larsen at the Glostrup Hospital in Copenhagen, Denmark 2004

Invited speaker to the 6TH WORLD CONGRESS ON MOUNTAIN MEDICINE AND PHYSIOLOGY in Xining, Quingai, Peoples Republic of China and Lhasa, Tibet. 2004.

Invited to the conference Advances in Pneumology at the University of Opole, 2004.

Invited speaker to the course ACID-BASE in Vejle, Denmark, 2005.

Invited to a Seminar at the Centre for Cardiovascular Research Czech Republic.

Invited to the conference Advances in Pneumology at the University of Opole, 2005

Invited speaker to the VIII WORLD CONGRESS OF THE INTERNATIONAL SOCIETY FOR ADAPTIVE MEDICINE (ISAM), June 21-24, 2006.

Invited speaker to The Lung at High Altitude: From cellular acclimatization to clinical disease August 3-7, 2012 Leh, Ladakh, J&K, India

Co-organizer of the Global Hypoxia Summit and 4th International Conference on Chronic Hypoxia held in India, under the direction of Prof. Shashi Bala Singh Director of Defense Institute of Physiology and Allied Sciences (DIPAS), in New Dehli, and Prof. Thuppil Venkatesh India 9-12 August,2012

Invited speaker by Frank Powell to the 1<sup>st</sup> Pan-American Congress of Physiological Sciences in Fozz D'Iguazzu, Brazil. Aug 2-6, 2014.

Invited speaker to VI SEMINARIO INTERNACIONAL DE SALUD OCUPACIONAL EN OPERACIONES MINERAS (ISEM) Lima, Peru 23 Oct, 2014.

Invited speaker to the CIMA Conferencia Internacional de Medicina de la Altura in Puno, Peru Feb 2015.

Organizer and Invited speaker to the CIMA II Conferencia Internacional de Medicina de la Altura in La Paz, Bolivia, Feb 2016

Invited speaker for the India Chronic Hypoxia Tour 2016

<http://altitudeclinic.com/blog/2016/08/india-chronic-hypoxia-tour-bangalore/>

Invited speaker to conference tours in Nov 29th to Dec 15th, 2017 in Bangalore, Lucknow and Vijayapur. India.

<http://altitudeclinic.com/blog/2017/12/india-conferences-2017/>

Named Visiting Professor at Era University in Lucknow India.

Named Visiting Professor at Barbados American University.

Multiple conferences in several Institutions, Schools, Universities to talk about high altitude medicine.

#### **INVITED PEER REVIEWER AT THE FOLLOWING JOURNALS:**

Journal of Affective Disorders - Elsevier

The Lancet Neurology

Journal of Clinical and Diagnostic Research  
High Altitude Medicine and Biology  
Wilderness and Environmental Medicine  
Journal of Krishna Institute of Medical Sciences University [JKIMSU]  
Acta Physiologica - from Scandinavia

### **CURRENT RESEARCH PROJECTS AND ACTIVITIES**

Development and discussion of the High Altitude Adaptation Formula and the Tolerance to Hypoxia Formula.

At IPPA, we are specialized in treatment of high altitude medical problems for new comers and local residents. We have all the resources that allow us to treat effectively and successfully Acute Mountain Sickness, High Altitude Pulmonary Edema, High Altitude Cerebral Edema, and others. The precise diagnosis is essential in order to counter the effects of hypoxia.

Successful construction of the elevator for IPPA. In charge of the brains of the elevator with new technology.

### **FUTURE ACTIVITIES**

Continued development of the High Altitude Zubieta University a private research institution in La Paz, Bolivia.

Teaching and training students from around the world in High Altitude Medicine at IPPA.

Carrying out, once more the 7th Chronic Hypoxia Symposium in 2019

<http://zuniv.net/symposium7>

### **TEACHING ACTIVITIES**

2005: Courses on High Altitude Medicine and Physiology at the High Altitude Pathology Institute.



1998: Courses on ACID-BASE at the High Altitude Pathology Institute in La Paz, Bolivia.

1998: Courses on Electrocardiography at the High Altitude Pathology Institute.

2006: Courses on Experimental Medicine in Physiology.

2003: Courses on Bio-engineering and Robotics.

2000: Thesis Advisor for students in Medical technology, Computer Science, Software engineers for several State and private Universities in Bolivia.

2017 Invited Thesis evaluator at BLDE University in Vijayapur, India

## **OTHER ACTIVITIES**

Software programming in BASIC, CLIPPER, QBASIC, HTML, PHP. Proficient in WINDOWS and LINUX environments. Development of medical databases for the High Altitude Pathology Institute, with on-line analog digital sampling since 1981 up to date.

Hardware development of multiple respiratory equipment, spirometers, Exercise ergometry on treadmill, Electrocardiographic and vectocardiographic equipment. Electrophoresis equipment, Computerization of Photometers, Timers, analog-digital converters, Solenoid valve application, automatized sample coloration, Monitor development and adaptation of transducers for pressure, temperature and oxygen and pressure sensing.

Development and construction of a computerized Hyperoxic/Hypoxic adaptation chamber Versions 1 and 2, and the Chacaltaya High Altitude Pyramid laboratory located at 5300 m.

Co-organizer of the Soccer game played on the summit of Mount Sajama in 2001 at 6542 m. Electrical engineering installation, computer cable links, setting up of Hubs and Channels of the building of the Zubieta University.

Writing articles for the press in Bolivia and one for the Copenhagen Post (Friday July 20, 2007). Creation of the Poul-Erik Paulev High Altitude Diving Laboratory.

<http://zuniv.net/labs/diving/>

Website development of the High Altitude Pathology Institute in La Paz, Bolivia.  
<http://altitudeclinic.com>

Extensive network of chronic hypoxia scientists from around the world receiving our newsletter periodically at:

<http://zubietas.blogspot.com/>

Creation of the Miécyslaw Pokorski Carotid Body High Altitude Laboratory (under development).

Organizer of the 1<sup>st</sup> World Congress on High Altitude Medicine and Physiology in La Paz, Bolivia Sept 1994.

Co-organizer of the 1<sup>st</sup> Symposium on the Effect of Chronic Hypoxia on Diseases at high altitude held in La Paz on Oct 2005.

<http://zuniv.net/symposium/follow-up.html>

Designer and constructor of the Chacaltaya Pyramid Laboratory at 5300 m.

Bioengineering and creation of innovative respiratory equipment.

2017 Interview with Sanjay Gupta for a CNN documentary to be aired in 2018.

Part2 Magazine interview and publication

<https://www.part2pictures.com/human-index/>

## **FOREIGN LANGUAGE SKILLS**

Spanish, English, French and Portuguese.

## **RESEARCH PAPERS**

Available at Researchgate.net

- Over 67 publications
- Over 10,000 reads
- 345 citations
- 33.10 Impact points

## **BIBLIOGRAPHY**

[1] Zubieta-Castillo G, Zubieta-Calleja R, Zubieta-Calleja G. Estudios sobre la circulacion

- coronaria en la altura. Acta de las Primeras Jornandas de Medicina y Cirugia de la Altura; 1978 4 - 7 de Octubre La Oroya, Peru; 1978.
- [2] Zubieta-Castillo G, Zubieta-Calleja, G. & Zubieta-Calleja, R. El consumo de oxigeno en miocardio de perros a 3600 mt y a diferentes tensiones de oxigeno. *Acta de las primeras Jornadas de Medicina y Cirugia de la altura*. La Oroya, Peru 1978.
- [3] Zubieta-Calleja G, Zubieta-Castillo, G., Zubieta-Calleja, R. . La Produccion de anhídrido carbonico durante el consumo de oxigeno en miocardio de perros a 3600 m. (Abstracto). Primer Congreso Boliviano de Biología; 1979 1979; UMSS Cochabamba; 1979.
- [4] Zubieta-Castillo G, Zubieta-Calleja, R., Zubieta-Calleja, G. Clasificacion de la eritrocitosis en la altura de acuerdo al numero de eritrocitos (Abstracto). Primer Congreso Boliviano de Biología; 1979; UMSS Cochabamba; 1979.
- [5] Zubieta-Castillo G, Zubieta-Calleja GR. Chronic mountain sickness and miners (Spanish). *Revista de la Academia Nacional de Ciencias de Bolivia*. 1985;4:109-16.
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- [10] Zubieta-Castillo G, Zubieta-Calleja GR. Iatrogenic Disease in a polycythemic patient at altitude. *Amer Rev of Respir Dis*. 1988;137(4):509.
- [11] Zubieta-Calleja GR, Zubieta-Castillo G. High Altitude Pathology at 12000 ft La Paz: Papiro 1989.
- [12] Zubieta-Castillo G, Zubieta-Calleja GR. Progressive high altitude hypoventilation reversed by hyperoxia. *Amer Rev of Respir Dis*. 1990;141(4):a924.
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- [15] Zubieta-Castillo G, Zubieta-Calleja G. Acute Hypoventilation on ascent to high altitude.

- European Respiratory Society Congress; 1992; Vienna, Austria; 1992.
- [16] Zubieta-Castillo G, Zubieta-Calleja GR. El Síndrome de Triple Hipoxia en la Altura. . Acta del Quinto Congreso Nacional de Medicina de la Altura; 1992; La Oroya, Peru; 1992. p. 136.
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- [19] Zubieta-Calleja GRZ-C, G and Zubieta-Calleja, L. Zubieta-Calleja, G.R. Zubieta-Castillo, G and Zubieta-Calleja, L. Acta Andina. 1995;4:123-6.
- [20] Zubieta-Calleja GR, Zubieta-Castillo G, Zubieta-Calleja L. Inadequate treatment of excessive erythrocytosis. Acta Andina. 1995;4:123-6.
- [21] Zubieta-Calleja GZ-C, G. CMS. Proceedings of the Third Symposium on High Altitude Medicine and Physiology; 1995; Xining, Gengai, PR China; 1995. p. 40.
- [22] Triplett J, Zubieta-Calleja L, Zubieta-Castillo G, Zubieta-Calleja GR. Physiological changes related to rapid altitude shifts in La Paz, Bolivia. Acta Andina. 1996;5(1):19-21.
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- [24] Zubieta-Calleja G. and Zubieta-Castillo GR. International Soccer vetoed in Stadiums above 3000 m of altitude. International Society for Mountain Medicine. 1996;6(1).
- [25] Zubieta-Calleja GR, Zubieta-Castillo, G and Zubieta-Calleja, L. Can HAPE be diagnosed through the tongue?. Acta Andina. 1996;5:31-4.
- [26] Zubieta-Castillo G, Zubieta-Calleja G. Triple hypoxia syndrome. Acta Andina. 1996;5(1): 15-8.
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- [28] Zubieta-Calleja G, De Urioste, L. & Zubieta-Calleja, L. High altitude residents in Bolivia. Progress in Mountain Medicine and High Altitude Physiology. In: Hideki Ohno TK, Shigeru Masuyama and Michiro, Nakashima, ed. *Progress in Mountain Medicine and High Altitude Physiology*. Matsumoto, Japan 1998:185-9.
- [29] Zubieta-Calleja G, Zubieta-Castillo G. Changes in oximetry during breath holding in normal residents of high altitude. In: Hideki Ohno TK, Shigeru Masuyama and Michiro, ed. *Progress in Mountain Medicine and High Altitude Physiology*. Matsumoto, Japan 1998:343-8.
- [30] Zubieta-Castillo G, Zubieta-Calleja G, Arano E, Zubieta-Calleja L. Respiratory Disease, chronic mountain sickness and gender differences at high altitude. . In: Hideki Ohno TK,

- Shigeru Masuyama and Michiro, Nakashima., ed. *Progress in Mountain Medicine and High Altitude Physiology*. HidekiOhno, Toshio Kobayashi, Shigeru Masuyama and Michiro, Nakashima. 1998:132-7.
- [31] Zubieta-Castillo G, Zubieta-Calleja GR. Pulse oximetry in chronic mountain sickness-long breath holding time and oscillation at lowest saturation. In: HidekiOhno TK, Shigeru Masuyama and Michiro, Nakashima, ed. *Progress in Mountain Medicine and High Altitude Physiology* 1998:349-54.
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- [38] Zubieta-Castillo G, Zubieta-Calleja, G.R., Zubieta-Calleja, L., Zubieta, N. Bolivian aymara that played soccer at 6542 m maintain higher oxygen saturation and lower oxygen uptake during maximal exercise. *HAMB*. 2002;3(1):114-5.
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- chronic mountain sickness (cms) contributed to the theory of life at the hypoxic levels of the summit of mount Everest. *HAMB*. 2004;5(2):291-2.
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- [53] Gustavo Zubieta-Calleja GZC, Poul-Erik Paulev (2009) The Adaptation of Highlanders to Sea Level. In *Wilderness & Environmental Medicine- Wilderness Conference and Annual Meeting*. (ed.), Vol. 20, pp. 184-5, Wilderness & Environmental Medicine-Official Publication of the Wilderness Medical Society, Snowmass, Colorado.
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