



**Prof. Dr. Gustavo Zubieta-Calleja  
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**Instituto Pulmonar y Patología de la Altura (IPPA)**

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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 the University of Copenhagen currently Visiting Professor at BLDE University, 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 were 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. I am 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 reviewer 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 the University of Copenhagen, Denmark.

2004 to 2017: Writing Scientific articles with Prof. Poul-Erik Paulev, attending invitations to speak in different medical centers and the 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/>

2018: Organizer and Scientific Committee: 7th Chronic Hypoxia Symposium (La Paz, Bolivia). <http://zuniv.net/symposium7/>

2020: Director and organizer of the 2nd World COVID Conference with Prof. Malali Gowda of the Bengaluru Genomics Center, held in India. <http://worldcovidconference.bgc-genomics.com/>

2020: Dedicated most of the year to the study and publication of articles on COVID-19, giving television and radio interviews, and giving conferences via zoom around the world.

2022: Organizer and Scientific Committee: 8th Chronic Hypoxia Symposium (La Paz, Bolivia). <http://zuniv.net/symposium8/>

## 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. Pentyala. Springer India, 2014.

## CONGRESSES, CONFERENCES, AND SEMINARS ATTENDED.

Invited speaker to the THIRD INTERNATIONAL CONGRESS OF HIGH ALTITUDE MEDICINE in Xining, Qinghai, 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 Kyiv, 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 UKRAINIAN CONGRESS OF PATHOPHYSIOLOGISTS in Odesa 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 FISIOLOGY 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, Qinghai, 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 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.

She invited speaker by Frank Powell to the 1<sup>st</sup> Pan-American Congress of Physiological Sciences in Fozz D'Iguazu, 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 from Nov 29th to Dec 15th, 2017, in Bangalore, Lucknow, and Vijayapur, India.

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

Appointed Visiting Professor at Era University in Lucknow, India. She appointed Visiting Professor at Barbados American University.

Appointed Visiting Professor at BLDE University, Vijayapur, India. Medical School ranking 6<sup>th</sup> in all India.

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

#### **INVITED PEER REVIEWERS 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

Respiratory Physiology and Neurobiology.

Faculty Opinions.

Nature, Scientific Reports

Frontiers

OBM Genetics

Several MDPI Journals

International Journal of Environmental Research and Public Health

Several others.

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## **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 the treatment of high altitude medical problems for newcomers and 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. A precise diagnosis is essential to counter the effects of hypoxia.

The 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 9th Chronic Hypoxia Symposium in 2024

<http://zuniv.net/symposium8>.

Several research projects in chronic hypoxia studies.

## **TEACHING ACTIVITIES**

2005: High Altitude Medicine and Physiology courses 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, and Software engineers for several State and private Universities in Bolivia.

2017 Invited Thesis evaluator at BLDE University in Vijayapur, India.

2022: External Examiner of Thesis by Ferdinand Vogts. Faculty of Health Sciences. University of Cape Town, South Africa.

## **OTHER ACTIVITIES**

Software programming in BASIC, CLIPPER, QBASIC, HTML, PHP, and PYTHON. Proficient in WINDOWS and LINUX environments. Development of medical databases for the High Altitude Pathology Institute, with online analog digital sampling since 1981.

Hardware development of multiple respiratory equipments, spiroimeters, Exercise ergometry on the treadmill, Electrocardiographic and 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>  
An extensive network of chronic hypoxia scientists from around the world receiving our

newsletter periodically at:

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

Creation of the Mieczyslaw Pokorski Carotid Body High Altitude Laboratory (under development). The 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 in 2018.

<https://www.youtube.com/watch?v=HRjXEayMmq0>

Part2 Magazine interview and publication <https://www.part2pictures.com/human-index/>

2019 Multiple publications and conferences on COVID-19. International Conference on Corona Viral Genome, Bengaluru, India. Colegio Medico del Peru - Puno. Medicos Bolivianos On-Line. Canadian Embassy during the Anniversary of Canada, International Conference of Odontologists. Iran International conference on COVID online. 2nd World Covid Conference, Radio Interview at the Universidad Mayor de San Andres program Desarmado Discursivo

2019 Creation of the New Concept of Pneumolysis in COVID-19.

<http://altitudeclinic.com/blog/2020/10/pneumolysis-in-covid-19/>

Multiple radio and Television interviews: [EFE America](#)

[El diario España](#)

[La Region Bolivia](#)

[Financial times](#)

[UK Daily Mail UK](#)

[Pagina Siete](#)

[Bolivia Fox News](#)

[USA Miami Herald](#)

[USA Erbol](#)

[FoxNews](#)

[Pagina Siete Bolivia](#)

[El Diario Bolivia Pneumolysis](#)

[Sobre Neumolisis y el deporte. David Heredia, Periodista deportivo, Programa](#)

[Record, Radio Monumental La Paz, Bolivia.](#)

Latest conferences and interviews available at:  
<http://altitudeclinic.com/blog/2020/06/covid-19-pubs/>

## FOREIGN LANGUAGE SKILLS

Spanish, English, French, and Portuguese.

## RESEARCH PAPERS

Updated data available at <https://www.researchgate.net/profile/Gustavo-Zubieta-Calleja/stats> as of Oct 27, 2022

- Over 126 publications
- Over 72,912 reads
- 1,541 citations
- 774.7 Research Interest Score

## BIBLIOGRAPHY

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- [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 anhidrido 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.
- [6] Zubieta-Castillo G, Zubieta-Calleja GR. El mal de Montaña Cronico y los mineros. (Chronic mountain sickness and miners). Cuadernos Academia Nacional de Ciencias de Bolivia. 1985;62:109-16.
- [7] Zubieta-Castillo G, Zubieta-Calleja GR. Pulmonary diseases and chronic mountain sickness (Spanish). Revista de la Academia Nacional de Ciencias de Bolivia. 1986;5:47-54.
- [8] Zubieta-Castillo G, Zubieta-Calleja GR. Las Enfermedades pulmonares y el mal de

- montaña cronico. (Pulmonary diseases and chronic mountain sickness). Cuadernos de la Academia Nacional de Ciencias de Bolivia. 1986;68:3-12.
- [9] Zubieta-Castillo G, Zubieta-Calleja GR. The triple hypoxia syndrome at altitude (Abstract). Amer Rev of Respir Dis. 1988;137(4):509.
  - [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: Papilo 1989.
  - [12] Zubieta-Castillo G, Zubieta-Calleja GR. Progressive high altitude hypoventilation reversed by hyperoxia. Amer Rev of Respir Dis. 1990;141(4):a924.
  - [13] Zubieta-Castillo. G & Zubieta-Calleja G. Hematocrit, PaO<sub>2</sub> and PaCO<sub>2</sub> changes in a High altitude increased Polycythemic during a 12 year follow up. Amer Rev of Respir Dis. 1990;141(4):a921.
  - [14] Zubieta-Castillo G, Zubieta-Calleja, G & Zubieta-Calleja, L. Cambios en la PaO<sub>2</sub>, PaCO<sub>2</sub> y el hematocrito en un paciente con mal de montaña cronico durante 12 años. Acta del Quinto Congreso Nacional de Medicina de la Altura; 1992; La Oroya, Peru; 1992. p. 136.
  - [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 Sindrome de Triple Hipoxia en la Altura. . Acta del Quinto Congreso Nacional de Medicina de la Altura; 1992; La Oroya, Peru; 1992. p. 136.
  - [17] Zubieta-Castillo G, Zubieta-Calleja G. Eritrocitosis agudas, EPOC y sindrome de triple hipoxia. Acta del Quinto Congreso Nacional de Medicina de la Altura; 1992; La Oroya, Peru; 1992. p. 135.
  - [18] Zubieta-Calleja G, Zubieta-Castillo G. High altitude illness in Bolivia (Abstract). First World Congress of High Altitude Medicine and Physiology; 1994; La Paz, Bolivia: Edvil; 1994. p. 58.
  - [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, Gingai, 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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<http://www.altitudeclinic.com>
  - [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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- [32] Pollard AJ, Niermeyer S, Barry P, Bartsch P, Berghold F, Bishop RA, et al. Children at high altitude: an international consensus statement by an ad hoc committee of the International Society for Mountain Medicine, March 12, 2001. *High Alt Med Biol*. 2001 Fall;2(3):389-403.
- [33] Zubieta-Calleja G, Zubieta-Castillo, G., Zubieta-Calleja, L. & Zubieta, N. Exercise performance of bolivian aymara in 3 conditions: at la paz 3510 m, breathing a hypoxic mixture simulating chacaltaya and at chacaltaya 5200 m. *HAMB*. 2002;3(1):114-5.
- [34] Zubieta-Calleja G, Zubieta-Castillo, G., Zubieta-Calleja, L., Zubieta, N. Measurement of circulatory time using pulse oximetry during breath holding in chronic hypoxia. *HAMB*. 2002;3(1):115.
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