CURRICULUM VITAE

Name	**RAMÓN LATORRE**
Address	Pasaje Harrington 287, Playa Ancha, Valparaíso
Phone	56-32-2508040 (office)
e-mail	ramon.latorre@uv.cl
Place of Birth	Santiago, Chile.

EDUCATION

1965	Biochemist, University of Chile, School of Chemistry and Pharmacy, Santiago, Chile.
1969	Ph.D. Faculty of Sciences, University of Chile, Santiago, Chile.

POSTDOCTORAL TRAINING

1969-1972	Visiting Fellow, Laboratory of Biophysics, IR, National Institute of Neurological Diseases and Stroke, National Institutes of Health, Bethesda, MD, U.S.A.

ACADEMIC APPOINTMENTS

2010 – 2021	Director, Instituto Científico Milenio Centro Interdisciplinario de Neurociencias, Universidad de Valparaíso, Pasaje Harrington 287, Playa Ancha, Valparaíso
2010 - 2020	Miembro de la Junta Directiva, Universidad de Valparaíso
2008-2021	Director, Centro Interdisciplinario de Neurociencias, Universidad de Valparaíso, Pasaje Harrington 287, Playa Ancha, Valparaíso
2008-	Professor, Universidad de Valparaíso, Valparaíso, Chile
2007 -	Associate Scholar, The University of Chicago, Chicago, Ill.

2006-2007	Scientific Attaché, Chilean Embassy, Rome, Italy.
2000-2007	Professor, Departamento de Biofísica y Fisiología Molecular, Centro de Estudios Científicos, Valdivia
1996-1999	Executive Director, Centro de Estudios Científicos de Santiago.
1995-present	Adjunct Professor, Department of Anesthesiology, University of California Los Angeles, CA, USA
1984-1999	Chairman, Biophysics Section, Centro de Estudios Científicos de Santiago (CECS), Santiago, Chile.
1983-present	Professor, Department of Biology, Faculty of Sciences, University of Chile, Santiago, Chile.
1982-1983	Associate Professor, Department of Physiology and Biophysics, Harvard Medical School, Boston, MA, U.S.A.
1977-1982	Assistant Professor, Department of Physiology and Biophysics, Harvard Medical School, Boston, MA, U.S.A.
1976-1977	Assistant Professor, Department of Pharmacological and Physiological Sciences, University of Chicago, Chicago, lL, U.S.A.
1972-1974	Associate Professor, Department of Biology, Faculty of Sciences, University of Chile, Santiago, Chile.

OTHER PROFESSIONAL POSITIONS AND MAJOR VISITING APPOINTMENTS

1974-1975	Visiting Scientist, Department of Physiology and Pharmacology, Duke University Medical Center, Durham, N.C., U.S.A.
1974	Visiting Associate, Laboratory of Biophysics, IR, National Institute of Neurological Diseases and Stroke, National Institute of Health, Bethesda, MA, U.S.A.
1983-1995	Visiting Professor, Graduate Department of Biochemistry, Brandais University, Waltham MA. U.S.A.

1986-1995	Visiting Professor, Department of Physiology University of California at Los Angeles, Los Angeles, CA, U.S.A.
1992	Professeur Associé, Laboratorie de Neurobiologie, Ecole Normale Superieure, Paris, France.
2003	Visiting Professor of Neurobiology, Department of Neurobiology, Harvard Medical School, Boston, MA

HONORS AND AWARDS

1986-1988	President, Society of Latin American Biophysicists (SOBLA) (elected)
1989	Elizabeth R. Cole Award. Biophysical Society, USA for "A significant advance in biophysics which is accepted and use by others in the field".
1989	Distinguished Visiting Professor, Baylor College of Medicine, Houston, TX, U.S.A:
1990	John Simon Guggenheim Memorial Foundation Fellowship
1991	Best Teacher Award. Department of Biology, Faculty of Sciences, University of Chile.
1991	Third World Academy of Sciences Award in Biology.
1992	Dies Academicus, Main Speaker. University of Ulm, Ulm, Germany.
1993	Member of the Latin American Academy of Sciences.
1996	Presidential Cathedra Award, Santiago, Chile
1996	Rectorial Medal, University of Chile
1997	Fellow of the Third World Academy of Sciences.
1997	Vice President, International Union of Physiological Sciences (IUPS) (elected)
1998	Corresponding Member of the Brazilian Academy of Sciences

1999	Presidential Cathedra Award, Santiago, Chile (Competitive renewal)
1999	Foreign Associate, National Academy of Sciences of the United States of America
2002	Corresponding Member of the Chilean Academy of Sciences
2002	National Prize in Natural Sciences bestowed by the Chilean Government
2002	Rectorial Medal University of Chile
2003-2006	Member, Molecular, Biophysics of Synapsis, Channels and Transporters Study Section, National Institutes of Health, USA.
2003	Robert F. Kennedy Professor of Latin American Studies, Harvard University, Boston, MA.
2005	Medalla Ranwell Caputto, Sociedad Argentina de Neuroquímica
2006	Council Member, Academy of Sciences of Latin America (Elected)
2007	Visiting Scholar, The University of Chicago Chicago Illinois, USA
2008	Mexican Award in Science and Technology, bestowed by the Mexican Government to distinguish scientists of Latin America (except Mexico), Spain and Portugal.
2010	Honorary Member of the Chilean Physiological Society
2010	Cathedra in Health Sciences Miguel Alemán Valdés, granted by the Miguel Aleman Valdés Foundation, Mexico
2012	Dr. *Honoris Causa*, Universidad de la República Oriental del Uruguay, Facultad de Medicina.
2012	Honorary Member of the Argentine Society for Research in Neuroscience

2012	Juan Negrín Award bestowed by the Spaniard Physiological Society for his contributions to the fields of Physiology and Biophysics and for his dedication to the advancement of Physiology in Latin America and Spain. Other recipients: Erwin Neher, Francisco Bezanilla
2012	Profesor Honorario, Facultad de Ciencias Exactas, Universidad de la Plata, Argentina
2014	Cátedra Santiago Ramon y Cajal bestowed by the Facultad de Medicina, Universidad Nacional Autónoma de México y la Fundación José M. García Valdecasas Santamaría A.C.

NAMED CONFERENCES

1993	**Conference Jaime Pi Sunyer**: Activation, conduction and inactivation in Ca^{2+} activated K^+ channels. II Ibero American Biophysics Congress, Puebla, México.
1994	**Conference Joaquin Luco**: The flavors of K^+ channels XVII. Latinoamerican Physiological Congress, Montevideo, Uruguay.
1996	**Conference Osvaldo Cori**, The Molecular Workings of a Ca^{2+} - activated K^+Channel, VIII PABMB Congress. Pucón, Chile.
2000	**Conference Juan Negrín**. KAT1: a potassium channel with reverse gear. III Ibero American Biophysics Congress, Alicante, Spain
2002	**Conference Luis Izquierdo**. Cellular Biology Society Congress. Puerto Varas, Chile.
2003	**Peter Baker Lecture –** Molecular Workings of large conductance (BK) calcium-activated potassium channels. Meeting of the Physiological Society– King´s College – London – Great Britain.

2005	**Ranwel Caputto Lecture** – Too hot or too cold? TRP channels as temperature sensors. X Congress of the Panamerican Association for Biochemistry and Molecular Biology – Pinamar, Buenos Aires, Argentina.
2006	**Herman Niemeyer Lecture** – Molecular Basis of Thermal Sensitivity in Mammals. XXIX Congreso of the Spaniard Society of Biochemistry and Molecular Biology, Elche, Spain.
2012	**Society of Latin American Biophysicist (SoBLa) Conference.** 2012 Biophyical Society Meeting, San Diego, California, USA, February 25-29
2013	**Society of Latin American Biophysicist (SoBLa) Conference. J**oint Meeting SoBLa-Sociedad Chilena de Neurociencia, Valparaíso, Chile , October 2-4.
2015	**Osvaldo Cori Moully Conference**. Allosterism and Structure in Transient Receptor potential Channels. 70th Anniversary of the Faculty of Chemical Sciences, University of Chile, Santiago, Chile. July 15.

EDITORIAL BOARDS

1981-1984	Biophysical Journal
1984-1992	Journal of Bioenergetics and Biomembranes
1988-1996	Comments on Molecular and Cellular Biophysics
1988-1992	Archivos de Medicina Experimental
1991-1996	American Journal of Physiology
1991-1999	Physiological Reviews
1992-2003	News in Physiological Sciences. Associate Editor

1992-	Biological Research
1996-2004	Brazilian Journal of Medical and Biological Research
2003-2008	Revista Atenea (Atenea Journal). Journal published by the University of Concepción, Chile.
2004-2017	Proceedings of the National Academy of Sciences, USA
2004-	Journal of General Physiology
2007-	Channels
2008-2013	Journal of Biological Chemistry
2014-	Temperature
2014-	Frontiers in Pharmacological Sciences
2017-	European Biophysics Journal
2018 -	Current Opinion in Neurobiology

SOCIETIES

American Association for the Advancement of Science, U.S.A.

American Physiological Society, USA

Biophysical Society, U.S.A.

New York Academy of Sciences, U.S.A

Society of General Physiologists, U.S.A.

Sociedad Chilena de Biología

Sociedad Chilena de Fisiología

Sociedad Chilena de Bioquímica

Sociedad de Biofísicos Latinoamericanos

MAJOR RESEARCH INTEREST

Ion transport mediated by ion channels in biological and artificial membranes. Molecular aspects of ion channel conductance and gating. Metabolic modulation of ion channels. Ion channels and hormones

RESEARCH FELLOWSHIP AND GRANT AWARDS

1975-1981	Ion Channel Mechanisms, National Institutes of Health (NIH), (CO-PI).
1981-1983	Alamethicin Channel Formation, NIH, (PI).
1986-1989	Ionic Channels of Excitation Contraction Coupling, NIH, (PI).
1989-1992	Modulation of Ion Channel in Muscle, NIH, (PI).
1992-1995.	Molecular and Cellular Biology of Learning in Drosophila. The Human Frontier Science Program (HFSP), (CO-PI)
1999-2001	Maxi-K Channel Beta Subunit as the Target for Estrogens in the Membrane of Vascular Smooth Muscle. The Human Frontier Science Program (HFSP), (CO-PI)
2009-2013	Charge Translocation by the Na/K pump in the giant axon of the Humboldt Squid. FIRCA, NIH Grant (CO-PI)
2000-2007	Millennium Institute Centro de Estudios Cientificos, Valdivia. (CO-PI)

2011-2016 Millennium Institute Centro Interdisciplinario de Neurociencia de Valparaíso – (PI)

2016-2021 Millennium Institute Centro Interdisciplinario de Neurociencia de Valparaíso – (PI). Non competitive renewal.

2017-2018 The Chilean Neuromorphic Computing Initiative. Air Force Office for Scietific Research.

In addition to the above, Dr. Latorre has been the recipient of FONDECYT grants (Fondo Nacional de Investigación Científica y Tecnológica, Chile) since the National Award system was started and Universidad de Chile grants.

GRADUATE STUDENTS

-	Osvaldo Alvarez	Ph.D.- 1974
-	James Donovan	Ph.D.- 1979
-	Cecilia Vergara	Ph.D.- 1983
-	Andrés Oberhauser	Ph.D.- 1987
-	David Naranjo	Ph.D.- 1991
-	Claudia Basso	Ph.D.- 1998
-	Felipe Díaz	Ph:D. -1998
-	Carlos González	Ph.D. -2004
-	Patricio Orio	Ph.D. -2004
-	Patricio Rojas	Ph.D.- 2005
-	Sebastián Brauchi	Ph.D.- 2006
-	Yolima Torres	Ph.D.- 2007
-	Ingrid Carvacho	Ph.D.- 2007
-	Francisco Morera	Ph.D. -2008
-	Cristian Zaelzer	Ph.D.- 2009
-	Marcelo Salazar	Ph.D. - 2012
-	Natalia Raddatz	Ph.D. –2013
-	David Báez	Ph.D. – 2013
-	Gustavo Contreras	Ph.D. – 2013
-	Horacio Poblete	Ph.D. - 2013
-	Hans Moldenhauer	Ph,D. - 2014
-	Juan Pablo Castillo	Ph.D. – 2014
-	Willy Carrasquel	Ph.D. – 2016
-	Amaury Pupo	Ph.D. – 2016
-	Bernardo Pinto	Ph.D. - 2017

- Yenisleidy Lorenzo — Ph.D. – 2019
- Sara T. Granados — Ph.D. – 2019 (Universidad Javeriana-UV)
- Rosa Scala — PhD – 2019 (University of Bari-UV)
- Miguel Cuaxospa — PhD – (CINVESTAD-UV)
- Emersón Carmona — PhD - 2020
- Naileth González — PhD -
- Felipe Echeverría — PhD -
- Karina Carvajal — PhD -
-

- Alfredo Villarroel — M.Sc. - 1986
- Carmen Alcayaga — M.Sc. - 1987
- Ricardo Delgado — M.Sc. - 1991
- Claudio Laurido — M.Sc. - 1989
- Enrique Estrada — M.Sc. - 1993
- Sebastián Candia — M.Sc. - 1996
- Yolima Torres — M.Sc. - 2002
- Sofia Hammami — M.Sc. - 2007
- Ester Otárola — M.Sc. - 2014
- Ignacio Segura — MSc -

UNDERGRADUATES

- Julio Amigo — Biochemist - 1999
- María Isabel Bahamondes — Biochemist – 2000
- Diego Cosmelli — Biochemist - 2000
- Fabián Muñoz — Biochemist – 2004
- José Ancalao — Biochemist – 2005
- Guillermo Vargas — Physicist – 2005
- Ingrid Oyarzún — Biochemist – 2005
- Paula Manriquez — Biologist - 2006
- Juan Pablo Castillo — Engineer in Molecular Biotechnology -2011
- Valeria O. Márquez — Engineer in Bioinformatics - 2009
- Constantino Dragicevic — Physicist – 2010
- Daniela De Giorgis — Biologist – 2013
- Ester Otárola — Biologist – 2013
- Felipe Echeverría — Biologist – 2019
- Ignacio Segura — Biochemist - 2019

POST-DOCTORAL FELLOWS

- Juan Reyes — EE.UU
- Roberto Coronado — EE.UU.

-	Edward Moczydlowski	EE.UU
-	Frank Greco	EE.UU
-	Walter Korosketz	EE.UU.
-	María Isabel Behrens	Chile
-	Marco Soto	Chile
-	Patricio Orio	Chile
-	Gerardo Orta Zalazar	México
-	Francisco Morera	Chile
-	Juan Pablo Castillo	Chile
-	Karen Castillo	Chile
-	Willy Carrasquel	Venezuela
-	Ignacio Díaz-Franulic	Chile

No de citas (06/04/2022): 16942 (Google Scholar)
Índice h: 68

PUBLICATIONS

1. **Latorre, R.,** Hidalgo, C. 1969. Effect of temperature on resting potential in giant axons of squid. *Nature*. **221**: 962-963. (8)

2. **Hidalgo, C.**, Latorre, R. 1970. Temperature dependence of non-electrolyte and sodium permeability in giant axon of squid. *J. Physiol*. (London) **211**: 173-191. (3)

3. Hidalgo, C., **Latorre, R.** 1970. Effect of stimulation and hyperpolarization of non-electrolyte and sodium permeability in perfused axons of squid. *J. Physiol*. (London) **211**: 193-202. (5)

4. **Latorre, R**., Dipolo, R. 1971. Temperature dependence of the resting potential in muscle fibers of the barnacle Balanus nubilus. *Acta Científica Venezolana* 22(5) Suppl. **2**: 69-70.

5. Dipolo, R., **Latorre, R.** 1972. Effect of temperature on membrane potential and ionic fluxes in intact and dialysed barnacle muscle fibres. *J. Physiol*. (London) **225**: 255-273. (35)

6. **Latorre, R**., Ehrenstein, G., Lecar, H. 1972. Ion transport through excitability-inducing material (EIM) channels in lipid bilayer membranes. *J. Gen. Physiol*. **60**: 72-85. (68)

7. Sachs, F., **Latorre, R**. 1974. Cytoplasmic solvent structure of single barnacle muscle cells studied by electron spin resonance. *Biophys. J*. **14**: 316-326. (38)

8. **Latorre, R**., Alvarez, O., Verdugo, P. 1974. Temperature characterization of the conductance of the excitability inducing material channel in oxidized cholesterol membranes. *Biochim. Biophys. Acta*. **367**: 361-365. (12)

9. Ehrenstein, G., Blumenthal, R., **Latorre, R**., Lecar, H. 1974. Kinetics of the opening and closing of individual excitability-inducing material channels in a lipid bilayer. *J. Gen. Physiol*. 63: 707-721. (105)

10. Alvarez, O., Díaz, E., **Latorre, R**. 1975. Voltage-dependent conductance induced by hemocyanin in black lipid films. *Biochim. Biophys. Acta*. **389**: 444-448. (41)

11. Alvarez, O., **Latorre, R**., Verdugo, P. 1975. Kinetic characteristics of the Excitability-Inducing material channel in oxidized cholesterol and brain lipid bilayer membranes. *J. Gen. Physiol*. **65**: 421-439. (17)

12. Lecar, H., Ehrenstein, G., **Latorre, R**. 1975. Mechanism for channel gating in excitable bilayers. *Ann. N.Y. Acad. Sci*. **294**: 304-313. (38)

13. **Latorre, R**., Alvarez, O., Ehrenstein, G., Espinoza, M., Reyes, J. 1975. The nature of the voltage-dependent conductance of the hemocyanin channel. *J. Membrane Biol*. **25**: 163-182. (33)

14. Hall, J., **Latorre, R.** 1976. Nonactin-K^+ complex as a probe for membrane asymmetry. *Biophys*. J. **15**: 99-103. (50)

15. **Latorre, R**., Hall, J. 1976. Dipole potential measurements in asymmetric membranes. *Nature*. **264**: 361-363. (45)

16. Melnik, E., **Latorre, R**., Hall, J.E., Tosteson, D. 1977. Phloretin-induced changes in ion transport across lipid bilayer membranes. *J. Gen. Physiol*. 69: 243-257. (94)

17. Alvarez, O., **Latorre, R**. 1978. Voltage-dependent capacitance in lipid bilayers made from monolayers. *Biophys. J*. 21: 1-17. (252)

18. Ehrenstein, G., Lecar, H., **Latorre, R.** 1978. Inactivation in bilayers and natural excitable membranes. *In Membrane Transport Processes*. D.C. Tosteson, Y. A. Ovchinnikov, R. Latorre, eds. raven Press, NY. **2**: 175-182.

19. **Latorre, R**., Hall, J.E. 1978. Membrane asymmetry and surface potentials in artificial lipid bilayer membranes. *Membrane Transport Processes*. D.C. Tosteson, Y. A. Ovchinnikov, R. Latorre, eds. Raven Press, NY. **2**: 313-323.

20. Donovan, J.J., **Latorre, R.** 1979. Inactivation of the alamethicin-induced conductance caused by quaternary ammonium ions and local anesthetics. *J.Gen. Physiol*. **73**: 425-451. (13)

21.Donovan, J.J., **Latorre, R**. 1979. Pancuronium inactivates alamethicin-induced conductance in artificial membranes. *Biophys. J*. **25**: 549-554. (2)

22.Reyes, J., **Latorre, R**. 1979. Effect of the anesthetics benzyl alcohol and chloroform on bilayers made from monolayers. *Biophys. J*. 28: 259-279. (106)

23.**Latorre, R**., Donovan, J.J. 1980. Modulation of alamethicin- induced conductance by membrane composition. *Acta. Physiol. Scand. Suppl*. **481**: 37-45. (33)

24.**Latorre, R**., Alvarez, O. 1981. Voltage-dependent channels in planar lipid bilayer membranes. *Physiol. Rev*. 61: 77-150. (261)

25.Benos, D., **Latorre, R**., Reyes, J. 1981. Surface potentials and sodium entry in frog skin epithelium. *J. Physiol*. (London) **321**: 163-174. (10)

26.Cecchi, X., Alvarez, O., **Latorre, R**. 1981. A three-barrier model for the hemocyanin channel. *J. Gen. Physiol*. **78**: 657-681. (22)

27.**Latorre, R.,** Donovan, J.J., Koroshetz, W., Tosteson, D.C., Gisin, B. 1981. Ion transport mediated by the valinomycin analogue cyclo (L-Lac-L-Val-D-Pro-D-Val)$_3$ in lipid bilayer membranes. *J. Gen. Physiol*. **77**: 387-417. (1)

28.Latorre, R., Miller, C.G., Quay, S.C. 1981. Voltage-dependent conductance induced by alamethicin-phospholipid conjugates in lipid bilayers. *Biophys. J*. **36**: 803-809. (33)

29.Verdugo, P., Latorre, R., Alvarez, O., Medel, M., Benos, D. 1981. Effects of copper and zinc on rat uterine muscle contraction and rabbit blastocyst fluid accumulation. *Biol. Reprod*. **25**: 502-510. (3)

30.Quay, S., Latorre, R. 1982. Molecular mechanisms of alamethicin channel gating. *Biophys. J*. **37**: 154-156. (6)

31.**Latorre, R**., Vergara, C., Hidalgo, C. 1982. Reconstitution in planar lipid bilayers of a $Ca2^+$ -dependent K^+ channel from transverse tubule membranes isolated from rabbit skeletal muscle. *Proc. Natl. Acad. Sci*. U.S.A. 79: 805-809. (326)

32.Simon, S., McIntosh, T., **Latorre, R.** 1982. Influence of cholesterol on Water penetration into bilayers. *Science*. 216: 65-67. (127)

33.Coronado, R., **Latorre, R**. 1982. Detection of K^+ and Cl^- channels from calf cardiac sarcolemma in planar lipid bilayer membranes. *Nature*. 298: 849-852. (83)

34.Coronado, R., Latorre, R. 1983. Phospholipid bilayers made from monolayers on patch-clamp pipettes. *Biophys. J.* **43**: 231-236. (354)

35.**Latorre, R.,** Miller, C. 1983. Conduction and selectivity in potassium channels. *J. Membrane Biol.* 71: 11-30. (703)

36.Moczydlowski, E., **Latorre, R.** 1983. Gating kinetics of Ca2+ -activated K^+ channels from rat muscle incorporated into planar lipid bilayers: Evidence for two voltage-dependent Ca2+ binding reactions. *J. Gen. Physiol.* 82: 511-542. (398)

37.Moczydlowski, E., **Latorre, R**. 1983. Saxitoxin and ouabain binding activity of isolated skeletal muscle membrane as indicators of surface origin and purity. *Biochim. Biophys. Acta*. 732: 412-420. (58)

38.Vergara, C., **Latorre, R**. 1983. Kinetics of Ca2+ -activated K^+ channels from rabbit muscle incorporated into planar bilayers. Evidence for a Ca2+ and Ba2+ blockade. *J. Gen. Physiol*. 82: 543-568. (260)

39.Benos, D., Hyde, B.A., **Latorre, R**. 1983. Sodium flux ratio through the amiloride-sensitive entry pathway in frog skin. *J. Gen. Physiol*. **81**: 667-685. (33)

40.Reyes, J., Greco, F., Motais, R., **Latorre, R**. 1983. Phloretin and phloretin analogs: mode of action in planar lipid bilayers and monolayers. *J. Membrane Biol*. 72: 93-103. (71)

41.Alvarez, O., Brodwick, M., **Latorre, R**., McLaughlin, A., McLaughlin, S., Szabo, G. 1983. Large divalent cations and electrostatic potentials adjacent to membranes: experimental results with hexamethonium. *Biophys. J*. 44: 333-342. (83)

42.**Latorre, R**., Vergara, C., Moczydlowski, M. 1983. Properties of a Ca^{2+}-Activated K^+ channel in a reconstituted system. *Cell Calcium* **4**: 343-357. (24)

43. Basso P., Cruz Coke R., García G., Arancibia A., Díaz G., González J:, Hernández A., Invernizzi L., Lagos G., **Latorre R**., Lavados J., Minguell, J., Oberhauser E., Sanfuentes A., and Saragoni R. 1984. A critical view of the University of Chile. *Rev. Med. Chile*. **112**:706-710.

44.**Latorre, R**., Benos, D. 1984. Reconstitution of ionic channels into lipid bilayer membranes. In: "*Transmembrane signaling and sensation*", Oozawa, F., Yoshioka, T., Hayashi, H. eds., Japan Scientific Societies Press, Tokyo.

45.Cecchi, X., **Latorre, R**., Alvarez, O. 1984. Alkali metal ion selectivity of the hemocyanin channel. *J. Membrane Biol*. **77**: 277-283. (4)

46.Coronado, R., **Latorre, R.,** Mautner, H.G. 1984. Single potassium channels with delayed rectifier behavior from lobster axon membranes. *Biophys. J.* **45**: 289-299. (36)

47.**Latorre, R.**, Coronado, R., Vergara, C. 1984. K^+ channels gated by voltage and ions. *Ann. Rev. Physiol*. 46: 485-495. (89)

48.Sariban-Sohraby, S., **Latorre, R.,** Burg, M., Olans, L., Benos, D. 1984. Amiloride-sensitive epithelial Na^+ channels reconstituted into planar lipid bilayer membranes. *Nature.* 308: 80-82. (103)

49.Vergara, C., Moczydlowski, E ., **Latorre R**. 1984. Conduction, blockade and Gating in Ca^{+2} Activated K^+ channel incorporated into planar lipid bilayers. *Biophys J.* 45: 73-76. (88)

50.**Latorre, R**., Wolff, D. 1985. Canales iónicos, comunicación de la célula con el medio ambiente. *Creces.* **6**: 27-31.

51.Alvarez, O., Benos, D., **Latorre, R**. 1985. The study of ion channels in planar lipid bilayer membranes. *J. Electrophysiol. Tech.* **12**: 159-177. (31)

52.**Latorre, R**., Alvarez, O., Cecchi, X., Vergara, C. 1985. Properties of reconstituted ion channels. *Ann. Rev. Biophys. Chem.* **14**: 79-111. (27)

53.Miller, C., Moczydlowski, E., **Latorre, R.,** Phillips, M. 1985. Charybdotoxin,a protein Inhibitor of single Ca2+ -activated K channels from mammalian skeletal muscle. *Nature.* 313: 316-318. (874)

54.Moczydlowski, E., Alvarez, O., Vergara, C., **Latorre, R**. 1985. Effect of phospholipid surface Charge on the conductance and Gating of a Ca2+ -Activated K^+ channel in planar lipid bilayers. *J. Membrane Biol*. 83: 273-282. (144)

55.**Latorre, R**. 1986. The Large calcium-activated potassium channel. In *Ion Channel Reconstitution,* Miller, C., ed., Plenum Press, N.Y. pp. 431-467.(68)

56. Eisenman, G., **Latorre, R**., Miller, C. 1986. Multi-ion conduction and selectivity in the High-conductance Ca++ -activated K^+ channel from skeletal muscle. *Biophys. J.* 50: 1025-1034. (182)

57. Wolff, D., Vergara, C., Cecchi, X., **Latorre, R.** 1986. Characterization of large-unitary-conductance calcium-activated potassium channels in planar lipid bilayers. *Ionic channels in cell and model systems,* Latorre, R., Editor, Plenum Press, N.Y. pp. 307-322.

58. Miller, C., **Latorre, R.,** Reisin, I. 1987. Coupling of voltage-dependent gating and Ba++ block in the high-conductance, Ca++ -activated K^+ channel. *J. Gen. Physiol*. 90: 427-449. (125)

59. Cecchi, X., Wolff, D., Alvarez, O., **Latorre, R.** 1987. Mechanisms of Cs^+ blockade in a Ca2+ -activated K^+ channel from smooth muscle. *Biophys. J.* 52: 707-716. (106)

60. **Latorre, R**., and Alvarez, O. 1988. Ion conduction in ion channels: Some inferences about their gross structure. *Comments Mol. Cell. Biophys.* **5**: 193-210.

61. Oberhauser, A., Alvarez, O., **Latorre, R. 1988**. Activation by divalent cations of a Ca2+ -activated K^+ channel from skeletal muscle membrane. *J. Gen. Physiol*. 92: 67-86. (124)

62. Behrens, M.I., Vergara, C., **Latorre, R**. 1988. Calcium-activated potassium channels of large unitary conductance. *Brazilian J. Med. Biol. Res*. **21**: 1101-1117. (6)

63. **Latorre, R**., Oberhauser, A., Labarca, P., Alvarez, O. 1989. Varieties of calcium-Activated potassium channels. *Ann. Rev. Physiol*. 51: 385-399. (781)

64. Villarroel, A., Alvarez, O., Oberhauser, A., and **Latorre, R**. 1988. Probing a Ca2+ -Activated K^+ channel with quaternary ammonium ions. *Pflugers Arch*. 413: 118-126. (134).

65. Alcayaga, C., Cecchi, X., Alvarez, O., and **Latorre, R**. 1989. Streaming potential measurements in Ca2+ -Activated K^+ channels from skeletal and smooth muscle: coupling of ion and water fluxes. *Biophys. J*. **55**: 367-371. (66)

66. Behrens, M.I., Oberhauser, A., Bezanilla, F., **Latorre, R**. 1989. Batrachotoxin-modified sodium channels from squid optic Nerve in planar bilayers. Ion conduction and Gating properties. *J. Gen. Physiol*. **93**: 23-41. (53)

67. Delgado, R., Barla, R., Latorre, R., and Labarca, P. 1989. L-Glutamate Activates Excitatory and Inhibitory channels in Drosophila Larval muscle. *FEBS Lett*. **243**: 337-342. (44)

68. MacKinnon, R., Latorre, R., Miller, C. 1989. The role of surface electrostatics in the operation of a high-conductance Ca^{2+}-activated channels. *Biochemistry*. 28: 8092-8099. (155)

69. Delgado, R., Hidalgo, P., Díaz, F., **Latorre, R.,** Labarca, P. 1991. A cyclic AMP-activated channel in Drosophila larval muscle is persistently activated in $dunce^{M14}$. *Proc. Natl. Acad. Sci*. U.S.A. 88: 557-560. (78)

70. Correa, A. M., **Latorre, R.**, Bezanilla, F. 1991. Ion permeation in normal and batrachotoxin-modified Na^+ channels in the squid giant axon. *J. Gen. Physiol*. **97**: 605-625. (55)

71. **Latorre, R**., Bacigalupo, J., Delgado, R., Labarca, P. 1991. Four cases of direct ion channel gating by cyclic nucleotides. *J. Bioenerg. Biomemb*. **23**: 577-597. (12)

72. Behrens, M. I. **Latorre, R**. 1991. Potassium channels in developing excitable cells. *Current topics in Membrane and Transport*. **39**: 327-355. (1)

73. **Latorre, R**. 1991. Metabolic control of K^+ channels: An Overview. *J. Bioenerg. Biomemb*. **23**: 493-497. (2)

74. Laurido, C., Candia, S., Wolff, D. **Latorre, R**. 1991. Proton modulation of a Ca^{2+} -activated K^+ channel from rat skeletal muscle incorporated into planar bilayers. *J. Gen. Physiol*. **98**: 1025 - 1043. (45)

75. **Latorre, R**., Labarca, P., Naranjo, D. 1992. Surface charge effects on ion conduction. In: *Ion Channels. Methods in Enzymology*. B. Rudy and L. Iverson, eds. **207**: 471-501. (54)

76. Labarca, P., **Latorre, R**. 1992. Insertion of ion channels into planar lipid bilayers by vesicle fusion. In: *Ion Channels. Methods in Enzymology*. B. Rudy and L Iverson, eds. **207**: 447-463. (54)

77. Correa, A. M., Bezanilla, F., **Latorre, R**. 1992. Gating kinetics of batrachotoxin-modified Na^+ channels in the squid giant axon. *Biophys. J*. **61**: 1332-1352. (76)

78. Candia, S., García, M. L., **Latorre, R**. 1992. Mode of action of iberiotoxin, a potent blocker of the large conductance Ca^+ activated K^+ channel. *Biophys. J*. 63: 583-590. (246)

79. Toro, L., Stefani, E., **Latorre, R.** 1992. Internal blockade of a Ca^{2+}-activated K^+ channel by Shaker B inactivating "Ball" peptide. *Neuron*. 9: 237-245. (64)

80. Ran, S., Muller, C.M., Arrate, P., **Latorre, R**., Benos, D. 1992. Functional reconstitution of a chloride channel protein from bovine trachea. *J. Biol. Chem*. 267:20630-20637. (71)

81. Delgado, R., **Latorre, R**., Labarca, P. 1992. K^+ -channel blockers restore synaptic plasticity in the neuromuscular junction of *dunce, a Drosophila* learning and memory mutant. *Proc. R. Soc. Lond. B.* **250**: 181-185. (20)

82. Naranjo, D., **Latorre, R. 1993**. Ion conduction in substates of the batrachotoxin-modified Na^+ channel from toad skeletal muscle. *Biophys. J*. **64**: 1038-1050. (26)

83. **Latorre, R**. 1993. The intimacies of K^+ channels revealed. *NIPS*. **8**: 1-2. (1)

84. Toro, L. Ottolia,M., Stefani,E., and **Latorre,R**. 1994. Structural determinants in the Interaction of *Shaker* inactivating peptide and a Ca^{2+}-activated K^+ channel. *Biochemistry* 33:7220-7228. (30)

85. Naranjo, D., **Latorre, R**., Cherbowaz, D., Mc Gill, P., and Schumaker, M.F. 1994. A simple model for surface charges on ion channels. *Biophys. J*. **66**: 59-70. (14)

86. **Latorre, R**. 1994. The molecular workings of large conductance (maxi) Ca^{2+}-activated K^+ channels. Chapter for Membrane Channels - Molecular and Cellular Physiology, Camillo Peracchia, editor, p.p. 79-102. (59)

87. Delgado R. **Latorre R**., and Labarca P 1994. *Shaker* mutants lack post-tetanic potentiation at motor end-plates. *Eur. J. Neurosci.* **6** 1160-1166. (16)

88. **Latorre, R**. 1994. Building ion transport processes in artificial membranes. *Proceedings of the TWAS Fourth General Conference.* Kuwait

89. Kukuljan M., Labarca P., and **Latorre R**., 1995 Molecular determinants of ion conduction and inactivacion in K^+ channels. *Am. J. Physiol* 268 C535-C556. (95)

90. Delgado R**., Latorre R.,** and Labarca P. 1995 Selectivity and Gating Properties of a cAMP-Modulated, K^+-Selective channel from *Drosophila* Larval Muscle *FEBS. Lett* **370** 113-117. (3)
91. Wallner M., Meera P., Ottolia M., Kaczarowski G., **Latorre R**., Garcia M ., Stefani E., Toro L., 1995. Cloning expression and modulation by β subunit of a Maxi Kca channel from human myometrium *Receptors and Channels* 3: 185-199. (205)

92. Hurst R.S., **Latorre R**., Toro L., and Stefani E., 1995. External Barium Block of ShH4 IR: Evidence for two Binding sites. *J. Gen. Physiol.* **106**: 1069-1087. (47)

93. Jorquera O., **Latorre R**., and Labarca P., 1995. Ion Channels Classes in Purified Olfactory Cilia Membranes: Planar Lipid Bilayer studies. *Am. J. Physiol.* **269:** C1235-C1244. (13)

94. **Latorre R.,** and Labarca P. 1996. Potassium channels: diversity, assembly and differential expression In: *Potassium Channels and their Modulators: From Synthesis to Clinical Experience.* Editors: J.M. Evans, T.C.Hamilton, S.D. Longman, & G. Stemp Publisher: *Taylor and Francis, Great Britain pp. 123 - 156.*

95. **Latorre R**., and Alvarez O., 1996. Vías y modelos de transporte a través de membranas. Texto de Biofísica y Fisiología Celular.Editors: Latorre R., López- Barneo J., Bezanilla F., Llinás R., Universidad de Sevilla. pag. 71- 116.

96. Stühmer W., and **Latorre R.,** 1996. Biología Molecular de los Canales Iónicos. In: *Biofísica y Fisiología Celular*.Editors: Latorre R., López- Barneo J., Bezanilla F., Llinás R., Universidad de Sevilla. pag.285-305.

97.Diaz, F. Wallner,M., Stefani,E., Toro,L. and Latorre, R. 1996. Interaction of internal Ba^{2+} with a cloned Ca^{2+}-dependent K^+ (h*Slo*) channel from smooth muscle. *J. Gen. Physiol.* **107**: 399-407. (44)

98. Stefani E., Ottolia M., Noceti F., Olcerse R., Wallner M., Latorre R., and Toro L. 1997. Voltage-controlled gating in a large conductance Ca^{2+}-sensitive K^+ channel (*hslo*). *Proc. Natl. Acad. Sci. (USA)* 94 5427-5431 (168)

99. Latorre R., Hurst R. Díaz F., Toro L., and Stefani E., 1997. Barium as a probe of the molecular architecture of the pore of K^+ channels. In: *From Ion Channels to Cell-to-cell Conversations.* R. Latorre and J.C. Sáez, eds. Plenum Press. N.Y. pp.129-146.

100. Latorre R., Stefani E., and Toro L. 1997. Balls, chains, and potassium channels. In: *Calcium and cellular metabolism: transport and regulation.* J.R. Sotelo and J.C. Benech, eds. Plenum press, NY. Pp. 59-71.(2)

101. Olcese R., **Latorre R.**, Toro L., Bezanilla F., and Stefani E., 1997 Correlation between charge movement and ionic current during slow inactivation in *Shaker* K^+ channels. *J. Gen. Physiol.* 110: 579-589. (175)

102. Labarca, P., and **Latorre, R**. 1997. Presidential Chairs in Chile. *Science* **97:**1724- 1725

103. Delgado R. Davis R., Bono M.R., **Latorre R.**, and Labarca P., 1998. Outward currents in *Drosophila* larval neurons: *dunce* lacks a maintained outward current component regulated by cyclic AMP. *J. Neurosci.* **18** 1399-1407 (36)

104. Ugarte, G., Pérez, F., and **Latorre R.**, 1998. How do calcium channels transport calcium ions? *Biol. Res.* **31**: 17-32. (15)

105. **Latorre , R.,** 1998. Molecular origin of ion selectivity and gating in voltage-dependent ion channels. *Ciencia e Cultura.* Journal of The Brazilian Association for the Advancement of Science **50**: 196-207

106. Basso, C., Labarca, P., Stefani, E., Alvarez, O., and **Latorre, R.**, 1998. Pore accessibility during C-type inactivation in *Shaker* K^+ channels. *FEBS Lett.* **429**:375-380. (17)

107. Vergara, C., **Latorre, R.**, Marrion, N.V. and Adelman., J.P. 1998. Calcium- activated potassium channels. *Curr. Op Neurobiol.* 8:321-329. (844)

108. Diaz, L. F., Meera,P., Amigo,J., Stefani,E., Alvarez,O., Toro,L., and **Latorre,R**. 1998. Role of the S4 segment in a calcium-sensitive voltage-dependent potassium channel. *J. Biol. Chem* 273(49): 32430. (141)

109. **Latorre, R. 1998**. Las puertas de la percepcion. Universidad de Chile, Anuario Facultad de Ciencias, pp. 3-20

110. Chrispeels, M.J., **Latorre, R**., Luan,C., Orellana, A., Peña, H., Raikhel, N., Ronald, P. and Trewavas, A. 1999. Signal transduction networks and the biology of plant cells. *Biol. Res.* **32**:35-60 (38)

111 Miguel A. Valverde, Patricio Rojas, Julio Amigo, Diego Cosmelli, Patricio Orio, Maria I. Bahamonde, Giovanni E. Mann, Cecilia Vergara and Ramon **Latorre**. 1999. Acute activation of Maxi-K channels (*hSlo*) by estradiol binding to the β□subunit. *Science*. 285:1929-1931 (575)

112 **Latorre, R.** 1999. El origen molecular de la excitabilidad celular. *Innovación y Ciencia*. Revista de la Asociación Colombiana Para el Avance de la Ciencia **8**:13-23.

113 Vergara,C., Alvarez,O. and Latorre, R. 1999. Localization of the K^+ lock-in and the Ba^{2+} binding sites in a voltage gated calcium modulated K^+ channel. *J Gen. Physiol.* **114**:365-376. (66)

114 Gonzalez, C., Rosenman, E., Bezanilla, F., Alvarez, O., and **Latorre, R**. Modulation of *Shaker* K^+ channel gating kinetics by the S3-S4 linker. 2000. *J. Gen. Physiol.* 115: 193-208. (83)

115 Sorensen, J.B., Cha, A., **Latorre, R**., Rosenman, E., and Bezanilla, F. Deletion of the S3-S4 linker in the *Shaker* potassium channel reveals two quenching groups near the outside of S4. 2000. *J.Gen. Physiol.* **115**: 209-222. (39)

116 Bravo-Zehnder, M., Orio, P., Norambuena, A., Toro, L., **Latorre, R**., and Gonzalez, A. 2000. Apical sorting of a voltage- and Ca^{2+}-activated K^+ channel α-subunit in Madin-Darby canine kidney cells is independent of N-glycosilation. *Proc.Natl. Acad. Sci. (USA)* 97:13114-13119 (119)

117 **Latorre,R**. Vergara, C., Stefani, E., and Toro, L. 2000. Voltage-gated calcium modulated potassium channel of large unitary conductance: structure, diversity and pharmacology. In: *Handbook of Experimental Pharmacology Vol 147:* 197-223. *Pharmacology of Ion Channel Functions: Activators and Inhibitors.* Endo, M. Ed. Springer-Verlag. Chapter 8. (9)

118 Olcese, R. Sigg,D., **Latorre,R**., Bezanilla,F., and Stefani,E. 2001. A conducting state with properties of a slow inactivated state in a *Shaker* K^+ channel mutant. *J. Gen. Physiol.* **117:**149-164. (35)

119 Berdiev, B.K., **Latorre,R**., Benos,D.J. and Ismailov,I.I. 2001. Actin modifies Ca^{2+} block of epithelial sodium channels in planar lipid bilayers. *Biophys. J.* **80**:2176-2186 (37)

120 Gonzalez, C., Rosenman, E., Bezanilla, F., Alvarez, O. and **Latorre, R**· 2001. Periodic Perturbations in *Shaker* K^+ Channel Gating Kinetics by Deletions in the S3-S4 Linker. *Proc. Nat. Acad. Sci. USA.* 98:9617-9623 (74)

121 **Latorre, R.** Science in Latin America: is there hope? *Int. Union Physiol. Sci. Newsletteres*. June 2001, No 3.

122 **Valverde,M.A.,** Muñoz,F., and Latorre,R. 2002. Los estrógenos y el sistema vascular. *Investigación y Ciencia* (*Scientific American* in Spanish). August number

123 Soto, M. A, González, C., Lissi, E., Vergara, C. and **Latorre, R.** 2002. Ca^{2+}-activated K^+ channel inhibition by reactive oxygen species. *Am. J. Physiol*. **282**:C461-C471. (83)

124. Orio, P., Rojas, P., Ferreira, G., and **Latorre, R**. 2002. New disguises for an old channel. Voltage and calcium-activated (MaxiK) channels β subunits. *News Physiol. Sci.* 17:156-161 (379)

125 Álvarez, O., González, C., and **Latorre, R**. 2002. Counting channels. A tutorial guide on ion channel fluctuation analysis. *Adv. Physiol. Ed*. 26: 327-341. (101)

126 **Latorre, R.** Muñoz, F. González, C. and Cosmelli,D. 2003. Structure and function of potassium channels in plants: some inferences about the molecular origin of inward rectification in KAT1 channels. *Mol. Memb. Biol.* 20:19-25 (19)

127 Hebeisen, S., Heidtmann, H., Cosmelli, D., Gonzalez, C., Poser, B., **Latorre, R.,** Álvarez, O. and Fahlke, C. 2003. Anion Permeation in Human Cic-4 Channels. *Biophys. J.* 84:2306-2318. (61)

128 **Latorre, R**., Olcesse, R., Basso, C., Gonzalez, C., Muñoz, F., Cosmelli, D. and Alvarez, O. 2003. Molecular coupling between voltage sensor and pore opening in the Arabidopsis inward rectifier K^+ channel KAT1. *J. Gen. Physiol*. 122:459-469. (47)

129 **Latorre, R**. 2004. Vagabundeos por el jardín de la mente. *Segunda Jornada de Investigación.* Universidad de Talca.

130 **Latorre, R**. and F. Morera. 2004. Voltage-Dependent K^+ Channels. In: *Encyclopedia of Biological Chemistry*. Lennarz, W.J. and Lane, M.D. editors. Elsevier. Vol. 4: 399-404

131 Fernádez-Fernández, J. M., Tomás, M., Vázquez, E., Orio, P., **Latorre, R**., Sentí, M., Marrugat J. and Valverde, M. A.. 2004. Gain-of-function mutation in the calcium-activated potassium channels β1 subunit associated with low prevalence of diastolic hypertension. *J. Clinical Invest.* 113:1032-1039 (214)

132 Brauchi, S. Orio, P., and **Latorre, R**. 2004. Clues to understanding cold sensation: Thermodynamics and electrophysiological analysis of the cold receptor TRPM8. *Proc. Natl. Acad. Sci. (USA)* 101:15494-15499 (345)

133 Alvarez, O. Rosenmann, E. Bezanilla, F., González, C., and **Latorre, R**. 2005. Helical nature of the voltage sensor. In: *Pumps, Transporters and Ion Channels. Studies on Their Structure, Function and Cell Biology.* Sepúlveda, F., Bezanilla, F. Eds. Plenum Press, NY. Pp. 93-101

134 González C., Morera, F., Rosenmann, E., Alvarez, O., and Latorre, R. 2005. S3b amino acid residues do not shuttle across the bilayer in voltage-dependent *Shaker* K^+ channels. *Proc. Natl. Acad. Sci. (USA)* 102:5020-5025 (38)

135 Orio, P., and Latorre, R. 2005. Differential effects of β1- and β2 –subunits on the BK channel activity. *J. Gen. Physiol.* 125:395-411 (127)

136 Latorre, R. 2005. De máquinas moleculares y sueños. *Anales de la Academia Chilena de Ciencias*. 7:107-118

137 **Latorre, R.** and Brauchi, S. 2006. Large conductance Ca^{2+}-activated K^+ (BK) channels: activation by Ca^{2+} and Voltage. *Biol. Res*. 39:385-401 (171)

138 Orio, P., Torres, Y., Rojas, P., Carvacho, I., Garcia, ML., Toro, L., Valverde, MA and **Latorre, R**. 2006. Structural determinants for functional coupling between the beta and alpha subunits in the Ca^{2+}.activated K^+ (BK) channel. *J. Gen. Physiol.* 127:191-204. (68)

139 Morera, F., Vargas, G., and **Latorre, R**. 2007. Ion-Channel Reconstitution. In: *Methods in Membrane Lipids.* Dopico, A. Ed. Humana Press Inc., Totowa, NJ. Chapter 38, pp. 571-585. Part of the series: *Methods in Molecular Biology*, vol. 400. (34)

140 Brauchi, S., Orta, G., Salazar, M., Rosenmann, E., and **Latorre, R**. 2006. A hot-sensing cold-receptor: C-terminal domain determines thermosensation in TRP channels. *J. Neurosci*. 26:4835-4840. (301)

141 **Latorre, R**., and Moreno, M.E. 2006. Ciencia: unidad en la variedad. *Revista Atenea* 493:23-34

142 **Latorre, R**., Vargas, G., Orta, G., and Brauchi, S. 2007. Voltage and temperature gating in thermoTRP channels. In: *TRP Ion Channels Function in Sensory Transduction and Cellular Signaling Cascades.* Liedtke, W. and Heller, S. Eds. **CRC** Taylor and Francis, London. Chapter 21, pp 287-302 (24)

143 Brauchi S., Orta G., Mascayano C., Salazar M., Raddatz N., Urbina H., Rossenman E., Gonzalez-Nilo F., **Latorre R. 2007**. Dissection of the components for PIP_2 activation and thermosensation in trp channels. *Proc. Natl. Acad. Sci. (USA)* 104:10246-10251.(223)

144 Torres Y., Carvacho, I., Morera, F., and **Latorre, R**. 2007. A marriage of convenience: β1 subunits of voltage-dependent channels. *J. Biol. Chem.* 282:24495-24489 (124)

145. Morera, F., Vargas, G., and **Latorre, R**. 2007. Ion-Channel Reconstitution. In: *Methods in Membrane Lipids.* Dopico, A. Ed. Humana Press Inc., Totowa, NJ. Chapter 38, pp. 571-585. Part of the series: *Methods in Molecular Biology*, vol. 400.

146 Latorre, R., Brauchi, S., Orta, G., Zaelzer, C., Vargas, G. 2007. ThermoTRP Channels as Modular Proteins with Allosteric Gating. *Cell Calcium* 42:427-438 (209)

147 Carvacho, I, Gonzalez, W., Torres, Y., Brauchi, S., Alvarez, O., Gonzalez-Nilo, F.D., and Latorre, R. 2008. Intrinsic Electrostatic Potential in the BK Channel Pore: Role in Determining Single Channel Conductance and Block. *Journal of General Physiology*. 31:147-162 (42)

148 Hammami, S., Willumsen, NU., Olsen, HL., Morera, FJ., **Latorre, R.** and Klaerke, DA. 2009. Cell volume and membrane stretch independently control K^+ channel activity. *J. Physiol. (London)* 587:2235-2231 (40)

149 **Latorre, R.** 2009. Perspectives on TRP channel structure and the TRPA1 puzzle. *J. Gen. Physiol.* 133:227-229. (15)

150.**Latorre, R.,** Zaelzer, C., and Brauchi, S. 2009. Structure and functional intimacies of transient receptor potential (TRP) channels. *Quart. Rev. Biophys.* 42:201-246 (189)

151.**Latorre, R.,** Morera, FJ., and Zaelzer, C. (2010). Allosterism and the modular nature of the voltage- and Ca^{2+}-activated (BK) channel. *J.Physiol.(London)* 588.17: 3141-3148 (66)

152 Baez.Nieto, D., Castillo, J.OP., Dragicevic, C., Alvarez, O. and **Latorre, R**. 2011. ThermoTRP channels: Biophysics of polimodal receptors. In *Transient Receptor Potential Channels"*. Islam, S., Editor. Springer, series on Advances in Experimental Biology and Medicine. 704:469-490. (29)

153.**Latorre, R**, Brauchi, S., Madrid, R. and Orio, P. 2011. A Cool Channel in Cold Transduction. *Physiolgy* 26: 273-285. **(**64**)**

154.Castillo, J.P. De Giorgis, D., Basilio, D., Gadsby, D.C., Rosenthal, J.J., **Latorre, R**., Holmgren, M., and Bezanilla, F. 2011. Energy landscape of the reaction governing the Na^+ deeply occluded state of the Na^+/K^+ -ATPaser in the giant axon of the Humboldt squid. *Proc. Natl. Acad. Sci. (USA).* 108:20556-61(18)

155. Gonzalez, C., Contreras, G., Peyser, A., Larsson, P., Neely, A. and **Latorre, R**. 2012.Voltage sensor of ion channels and enzymes. *Biophysical Rev. 4:*1-15. (10)

156. Gonzalez, C., Baez-Nieto, D., Valencia, I., Oyarzún, I., Rojas, P., Naranjo, D., and **Latorre, R**. 2012. K channels: Function-structural overview. *Comprehensive Physiology*. ***2***: 2087-2149 (116)

157. Pertusa, M, Moldenhauer, H., Brauchi, S., **Latorre, R**., Madrid, R. and Orio, P- 2012. Mutagenesis and temperature-sensitive little machines. In: *Mutagenesis,* Chapter 11, pp, 221-246. Mishra, R. Ed., . InTech Open Access publisher. (8)

158. Morera,F.J., Alioua, A., Kundu,P., Salazar, M., Gonzalez, C., Martinez, A.D., Stefani, E., Toro, L. and Latorre, R. 2012. The first transmembrane domain (TM1) of β2-subunit binds to the transmembrane domain S1 of α-subunit in BK potassium channels. *FEBS Lett.* **586**:2287-2293 (17)

159. Dinardo MM, Camerino G, Mele A, **Latorre R**, Conte Camerino D, Tricarico D. 2012. Splicing of the rSlo Gene Affects the Molecular Composition and Drug Response of Ca(2+)-Activated K(+) Channels in Skeletal Muscle. *PLoS One* 7(7): e40235 (29)

160. Contreras, GF, Neely, A., Alvarez, O, Gonzalez, C, and **Latorre, R.** 2012. Modulation of BK Channel Voltage Gating by Different Auxiliary β Subunits- *Proc. Natl. Acad. Sci. (USA).* **109:**18577-18582 (72)

161. **Latorre, R**., Morera, FJ., and Zaelzer, C. (2013). Voltage-dependent K^+ channels. In: *Encyclopedia of Biological Chemistry*. 2nd Edition. Vol 1, pp. 399-404. Lane, M.D and W.J.. Lennarz, editors. Elsevier.

162. **Latorre, R**. and Baez-Nieto, D. 2013. Ca^{2+} activation of K^+ channels: RCK domains. *Encyclopedia of Biophysics*, Roberts, Gordon Ed., Springer. 2807 pp..

163. **Latorre, R**., González, C., Rojas P. 2013. Signal-Transduction-Dependent Channels. In *Neuroscience in the 21st Century*. Chapter 5. Pp 81-107. Pfaff, Donal W. ed., Springer.Verlag.

164. Cea, LA, Bruno A. Cisterna, BA, Puebla, C, Frank, M, Figueroa, XF, Cardozo, C, Willecke, K, Latorre, R, and Sáez, JC. 2013. *De novo* expression of connexin hemichannels in denervated fast skeletal muscles leads to atrophy. *Proc. Natl. Acad. Sci. (USA)* 110:16229-16234 (77)

165. Contreras, GF, Castillo, K, Enrique, N, Carrasquel-Ursulaez, W, Castillo, JP, Milesi, V, Neely, A, Alvarez O, Ferreira, G, Gonzalez, C, and **Latorre. R.** (2013) A BK (Slo1) Channel Journey from Molecule to Physiology. *Channels* 7:1-17 (102)

166. Tricarico D, Mele A, Calzolaro S, Cannone G, Camerino MG, Dinardo MM, **Latorre R**, Conte Camerino D. (2013) Emerging Role of Calcium-Activated Potassium Channel in the Regulation of Cell Viability Following Potassium Ions Challenge in HEK293 Cells and Pharmacological Modulation. *Plos One*. 8(7). e69551.(22)

167. **Latorre, R**. and Contreras ,G. 2013. Keeping you healthy; BK activation by omega-3 fatty acids. *Journal of General Physiology* 142:487-491 (7).

168. Pupo A, Baez-Nieto D, Martínez A, **Latorre R**, González C. 2014. Proton channel models: Filling the gap between experimental data and the structural rationale. *Channels* Apr 22;8(3):180-192 (12)

169. Jabba S, Goyal R, Sosa-Pagán JO, Moldenhauer H, Wu J, Kalmeta B, Bandell M, **Latorre R,** Patapoutian A, Grandl J. 2014. Directionality of Temperature Activation in Mouse TRPA1 Ion Channel Can Be Inverted by Single-Point Mutations in Ankyrin Repeat Six. *Neuron*. 82:1017-1031. (85)

170. Moldenhauer H, **Latorre R,** Grandl J. 2014. The Pore-Domain of TRPA1 Mediates the Inhibitory Effect of the Antagonist 6-Methyl-5-(2-(trifluoromethyl)phenyl)-1H-indazole. *PloS One* 4e 9:e106776. (9)

171. Baez D, Raddatz N, Ferreira G, Gonzalez C, Latorre R**.** 2014. Gating of Thermally Activated Channels. In: Thermal Sensors. L. Islas and F. Qin. Eds. *Current Topics in Membranes*. 74:51-87.(28)

172. Raddatz N, Castillo JP, Gonzalez C, Alvarez O, Latorre R. 2014. Temperature and Voltage Coupling to Channel Opening in Transient Receptor Potential Melastatin 8 (TRPM8). *J Biol Chem.* 289:35438-54.(44)

173. Torres YP, Granados ST, **Latorre R**. 2014. Pharmacological consequences of the coexpression of BK channel α and auxiliary β subunits.*Front Physiol.* Oct 10;5:383. doi: 10.3389/fphys.2014.00383. (46)

174. Poblete H, Oyarzún I, Olivero P, Comer J, Zuñiga M, Sepulveda RV, Báez-Nieto D, González Leon C, González-Nilo F, **Latorre R**. 2015. Molecular Determinants of Phosphatidylinositol 4,5Bisphosphate (PI(4,5)P2) Binding to Transient Receptor Potential V1 (TRPV1) Channels. *J Biol Chem.* 290:2086-2098 (49)

175. Carrasquel-Ursulaez W, Contreras GF, Sepúlveda RV, Aguayo D, González-Nilo F, González C, **Latorre R**. 2015. Hydrophobic interaction between contiguous residues in the S6 transmembrane segment acts as a stimuli integration node in the BK channel. *J Gen Physiol.* 145(1):61-74. doi: 10.1085/jgp.201411194.(12)

176. Castillo, K., Contreras, G.F., Pupo, A., Torres, Y.P., Neely, A., Gonzalez, C. and **Latorre, R**, 2015. Molecular mechanism underlying β1 regulation in voltage- and calcium-activated

potassium (BK) channels. *Proc. Natl. Acad. Sci. (USA).* 112(15):4809-4814. doi:10.1073/pnas.1504378112 (25)

177. Carrasquel-Ursulaez, W. Moldenhauer, H, Castillo, JP. **Latorre, R**. Alvarez, O. 2015. Biophysical analysis of thermosensitive TRP channels with a special focus on the cold receptor TRPM8. *Temperature.* 2:188-200 (12)

178. Castillo, J.P., Rui, H., Basilio,D., Roux, B., **Latorre, R**., Bezanilla, F., and Holmgren, M. 2015. Mechanism of potassium ion uptake by Na+/K-ATPase. *Nature Comm*. July 24 6:7622 Doi: 10.1038/ncomms8622 (38)

179. Ferreira G, Raddatz N, Lorenzo Y, Gonzalez C and **Latorre R** (2015) Biophysical and Molecular Features of Thermosensitive TRP Channels Involved in Sensory Transduction . Cahpter in: TRP Channels in Sensory Transduction, R. Madrid, J. Bacigalupo (eds.). Springer International Publishing Switzerland.

180. Castillo, K., Pupo, A., Baez, D., Cintreras, G., Morera, F.J., Neely, A., **Latorre, R**., Gonzalez, C. 2015. Voltage-gated proton (Hv1) channels, a singular voltage sensing domain. *Febs Lett*. 589(22):3471-8.doi: 10.1016/j.febslet.2015.08.003. (8)

181. Castillo JP, Sánchez-Rodríguez JE, Clark Hyde H, Zaelzer CA, Aguayo D, Sepúlveda R, Luk LYP, Kent S, Gonzalez-Nilo F, Bezanilla F, and **Latorre R.** 2016. β1 Subunit-Induced Structural Rearrangements of the Ca2+- and Voltage-Activated (BK) Channel. *Proc. Natl Acad Sci (USA).* 113(23): E3231-9. doi:10.1073/pnas.1606381113. (13)

182. Diaz-Franulic I, Poblete H, Miño G, González C, and **Latorre R.** 2016. Allosterism and Structure in Thermally Activated Transient Receptor Potential Channels *Ann. Rev. Biophys.* 45:371-398 (32)

183. Pinto BI, García IE, Pupo A, Retamal MA, Martinez AD, **Latorre R** and Gonzalez C. 2016. Charged residues at the first transmembrane region contribute to the voltage dependence of connexins slow gate. *J Biol Chem* 291:15740-52 (8)

184. Diaz-Franulic I, Caceres-Molina J, Sepulveda, RV, Gonzalez-Nilo, F and **Latorre R**. 2016. Structurally driven pharmacology of transient receptor potential vanilloid1 (TRPV1) channel. *Mol Pharm.* 90:300-308 (14)

185. Latorre R, Castillo K, Carrasquel-Ursulaez W, Sepulveda RV, Gonzalez-Nilo F, Gonzalez C, Alvarez O. 2017. Molecular determinants of BK channel functional diversity and functioning- *Physiol Rev*. Jan;97(1):39-87. DOI: 10.1152/physrev.00001.2016 (93)

186. Alvarez, O. and **Latorre, R**. 2017. The enduring legacy of the "constant-field equation" in membrane transport. *J. Gen. Physiol*. 149:911-920- (9)

187. Pinto, B.I., Pupo, A. Garcia, I., Martínez, A,D., Latorre, R. and Gonzalez, C. 2017. Calcium binding and voltage gating in Cx46 hemichannels. *Sci. Reps*. 7:15851. DOI:10.1038/s41598-017-15975-5 (2)

188. Castillo, K., Diaz-Franulic, I., Canan J., Fernando Gonzalez-Nilo and **Latorre, R**. 2018. Thermally-activated TRP channels: Molecular sensors for temperature detection. *Phys. Biology*. 15:021001. DOI.org/10.1088/1478-3975/aa9a6f (26)

189. Marthur, C., Johnson, K.R., Tong, B.A., Srikumar, D., Basilio, D., **Latorre, R**., Bezanilla, F., Holmgren, M. 2018. Demonstration of ion channel synthesis by isolated squid giant axon provides functional evidence for localized axonal membrane protein translation. *Sci. Reps*. 8:2207. DOI:10.1038/s41598-018-20684-8 (8)

190. Carrasquel-Ursulaez, W., Lorenzo, Y., Echeverria, F. and **Latorre, R**. 2018. Large conductance potassium channels in the nervous system. In: *The Oxford Handbook of Neuronal Ion Channels*, Oxford Handbooks Online, UK. Online publication date: April 2018. DOI: 10.1093/oxfordhb/9780190669164.013.11.

191. García, I:E., Villanelo, F., Contreras, G., Pupo, A., Pinto, B., Contreras, J., Pérez-Acle, T., Alvarez, O., **Latorre, R.**, Martínez, A., and González, C. 2018. The syndromic deafness mutation G12R impairs fast and slow gating in Cx26 hemichannels. *J. Gen. Physiol*. DOI: 10.1085/jgp.201711782.(7)

192. Carrasquel-Ursulaez, W., Alvarez, O., Bezanilla, F., and **Latorre, R**. 2018. Determination of the stoichiometry between α- and γ1 subunits of the BK channel using LRET. *Biophy. J.* 114:1-5. doi.org/10.1016/j.bpj.2018.04.008 (4)

193 . Carmona, E, Larsson HP, Neely, A., Alvarez, O., **Latorre, R***., and Gonzalez, C. 2018. Gating charge displacement in a monomeric voltage-gated proton (Hv1) channel. *Proc. Natl. Acad. Sci. (USA).* 115:9240-9245. (7)

194.Scala R, Maqoud F, Angelelli M, **Latorre R,** Perrone MG, Scilimati A, Tricarico D. (2019) Zoledronic Acid Modulation of TRPV1 Channel Currents in Osteoblast Cell Line and Native Rat and Mouse Bone Marrow-Derived Osteoblasts: Cell Proliferation and Mineralization Effect. *Cancers* (Basel). 11(2). pii: E206. doi: 10.3390/cancers11020206. (5)

195. Alvarez O, Carmona E, **Latorre R.** and Gonzalez C. (2018) A Glimpse into the Permeation Pathway of the Voltage-Dependent Proton Channel (Hv1). *Journal of Physiology*.

196. Alvarez O, Castillo K, Carmona E, Gonzalez C and **Latorre R**. (2019) Methods for investigating TRP channel gating. In: *Methods in Molecular Biology*. Editores: Antonio Ferrer-Montiel, y Tim Hucho. Springer Publishing Company, NY, NY, USA. 1987:167-185. doi: 10.1007/978-1-4939-9446-5_11

197. Granados, S, Castillo, K, Bravo-Moraga, F, Sepulveda, RV, Carrasquel-Ursulaez, W, Rojas, M, Carmona, E, Lorenzo-Ceballos, Y, Gonzalez-Nilo, F, González, C, **Latorre, R**, Torres, YP. 2019. The molecular naturre of the 17β-estradiol binding site in the voltage- and Ca^{2+} - activated (BK) chanel β1 subunit. *Sci Reps* 9:9965 (2)

198. Lorenzo-Ceballos Y, Carrasquel-Ursulaez W, Castillo K, Alvarez O, **Latorre R.** (2019) Calcium-driven regulation of voltage-sensing domains in BK channels. *eLife*. 8. pii: e44934. doi: 10.7554/eLife.44934. (3)

199. Alvarez O, Castillo K, Carmona E, Gonzalez C, **Latorre R**. (2019) Methods for investigating TRP channel gating. In: *Methods in Molecular Biology*. Editores: Antonio Ferrer-Montiel, y Tim Hucho. Springer Publishing Company, NY, NY, USA. 1987:167-185. doi: 10.1007/978-1-4939-9446-5_11

200. Scala R, Maqoud F, Angelelli M, **Latorre R**, Perrone MG, Scilimati A, Tricarico D. (2019) Zoledronic Acid Modulation of TRPV1 Channel Currents in Osteoblast Cell Line and Native Rat and Mouse Bone Marrow-Derived Osteoblasts: Cell Proliferation and Mineralization Effect. *Cancers (Basel).* 11(2). pii: E206. doi: 10.3390/cancers11020206. (5)

201. Díaz-Franulic I, Raddatz N, Castillo K, González-Nilo FD, **Latorre R**. 2020. A folding reaction at the C-terminal domain drives temperature sensing in TRPM8 channels. *Proc Natl Acad Sci U S A.* 117(11):20298-20304. doi: 10.1073/pnas.1920008117

202. Du X, Carvalho-de-Souza JL, Wei C, Carrasquel-Ursulaez W, Lorenzo Y, Gonzalez N, Kubota T, Staisch J, Haine T, Petrossiana N, Xu M, **Latorre R**, Bezanilla F and Gomez CM. 2020. Loss-of-function BK channel mutation causes impaired mitochondria and progressive cerebellar ataxia. *Proc Natl Acad Sci U S A.* 117(11):6023-6034. doi: 10.1073/pnas.1920008117 (3)

203. Hinostroza F, Neely A, Araya-Duran I, Marabolí V, Canan J, Rojas M, Aguayo D, **Latorre R**, González-Nilo FD, Cárdenas AM. (2020) Dynamin-2 R465W mutation induces long range perturbation in highly ordered oligomeric structures. *Sci Rep*. 10(1):18151. doi: 10.1038/s41598-020-75216-0.

204. Moreno C, Yano S, Bezanilla F**, Latorre R**, Holmgren M. (2020) Transient Electrical Currents Mediated by the Na+/K+-ATPase: A Tour from Basic Biophysics to Human Diseases. *Biophys J.* 116: 236-242. doi: 10.1016/j.bpj.2020.06.006

205. Ramírez-Barrantes R, Carvajal-Zamorano K, Rodriguez B, Cordova C, Lozano C, Simon F, Díaz P, Muñoz P, Marchant I, **Latorre R**, Castillo K, Olivero P. 2020. TRPV1-Estradiol

Stereospecific Relationship Underlies Cell survival in Oxidative Cell Death. *Front Physiol.* 11:444. doi: 10.3389/fphys.2020.00444.

206. Carmona EM, Fernandez M, Alvear-Arias JJ, Neely A, Larsson HP, Alvarez O, Garate JA, **Latorre R** and Gonzalez C (2021) The voltage sensor is responsible for ΔpH dependence in Hv1 channels. Proc Natl Acad Sci U S A 118(19), e2025556118. doi:10.1073/pnas.2025556118

207. Diaz-Franulic I, Verdugo C, Gonzalez F, González-Nilo F, and **Latorre R** (2021) Thermodynamic and structural basis of temperature-dependent gating in TRP channels. Biochemical Society Transactions. 49(5):2211-2219. doi: 10.1042/BST20210301

208. Granados ST, **Latorre R** and Torres YP (2021). The membrane cholesterol modulates the interaction between 17-βEstradiol and the BK channel. Frontiers in Pharmacology, 12:687360. doi: 10.3389/fphar.2021.687360

209. Gonzalez-Sanabria N, Echeverria F, Segura I, Alvarado-Sánchez R , **Latorre R** (2021) BK in double-membrane organelles: a biophysical, pharmacological, and functional survey. Frontiers in Physiology, section Membrane Physiology and Membrane Biophysics 12:761474. doi: 10.3389/fphys.2021.761474

210. Henao JC, Grismaldo A, Barreto A, Rodríguez-Pardo VM, Mejía-Cruz CC, Leal-Garcia E, Pérez-Núñez R, Rojas P, **Latorre R**, Carvacho I and Torres YP (2021) TRPM8 Channel Promotes the Osteogenic Differentiation in Human Bone Marrow Mesenchymal Stem Cells. Front. Cell Dev. Biol. 9:592946. doi: 10.3389/fcell.2021.592946

211. Pihán P, Lisbona F, Borgonovo J, Edwards-Jorquera S, Nunes-Hasler P, Castillo K, Kepp O, Urra H, Saarnio S, Vihinen H, Carreras-Sureda A, Forveille S, Sauvat A, De Giorgis D, Pupo A, Rodríguez DA, Quarato G, Sagredo A, Lourido F, Letai A, **Latorre R**, Kroemer G, Demaurex N, Jokitalo E, Concha ML, Glavic Á, Green DR, Hetz C. (2021) Control of lysosomal-mediated cell death by the pH-dependent calcium channel RECS1. Sci Adv. 7(46):eabe5469. doi: 10.1126/sciadv.abe5469.

212. **Latorre R**, Díaz-Franulic I. (2022) Profile of David Julius and Ardem Patapoutian: 2021 Nobel Laureates in Physiology or Medicine. Proc Natl Acad Sci U S A. 119(1):e2121015119. doi: 10.1073/pnas.2121015119.

213. Scala R, Maqoud F, Antonacci M, Dibenedetto JR, Perrone MG, Scilimati A, Castillo K, **Latorre R**, Conte D, Bendahhou S, Tricarico D. (2022) Bisphosphonates Targeting Ion Channels and Musculoskeletal Effects. Front Pharmacol. 13:837534. doi: 10.3389/fphar.2022.837534.

214. Alvear-Arias JJ, Carrillo C, Villar JP, Garcia-Betancourt R, Peña-Pichicoi A, Fernandez A, Fernandez M, Carmona EM, Neely A, Alvarez O, Garate JA, Barajas-Martinez H, Larsson HP, Lopez-Rodriguez A, **Latorre R** and Gonzalez C (2022) Expression of Hv1 proton channels in

myeloid-derived suppressor cells (MDSC) and its potential role in T cell regulation. Proc Natl Acad Sci U S A 119(15):e2104453119. doi: 10.1073/pnas.2104453119. Online ahead of print

BOOKS EDITED AND REVIEW SERIES.

1. Tosteson, D. C., Ovchinnikov, Y. A., Latorre, R. 1978. *Membrane Transport Processes*, Vol. II, Raven Press, NY, pp 451.

2. Latorre, R. 1986. *Ionic Channels in Cells and Model Systems*. Plenum Press, NY, pp 437.

3. Latorre, R. 1991. Metabolic Control of K^+ channels. *J. Bioenerg. Biomembranes*. **23**: 493-663.

4. Latorre R., Sáez L., Zanelli J., Editores 1994. *Enseñanza y desarrollo de las ciencias. ¿Qué hacer?*. Foro de la Educación Superior. Santiago, Chile pp.169.

5. Latorre, R., *López-Barneo J., Bezanilla, F., Llinás, R. 1996.* Biofísica y Fisiología Celular. Editorial Universidad de Sevilla, España. pp.708.

6. Latorre R., and Sáez J.C. 1997. *From Ion Channels to Cell-to-Cell Conversations.* Plenum Press, New York and London. pp 504.

PATENT.

Immunoassay for the Detection and Quantitation of Toxins Causing Paralytic Shellfish Poisoning.