

CURRICULUM VITAE**NAME:** Julio Antonio Copello**DATE:** August 2018**PRESENT POSITION AND ADDRESS**

Associate Professor
Department of Pharmacology
Southern Illinois School of Medicine
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EDUCATION

1972	Economy	B.A.	National School, Chacabuco, Argentina
1983	Biochemistry	Licenced	Sciences School, University of La Plata, Argentina
1989	Biochemistry	Doctor (Ph.D.)	University of La Plata, Argentina

PROFESSIONAL AND TEACHING EXPERIENCE:

2010-Current	Associate Professor, Department of Pharmacology, Southern Illinois School of Medicine (SIU-SOM), Springfield, IL 62794.
2014-Current	Y2 CRR Unit Co-Director, Southern Illinois School of Medicine
2011-2014	Graduate Program Director, Department of Pharmacology, Southern Illinois School of Medicine (SIU-SOM), Springfield, IL 62794.
2005-2010	Assistant Professor, Dept Pharmacol, SIU-SOM, Springfield, IL 62794.
2005-2008	Adjunct Assistant Professor, Department of Physiology, Loyola University Chicago, Maywood, IL 60153.
1999-2005	Research Assistant Professor, Dept Physiology, Loyola University Chicago,
1994 -1999	Senior Research Associate, Department of Molecular Biology, Vanderbilt University, Nashville, Tennessee 37235.
1989 - 1994	Research Associate, Department of Physiology and Biophysics, University of Texas Medical Branch, Galveston, Texas 77550.
1987 - 1989	Instructor, Department of Biological Chemistry, University of Buenos Aires, Argentina.
1984 - 1989	Graduate Student, Institute of Cardiological Research, University of Buenos Aires, Argentina (Directed by Dr. Fernandez Villamil, M.).

HONORS AND AWARDS:

Travel Grant to the World Biophysical Congress from IUPAB. April 2002.
Superlative Thesis work for the Doctorate in Biochemistry of the University of La Plata, 1989
Travel Awards to the Meeting of the Argentinean Society for Clinical Investigation (1986, 1987).

COMPETITIVE FELLOWSHIPS:

Initiation fellowship of the National Research Council of Argentina (1984-1986)
Predoctoral fellowship of the National Research Council of Argentina (1986-1988)
Advanced Predoctoral fellowship of the National Research Council of Argentina (1988-1989).

RESEARCH ACTIVITIES:**A. Areas of research:**

1994-Current: A) Muscle Physiology & Pharmacology, Excitation-Contraction Coupling, Calcium Release Channels, Ryanodine Receptors, Calcium Signaling in Heart and Skeletal Muscle. Regulation of Ca²⁺ homeostasis in ischemia; B) Regulation of Ca²⁺ homeostasis in Cancer,

Previous: Regulation of Ion Transport and Contractility in Smooth Muscle. Epithelial transport: Potassium and Chloride channels.

B. Research Support (Current):

- Eskridge Foundation Grant (PI, JA Copello). Title: "Cardioprotection in ischemia-reperfusion injury: Novel modulation of ryanodine receptors and calcium ATP-ase". Period: 04/01/2015-06/31/2019.

C. Research Support (Previous):

- Team Development Grant (PI's JA Copello and S Tischkau). Title: "Modulation of Intracellular Ca²⁺ homeostasis - A Pharmacological Target for Cancer Therapy". Period: 01/01/2015-12/31/2016.

- Research Seed Grant (PI Julio Copello). Title: Calcium dependent blockers of the calcium ATPase of sarcoplasmic reticulum. A new pharmacological paradigm for cardioprotection from ischemia-reperfusion injury. (July 2014 – December 2015).

- Research Host (JA Copello) for Physiology Research Teacher (Melanie Loulousis; 2nd year) - American Physiological Society Frontiers in Physiology Fellowship. Summer 2016

- Research Host (JA Copello) for Physiology Research Teacher (Melanie Loulousis; 1st year) - American Physiological Society Frontiers in Physiology Fellowship). Summer 2015.

- American Heart Association MWA Winter 2012 Grant-in-Aid 12180038. PI, Copello 07/01/2012-06/31/2015. Title: "Modulation of ryanodine receptor-mediated calcium leak in health and diseases".

- National Institutes of Health (NIH, GM078665) **PI**, J.A. Copello (total cost \$1,264.375/5years; Period: 10/01/2006 - 09/31/2013). Title: "Communication between neighboring ryanodine receptor channels in skeletal muscle". Score , 154 (12.4% percentile).

- ARRA (NOT-OD-09-058) Competitive supplement to NIHGM078665. Grant Title: "Communication between neighboring ryanodine receptor channels in skeletal muscle". Period: 09/01/2009-12/31/2011.

-Bernie Eskridge Basic Research Award in Cardiovascular Diseases. Grant Title: Modulation of ryanodine receptor channels in diastole. Period: 01/01/2011-12/31/2012.

-Excellence in Academic Medicine (EAM) from Southern Illinois University **PI**, JA. Copello . Title:"Communication between neighboring ryanodine receptor channels in skeletal muscle". Period 01/01/2006-12/31/2006

-Muscular Dystrophy Association (MDA). **PI**, J.A. Copello. Title: "Coordinated gating of ryanodine receptor channels". Period: 01/01/2004-09/31/2006.

-National Institutes of Health (NIH). **Co-PI** J.A. Copello; PI, M. Fill. Title: "Control Mechanisms of Ca-induced Ca-release in heart". Period: 01/01/2003-06/31/2005.

-American Heart Association (National 0130142N) Scientific Development Award. **PI** J.A. Copello. Title: Role of RyR heterogeneity on excitation-contraction coupling in skeletal muscle. Period: 1/1/2001 to 12/31/2004.

-Potts Foundation Grant. **PI** J. A. Copello. Title: "Excitation-contraction coupling in skeletal muscle. Total cost: \$39,970\$. Period: 09/01/2000-08/31/2001.

-National Research Council of Argentina **Traineeship Stipend** to Julio A. Copello. Field of Medical Sciences. Categories: Initiation (1984-86), Advanced (1986-88) and Doctoral Formation (1988-89).

TEACHING EXPERIENCE:

A. Southern Illinois School of Medicine (2005-current)

A1. Medical School.

A.1.1. Lecturer of Pharmacology. I) Y2-Cardiovascular, Renal and Respiratory Unit: 1) Cholinergic drugs (2007-2009); 2) Antihistaminics, Mucolytics and Expectorants (2007-2014), 3) Antianemics, 4) Anticoagulants, Antithrombotics and Thrombolytics 5) Antihyperlipidemics, 6) Ophthalmic Drugs, 7) Diuretics. **II) Endocrine and Reproduction Unit:** 1) Diseases of the Pancreas. 2) Disorders of Calcium Metabolism. **III) Neuropharmacology Substitute Teacher.** 1) NSAIDS (Substitute teacher for Dr. D. Caspary; 2007).

A.1.2. Substitute Lecturer of Physiology. I) Y1-Cardiovascular, Renal and Respiratory Unit: 1) Renal Physiology I, 2) Renal Physiology II, 3) Renal Handling of Hydrogen and Bicarbonate and 4) Fluid and Electrolyte Disorders.

A.1.3. Small Groups Facilitator. I) CRR Unit Cases: 1) Asthma, 2) Lung disease, 3) Lung Cancer, 4) Pulmonary Embolus, 5) MI, 6) Arrhythmia, 7) CHF, 8) Endocarditis, 9) Malignant Hypertension; 10) Peripheral Vascular Disease, 11) Renal Cancer; 12) Polycystic Kidney Disease; 13) Glomerulonephritis, 14) Chronic Renal Failure. **II) Substitute small group Facilitator.** CRR, Neuropharmacology and ERG.

A3. Graduate School Lecturer. I) Basic Principles of Pharmacology: 1) Pharmacokinetics, 2) Membranes and transport; 3) Types of muscles, 4) Excitation-contraction coupling, 5) Neural and endothelial control of vascular smooth muscle, 6) Cholinergic Drugs 7) Antihistamines, Mucolytics and Expectorants, 8) Anticoagulants, Antithrombotics and Thrombolytics, 9) Endothelium, nitric oxide, endothelin, 10) Antihyperlipidemics, 11) Angiotensin/Renin, 12) Diuretics, 13) Ophthalmic Agents and Glaucoma; **2) Cardiovascular Pharmacology** 1) Introductory Lecture, 2) Excitation-contraction coupling I, 3) EC-coupling II, 4) Electrophysiology & EC-coupling, 5-9) Research Articles Discussions; **3) Neuropharmacology** (Calcium homeostasis in neurons). **4 Cell Biology** (Membrane Transport).

B. University of Illinois at Springfield (2008 – 2011). CHE480. Introduction to Pharmacology Lecturer: 1) Excitation-contraction coupling (2007-), 2) Ion transport across cell membranes.

C. Loyola University Chicago (1999-2005).

C1. Medical School - Small Groups Coordinator- Course of "Function of the Human Body" for Medical students. Supervision and coordination of ~12 small groups of discussion/year. Topics: Muscle, Cardiovascular, Renal, Gastrointestinal, Liver Physiology and Metabolism.

C2. Graduate School - Lecturer in course of Membrane Excitability: Topic: "Sarcoplasmic reticulum Ca uptake, content and release". Lecturer in the Introduction to Research Course. Topic: "Modulation of calcium release channels".

D. University of Buenos Aires. Argentina. Pharmacy and Biochemistry School (1988-1989). .

Lecturer, Laboratory Supervisor and Group Discussion Leader of the course of Biophysical Chemistry. Topics: 1) Dynamic properties of macromolecules; 2) Chemical Equilibria; 3) Regulation of intracellular volume; 4) Mechanisms of ion flux across biological membranes.

E. Instituto Superior de Enseñanza y Formación (ISEF). San Martin, Buenos Aires, Arg. (1984).
Lecturer of General Chemistry. (The course aimed to bridge High School and University education).

F. Training and teaching of Complex Experimental Protocols.

Teaching cell dissociation and Patch-Clamp Technique (UTMB Galveston): to Julie Horton, PhD (1990), Tomas Heming, PhD (1991); and to Carlos Vanoye-Trevino, Graduate Student (1992).

Vanderbilt University. Teaching planar lipid bilayers and single-channel analysis to Sebastian Barg (1994-1995), Visiting Student, and to Alois Sonnleitner, Visiting Student (1995-1996).

Loyola University Chicago. Teaching planar lipid bilayers and methods for isolation of microsomes to Claudia Perez, Postdoctoral Fellow (2000), and to Aleksey Zima (2001), Postdoctoral Fellow

GRADUATE STUDENT EDUCATION:

A. Graduate Student Advisor

-Jesika Saucedo (2018-current), Dept Pharmacol, Graduate Student, Southern Illinois University.

-Yuanzhao Lv (2011-2015), Dept Pharmacol, Graduate Student, Southern Illinois University.

- Tsung-Han Tsie (2012-2014), Dept Pharmacol, Graduate Student, Southern Illinois University.

-Vanessa Vullmahn (2010-2011), Dept Pharmacol, Graduate Student, Southern Illinois University.

- Jacob Neumann (2006-2011), Grad. Student (PhD in Pharmacol, Southern Illinois Univ. Thesis entitled: The role of ATP and FK-506 binding protein in the coupled gating of skeletal ryanodine receptors)

- Stephen Johnson (2006-2009), Graduate Student (PhD in Pharmacol. Southern Illinois University Thesis entitled: A biochemical and pharmacological characterization of a novel neuroactive peptide from the neotropical hunting ant *dinoponera australis*).

-Maura Porta (2002-2006). Graduate Student (PhD in Physiology, Loyola University Chicago. Thesis entitled: Coordinated gating of ryanodine receptors).

B. Graduate Student Dissertation Committee Member.

Jesse Britz, 2017-current (Dept Pharmacol, Southern Illinois University)

Yufang Ying, 2015-current (Dept Pharmacol, Southern Illinois University).

Sarah Sottile 2015, 2017 (PhD in Pharmacology, SIUSOM). "Neuronal Nicotinic Receptor Dynamics in Medial Geniculate Body Neurons of Young and Aged Fischer Brown Norway Rats".

Shrinavasa Kommashusjula 2015-2017. (PhD in Pharmacology, SIUSOM). "Neuroactive agents-mediated changes in neuronal network activity controls susceptibility to sudden unexpected death in epilepsy (SUDEP)"

Aarushi Sharma 2015-2016 (PhD in Pharmacology, SIUSOM. "Human ClCa2 modulates the conductance of calcium-activated chloride channels by regulation of intracellular calcium"

Daniel Fox, 2013-2016 (PhD in Pharmacology, SIUSOM. "D-methionine (D-met) mechanisms underlying otoprotection from noise- and aminoglycoside-induced hearing loss".

Adam Spong (2007-2011), Graduate Student, Dept. Pharmacol. Southern Illinois University)

Deshou Cao, 2008-2010 (PhD in Pharmacology, Southern Illinois University). "Role of TRPV4 and TRPA1 in Nociception."

Kile Montgomery, 2007- 2008 (Ph.D. in Pharmacology, Southern Illinois University) "Molecular factors that influence the binding of agonists to AMPA receptors".

Xiaobin Xie, 2005-2008 (PhD in Pharmacology, Southern Illinois University). "The role of adenosine and dopamine receptor subtypes in locomotion regulation in NF-kB p50 subunit knockout mice"

Yewei Liu, 2003-2008, (PhD in Neurosciences, Loyola University Chicago)."Ryanodine receptor function in intracellular calcium signaling".

Khrisna Jhavery, 2005-2006 (PhD in Pharmacology, Southern Illinois University) "Interactions of Nitric oxide synthase, A1 Adenosine receptor and Nuclear factor -kB in regulation of sleep".

Fatima Pimentel Montero 2005 (Master in Pharmacology, Southern Illinois Univ.)“Modulation of Transient Receptor Potential Melastatin 8 by Protein Kinase C”.

C. Graduate Program Committee. - Member (2005-current)

D. Graduate Program Director (2011-2014)

TRAINEES:

Melanie Loulousis (2015-2016, Summer Research Trainee)

Paula L. Diaz Sylvester (2004-2014, Res. Assistant Professor, Loyola Univ. Chicago and SIU).

Stephen Johnson (2010-2011), SIU, Part-time Res Assistant Professor

Lucia Goncalvez (2011-2012), SIU, Undergraduate Research Assistant,

Manish Raisinghani (2005, Postdoctoral Fellow, Dept. Pharmacol, Southern Illinois University)

Alma Nani. Technician, Loyola Univ. Chicago (2001-2002).

Paula L. Diaz-Sylvester, Loyola Univ. Chicago, Visiting Student (2001).

Jason W. Bobbitt (1998), Vanderbilt University, Summer Undergraduate Student.

Ariel Castro, Undergraduate Student (1988-89), Institute of Cardiovascular Research, Argentina:

Fernando Pitossi. Undergraduate Student (1987), Institute of Cardiovascular Research, Argentina:

INTRAMURAL SERVICE AT SOUTHERN ILLINOIS UNIV. SCHOOL OF MEDICINE.

I. Southern Illinois University School of Medicine - Committee Member:

A) Laboratory Animal Care and Use Committee Member (2005-2010); Alternate (2011-current).

B) Infection Control and Safety Committee Member (2007-current)

C) Admissions Committee Member (2009-current)

D) Grievances Committee Member (2010-2015)

E) Radiation Safety Committee; Chair (2017-current), Member (2011-current)

F) Faculty Council (2013-2016)

G) Committee on Committees Chair (2015-2016)

H) Y2CC Committee Member (2014-current)

I) Diversity Advisory Group (2010-2016)

II. Southern Illinois University School of Medicine – Internal Grants Review Panel:

A) Excellence in Academic Medicine (EAM) (2009-current);

B) CRC Reviewer/Regional Study Section member (2011-current)

C) Research Seed Grant (RSG) Applications (2015-current)

III. SIU Research Symposium – Springfield & Carbondale

2006-current (evaluator of poster and/or platform presentations)

IV. Department of Pharmacology - SIUSOM:

A) Graduate Program Committee Member, Dept. Pharmacology (2005-current)

B) Seminars Program Coordinator (July 2006 – July 2008)

C) Electives Coordinator, Dept. Pharmacology (2006-current)

D) Graduate Program Director (2011-2014)

EXTRAMURAL SERVICE:

A1) Ad-hoc Grant reviewer:

i) National Agency of Scientific and Technological Promotion of Argentina. Study section Member (1998-current); Evaluation of Grant Applications related to the Fields of Biological and Medical Sciences.

ii) Association Francaise Contre Les Myopathies. Review of Research Grant Applications (2003);

iii) The Welcome Trust, Physiological Sciences (2009). **iv) Commission for Scientific Research, National University of Uruguay (CSIC- Universidad de la Republica)** Review of research grants applications (2010-2014, 2015); **v) NIH-NIAMS National Institute of Arthritis and Musculoskeletal and Skin Diseases.** a) Special Study Section Ad-Hoc Member (2011); **vi) Biotechnology and Biological Sciences Research Council (BBSRC), UK (July 2015)**

A2) Study Section Member:

vii) NIH-NIAMS National Institute of Arthritis and Musculoskeletal and Skin Diseases. a) Special Study Section Ad-Hoc Member (2011). b) Musculoskeletal, Oral and Skin Sciences IRG (MOSS) (Study Section Ad-Hoc Member, Participates of the February Meetings, 2014-current).

viii) American Heart Association – AHA Innovative Award Study Section Member (2011-2016).

ix) American Heart Association – Chair of Study Section - AHA- Molecular Signaling (2017-2018).

B) Invited reviewer for scientific journals: Acta Physiologica, Aging, Aging Cell, American Journal of Physiology; Biophysical Journal, BBActa, British Journal of Pharmacology, FEBS Letters; Frontiers in Biosciences, General Physiology & Biophysics, Journal of American Chemical Society, Journal of Cell and Molecular Cardiology, Journal of General Physiology, Journal of Gerontology, Journal of Membrane Biology, Journal of Molecular and Cellular Cardiology, Journal of Physiology, Investigative Ophthalmology & Visual Science; In Vitro Cellular & Developmental Biology - Animal, Mechanisms of Ageing and Development, Molecular Pharmacology, Nature, Neuropharmacology, Pflugers, PLoS one, PNAS, Trends in Cell Biology.

COMMUNITY SERVICE:

1991-1994. On Call Volunteer interpreter for Hispanic patients visiting the Emergency Room, John Sealy Hospital, Univ. of Texas Medical Branch at Galveston, TX.

2000-2005. Volunteer soccer coach for Corec and Girls Soccer. Wheaton Park District.

2005-2008. Volunteer work for Springfield Area Soccer Association (SASA).

2011. Volunteer translator and pharmacy supervisor for first SIUMED medical mission to Honduras.

PROFESSIONAL ACTIVITIES:

A) Membership in scientific societies: Argentinean Society for Clinical Investigation (1985-1989); Biophysical Society (1994-current); Latin American Biophysicists Society (1994-current); American Heart Association, Basic Sciences Section Member (2001-current). American Physiological Society (2011-current), American Society for Pharmacology and Therapeutics (2005-current). Argentinean Society of Cardiology (2011-current; also alternate member of the council).

B) Meeting Organizer: XIV International Biophysical Congress. Satellite Meeting "Intracellular Ca signaling in heart". Dept. Physiology, School of Science and Technology, University of San Martin, Argentina. May 2, 2002.

C) Co-Chair of "Excitation-Contraction Coupling Platform Session". Biophysical Society Meeting, New Orleans, Monday, Feb. 13, 2017.

BIBLIOGRAPHY

1) Cantiello H, **Copello J**, Müller A, Mikulic L, Villamil MF. (1986). Effects of bumetanide on potassium transport and ionic composition of the arterial wall. *American Journal of Physiology* 251: F537-F546.

2) **Copello J**, Müller A, Aquino S, Villamil MF. (1989). Vascular relaxing effects of Bumetanide. *Methods and Findings in Experimental and Clinical Pharmacology* 11: 613-619.

3) Massaldi HA, **Copello J**, Müller A, Villamil MF. (1990). Improved method for estimating Ca uptake in vascular smooth muscle using compartmental analysis. *American Journal of Physiology* 259: R172-R183.

- 4) Altenberg G, **Copello J**, Cotton C, Dawson K, Segal Y, Wehner F, Reuss L. (1991). Electrophysiological methods for studying ion and water transport in *Necturus* gallbladder epithelium. *Methods in Enzymology* 192: 650-683.
- 5) **Copello J**, Segal Y, Reuss L. (1991). Cytosolic pH regulates maxi K⁺ channels in *Necturus* gall-bladder epithelial cells. *Journal of Physiology (London)* 434: 577-590.
- 6) **Copello J**, Simon B, Segal Y, Wehner F, Ramanujam VMS, Alcock N, Reuss L.(1991). Ba²⁺ release from soda glass modifies single maxi K⁺ channel activity in patch clamp experiments. *Biophysical Journal* 60: 931-941.
- 7) **Copello J**, Wehner F, Reuss L. (1993). Artfactual expression of maxi-K⁺ channels in basolateral membrane of gallbladder epithelial cells. *American Journal of Physiology* 264: C1128-C1136.
- 8) **Copello J**, Heming TA, Segal Y, Reuss, L. (1993). cAMP-activated apical membrane chloride channels in *Necturus* gallbladder epithelium. Conductance, Selectivity, and Block. *Journal of General Physiology* 102: 1-24.
- 9) Heming TA, **Copello J**, Reuss L. (1994). Regulation of cAMP-activated apical membrane chloride channels in gallbladder epithelium. *Journal of General Physiology* 103: 1-18.
- 10) Torres RJ, Altenberg GA, **Copello JA**, Zampighi G, Reuss L. (1996). Preserved structural and functional polarity in isolated epithelial cells. *American Journal of Physiology* 270: C1864-C1874.
- 11) Timerman AP, Onoue H, Xin H-B, Barg S, **Copello JA**, Wiederrecht G, Fleischer S. (1996). The cardiac ryanodine receptor selectively binds FKBP12.6. *Journal of Biological Chemistry* 271: 20385-20391.
- 12) Barg S, **Copello JA**, Fleischer S. (1997). Different interactions of cardiac and skeletal muscle ryanodine receptors with FK binding protein isoforms. *American Journal of Physiology* 272: 1726-1733.
- 13) **Copello JA**, Barg S, Onoue H, Fleischer S. (1997). Heterogeneity of Ca²⁺ gating of skeletal muscle and cardiac ryanodine receptor. *Biophysical Journal* 73: 141-156.
- 14) Jeyakumar LH, **Copello JA**, O'Malley AM, Wu G-M, Grassuci R, Wagenknecht T, Fleischer S. (1998). Purification and characterization of ryanodine receptor 3 from mammalian tissue. *Journal of Biological Chemistry* 273: 16011-16020.
- 15) **Copello JA**, Qi Y, Ogungumni E, Jeyakumar L, Fleischer S. (2001). Lack of effects of cADP-ribose on channel activity and FKBP binding of skeletal muscle and heart ryanodine receptors. *Cell Calcium* 30: 269-294.
- 16) Xin H-B, Senbonmatsu T, Cheng D-S, Wang Y-X, **Copello JA**, Ji G-J, Collier ML, Deng KY, Jeyakumar LH, Magnuson MA, Inagami T, Kotlikoff MI, Fleischer S. (2002). Estrogen protects FKBP12.6 null mice from cardiac hypertrophy. *Nature* 416: 334-337.
- 17) **Copello JA**, Barg S, Sonnleitner A, Porta M, Diaz-Sylvester PL, Fill M, Schindler H, Fleischer S. (2002). Mg²⁺ block of cardiac and skeletal muscle ryanodine receptors. Effects of Ca²⁺, ATP and caffeine. *Journal of Membrane Biology* 187: 51-64.
- 18) Fill M, **Copello JA**. (2002). Ryanodine Receptors Calcium Release Channels. *Physiological Rev.*82: 893-922.
- 19) Zima AV, **Copello JA**, Blatter LA. (2003). Differential modulation of cardiac and skeletal ryanodine receptors by NADH. *FEBS Letters* 547: 32-36.

- 20) Zoghbi ME, **Copello JA**, Velez P, Bolaños P, Marcano A, Diaz-Sylvester PL, Fill M, Escobar AL. (2004) Differential Ca^{2+} and Sr^{2+} regulation of intracellular divalent cations release in ventricular myocytes. *Cell Calcium*. 36: 119-134.
- 21) Zima, AV, **Copello JA**, Blatter LA. (2004). Effects of cytosolic NADH/NAD⁺ levels on sarcoplasmic reticulum Ca^{2+} release in permeabilized rat ventricular myocytes. *Journal of Physiology (London)* 555: 727-741.
- 22) Perez C, **Copello JA**, Li Y, Gomez, L, Ramos-Franco, J., Fill M, Mejia-Alvarez R. (2004). Cardiac ryanodine receptor channels in neonate rat. *American Journal of Physiology*: 288 H2527-2540.
- 23) Garcia MC, Carrillo ED, Galindo JM, Hernandez A, **Copello JA**, Fill M, Sanchez JA. 2005. Short-term regulation of excitation-contraction coupling by the β 1a subunit in adult mouse skeletal muscle. *Biophysical Journal* 89:3976-3984.
- 24) **Copello JA**, Zima AV, Diaz-Sylvester PL, Fill, M, Blatter, LA. 2007. Ca^{2+} entry-independent effects of L-type Ca^{2+} channel modulators on Ca^{2+} sparks in ventricular myocytes. *American Journal of Physiology* 292: C2129-C2140.
- 25) Xiao J, Tian X, Jones PP, Bolstad J, Kong H, Wang R, Zhang L, Duff HJ, Gillis AM, Fleischer S, Kotlikoff M, **Copello JA**, Chen SR. 2007. Removal of FKBP12.6 does not alter the conductance and activation of the cardiac ryanodine receptor or the susceptibility to stress-induced ventricular arrhythmias. *Journal of Biological Chemistry* 282: 34828-34838.
- 26) Diaz-Sylvester PL, Porta M, **Copello JA**. 2008. Halothane modulation of skeletal muscle ryanodine receptors: dependence on Ca^{2+} , Mg^{2+} and ATP. *American Journal of Physiology* 294: C1103-1112.
- 27) Porta M, Diaz-Sylvester PL, Nani A, Ramos-Franco J, **Copello JA**. 2008. Ryanoids and imperatoxin affect the modulation of cardiac ryanodine receptors by dihydropyridine receptor peptide A. *Biochimica et Biophysica Acta - Biomembranes* 1778:2469-2479.
- 28) Said M, Becerra R, Palomeque J, Rinaldi G, Kaetzel MA, Diaz-Sylvester PL, **Copello JA**, Dedman JR, Mundiña-Weilenmann C, Vittone L, Mattiazzi A. 2008. Increased intracellular Ca^{2+} and SR Ca^{2+} load contribute to arrhythmias after acidosis in rat heart. Role of Ca^{2+} /calmodulin-dependent protein kinase II. *American Journal of Physiology- Heart and Circulation Physiology*: H1669-1683.
- 29) Johnson SR, **Copello JA**, Evans MS, Suarez AV. 2009. A Biochemical Characterization of the Major Peptides from the Venom of the Giant Neotropical Hunting Ant *Dinoponera australis* *Toxicon*. 2010;55 :702-710.
- 30) Diaz-Sylvester PL, **Copello JA**. 2009. Voltage-Dependent Modulation of Cardiac Ryanodine Receptors (RyR2) by Protamine. *PLoS One*. 2009; 4: e8315
- 31) Ramos-Franco, J, Gomes AM, Nani A, Liu Y, **Copello JA**, Fill M. Ryanodol action on calcium sparks in ventricular myocytes. *Pflugers Arch*. 2010; 460: 767-776.
- 32) Neumann J, Diaz-Sylvester PL, Fleischer S, **Copello JA**. 2011. CGP 37157 activates ryanodine receptor channels (RyRs) and inhibits the sarcoplasmic reticulum Ca^{2+} ATPase (SERCA) in skeletal muscle and heart. *Molecular Pharmacology*; 79: 141-147.
- 33) Porta M, Zima AV, Nani A, Diaz-Sylvester PL, **Copello JA**, Ramos-Franco J, Blatter L, Fill, M. 2011. Caffeine Activation of Single RyR2 Channel Function. *Biophysical Journal* 100: 931-938.
- 34) Neumann J, **Copello JA**. 2011. Cross-reactivity of ryanodine receptors (RyRs) with modulators of plasma membrane ion channels. *Molecular Pharmacology* 80: 509-517.

- 35) Diaz-Sylvester PL, Porta M, **Copello JA**. 2011. Luminal modulation of cardiac ryanodine receptor channels by earth alkaline divalent cations *PLoS One*. 6(10):e26693.
- 36) Porta M, Diaz-Sylvester PL, Neumann JT, Escobar AL, Fleischer S, **Copello JA**. 2012. Coupled gating of skeletal muscle ryanodine receptors is modulated by Ca²⁺, Mg²⁺ and ATP. *American Journal of Physiology Cell Physiology* 303: C682-C697.
- 37) Diaz-Sylvester PL, Porta M, Juettner VV, Lv Y, Fleischer S, **Copello JA**. 2014. Eudistomin D and Penaresin derivatives as modulators of ryanodine receptor channels and sarcoplasmic reticulum Ca²⁺ ATPase in striated muscle. *Molecular Pharmacology* 85: 564-575.
- 38) Darcy YL, Diaz-Sylvester PL, Copello JA. 2016. K201 (JTV519) is a Ca²⁺-Dependent Blocker of SERCA and a Partial Agonist of Ryanodine Receptors in Striated Muscle. *Molecular Pharmacology* 90: 106-115.
- 39) Darcy YL, Loulousis M, Copello CG, Diaz-Sylvester PL, Copello JA. The Ca²⁺ ATPase of sarcoplasmic reticulum: A potential target for benzothiazepines and other cell protective drugs. (*Molecular Pharmacology*, to be submitted, October 2018).
- 40) Diaz-Sylvester PL, Neumann JT, Porta M, Fleischer S, **Copello JA**. Modulation of coupled gating of cardiac ryanodine receptor in planar lipid bilayers. (*American Journal of Physiology*, to be submitted, December 2018).
- 41) Neumann JT, Diaz-Sylvester PL, **Copello JA**. Modulation of coupled gating of skeletal ryanodine receptors by ATP, FKBP12 and pharmacological agonists. (*American Journal of Physiology*, to be submitted, October 2018).

CHAPTERS in BOOKS:

- 1) Copello JA. "Drugs for Diabetes Mellitus" for Brody's Human Pharmacology: Mechanism-Based Therapeutics, (scheduled for publication by Elsevier in 2018).

ABSTRACTS OF RESEARCH WORK PRESENTED IN SCIENTIFIC MEETINGS:

- 1) Avila M, Müller A, Copello J, Villamil MF. 1984. "K transport and vascular ionic composition. I. Effects of bumetanide (B) and of anionic and cationic replacement." (In Spanish). *Abstracts of the XXIV Scientific Meeting of the Argentinean Society of Clinical Investigation*. (Mar del Plata, Argentina. November 14-18, 1984), p247.
- 2) Copello J, Müller A, Avila M, Villamil MF. 1984. "K transport and vascular ionic composition II. Ouabain sensitive component and its relationship with the bumetanide-sensitive component of K influx" (In Spanish). *XXIV Sci. Meeting Argentinean Society of Clinical Investigation*. (Mar del Plata, Argentina. November 1984), p248.
- 3) Villamil MF, Müller A, Avila M, Copello J. 1985. "Does bumetanide (B) block Ca entry into vascular smooth muscle." 6th *Sci. Meeting Inter-American Society of Hypertension* (Cleveland, Ohio. May 19-22, 1985), p46.
- 4) Copello J, Aquino S, Müller A, Villamil MF. 1985. "Bumetanide (B) inhibits Ca entry and content and the contractile response induced by potassium in vascular smooth muscle (MLV)." (In Spanish). *First Research Journeys of the Hospital de Clínicas José de San Martín* (Buenos Aires, Argentina, October 21-25, 1985), p182.
- 5) Copello J, Müller A, Aquino S, Villamil MF. 1985. "Effects of bumetanide (B) on Ca influx and contractility of vascular smooth muscle (MLV)." *Medicina (Buenos Aires)* 45: 326.
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- 53) Diaz-Sylvester PL, Porta M, Escobar AL, Copello JA. Voltage dependent modulation of ryanodine receptors (RyRs) by peptide probes. *Biophys J.* 90: 88A, 2007. 51st Meeting Biophys Soc. Baltimore, Feb, 2007.
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- 57) Johnson S, Copello JA. A biochemical characterization of the major peptides from the venom of the giant neotropical ant *Dinoponera australis*. Biophysical Society Meeting (54rd Annual Meeting, San Francisco, CA, February 20-24, 2010). *Biophysical Journal*, Volume 98, Issue 3, Supplement 1, January 2010, Page 108a.
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- 62) Vanessa Vullmahn, Maura Porta, Paula L. Diaz-Sylvester, Sidney Fleischer, Julio A. Copello. 2012. Modulation of Ryanodine Receptor Channels (RyRs) by Penaresin and Eudistomin Derivatives. Biophysical Journal 102(3) pp. 307a.
- 63) Diaz-Sylvester PL, Neumann JT, Porta M, Nani A, Escobar AL, Fill M, Fleischer S, Copello JA. 2012. Coupled Gating of Skeletal Ryanodine Receptor Channels - a Summary of Two Decades of Studies in Planar Lipid Bilayers. Biophysical Journal 102(3) pp. 307a.
- 64) Lv Y, Diaz-Sylvester PL, Copello JA. 2013. Benzodiazepines and Benzothiazepines as Modulators of the Sarcoplasmic Reticulum Calcium ATP-ase and Ryanodine Receptors in Striated Muscle. Biophysical Journal 104, p446a
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- 66) Diaz-Sylvester PL, Neumann JT, Fleischer S, Copello JA. 2014. Coupled Gating of Ryanodine Receptors: Evidence for a Role of Physical RyR-RyR Interactions. Biophysical Journal 106, Issue 2, p109a-110a.
- 67) Lv, Y, Copello JA. 2015. DHBP Block of Ryanodine Receptor Channels. Biophysical Journal, Vol. 108, Issue 2, p568a.
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- 69) Loulousis, M, Krager SL, Darcy YL, Tischkau SA, Copello JA. 2016. Drugs That Inhibit the Sarcoplasmic Reticulum Ca²⁺ ATPase (SERCA) and Prevention of Breast Cancer Cell Proliferation. The FASEB Journal 30 (1 Supplement) p768.4.
- 70) Copello JA, Darcy, YL, Diaz-Sylvester, PL, Loulousis M. 2016. The Sarcoplasmic Reticulum Calcium ATPase: A target for cardioprotective drugs. The FASEB Journal 30 (1 Supplement) p940.7.
- 71) Aguilar-Sanchez Y, DiFranco M, Darcy YL, Quiñones M, Escobar AL, Copello JA. 2017. DHPB reversibly inhibits calcium release from sarcoplasmic reticulum (SR) in skeletal muscle and heart. Biophysical Journal 112 (3) p598a.
72. Darcy YL, Loulousis M, Copello CG, Diaz-Sylverter PL, Copello JA. 2018. Pharmacological targeting of SERCA may have potential for cellular protection. Biophysical Journal Vol 114, Issue 3, Supplement 1, p467a, 2.

INVITED SCIENTIFIC TALKS IN SCIENTIFIC MEETINGS AND UNIVERSITIES:

1) Thesis dissertation: "Effects of bumetanide on the arterial wall." Sciences School. Universidad Nacional de La Plata, May 19, 1989.

2) Seminars on Ion channels in Necturus gallbladder epithelium:

- Department of Microbiology. University of Texas Medical Branch at Galveston. TX. February 24, 1993.
- Institute for Cardiovascular Research. Buenos Aires, Argentina. December 7, 1993;
- Dept Biological Chemistry. School of Pharmacy and Biochem. Univ. of Buenos Aires, Argentina. 12/10/93.

- Department of Physiology University of Maryland School of Medicine. March 3, 1994;
- Department of Physiology. University of Nevada School of Medicine. April 27, 1994.

3) Seminars on ryanodine receptors calcium release channels:

- Institute of Cardiovascular Research. University of Buenos Aires. Argentina. June 24, 1997;
- Dept Biological Chemistry. School of Pharmacy and Biochem. Univ. of Buenos Aires, Argentina. 07/27/97.
- Biophysical Group Seminar. Vanderbilt Univ. Nashville, TN. 12/04/1997.
- Department of Physiology. Loyola University Chicago, Maywood, IL. March 28, 2001.
- Cardiovascular Institute. Stritch School of Medicine. Loyola Univ. Chicago, Maywood, IL. 12/20/2001.
- Department of Pharmacology. University of Illinois at Chicago. April 9, 2002.
- Department of Physiology, Texas Tech University at Lubbock. March 7, 2003.
- Department of Biomedical Sciences, Florida Atlantic University at Boca Raton. March 27, 2003.
- Department of Physiology and Cell Biology, Ohio State University at Columbus, April 17, 2003
- Department of Physiol., Pharmacol. & Therapeutics, Univ. of North Dakota at Grand Forks, April 29, 2003.
- Institute for Cardiovascular Research. University of Buenos Aires. Argentina. October 8, 2003.
- Department of Pharmacology, Southern Illinois School of Medicine, Springfield, March 15, 2004.
- Dept Biological Chemistry. School of Pharmacy and Biochem. Univ. of Buenos Aires, Argentina. 07/08/04.
- Dept of Physiology, School of Science and Technology, Univ. of San Martin, Argentina. 07/14/04.
- Center for Studies in Health and the Environment, San Martin, Argentina, May 11, 2008.
- Dept of Physiology, School of Medicine, National University of La Plata, Argentina, May 14, 2008.
- Institute for Genetic Engineering and Molecular Biology, INGEBI, Buenos Aires, Argentina, May 16, 2008.
- Dept of Biological Chem., School of Pharmacy and Biochem. Univ. Buenos Aires, Argentina, May 23, 2008.
- Dept of Physiology, University of Montevideo School of Medicine, Uruguay, May 27, 2009.
- Dept of Pharmaceutical Sciences, School of Pharmacy, Southern Illinois University, Edwardsville, January 18, 2013.

4) Speaker in Meetings and Symposia:

- Biophysical Society Meeting, San Francisco, February 1998.
- Symposium: "New perspectives in intracellular calcium sensitive channels" Satellite to the XIV International Biophysical Congress. Universidad de Medicina de La República. Montevideo, Uruguay. April 26, 2002.
- Workshop: "Intracellular Ca signaling in heart". Satellite to the XIV International Biophysics Congress. Dept of Physiology, School of Science and Technology, Univ. of San Martin, Buenos Aires, Argentina. 05/02/02.
- Symposium: "Calcium signaling". Centro de Neurociencia de Valparaíso. Univ. Valparaíso. Chile. 05/04/02.
- Biophysical Society Meeting, San Antonio, TX. March 2nd, 2003.
- Gordon Research Conference on Muscle: Excitation-Contraction Coupling. New London, NH. June 10, 2003.
- Sangamon Chapter of Neurosciences Retreat, Findlay, IL. July 21, 2006.
- American Heart Association Scientific Sessions. Chicago, IL, November 11, 2006.
- Sangamon Chapter of Neurosciences Retreat, Pere Marquette, IL, September 13, 2008.
- Joint Meeting International Society for Heart Research & XXVII National Congress of the Argentinean Society of Cardiology. Buenos Aires – Argentina, May 23, 2009.

- Symposium: "Calcium signaling in the heart: from the molecule to the disease". School of Engineering & Division of Graduate Studies. University of California at Merced. February 25, 2010.
- 5th Congress on Innovation in Cardiology and Vascular medicine. Monterrey, Mexico, October 11-13, 2012.
- Biophysical Society Meeting, New Orleans, February 2017.