Stanford

Timothy Angelotti MD, PhD

NIH Biosketch available Online

Curriculum Vitae available Online

CLINICAL OFFICE (PRIMARY)

- **Anesthesia Department**

  300 Pasteur Dr Rm H3580

  MC 5640

  Stanford, CA 94305

  Tel (650) 498-7525 **Fax** (650) 725-8544

ACADEMIC CONTACT INFORMATION

- **Alternate Contact**

  Bernadette Carvalho

  Email berniec@stanford.edu

Bio

BIO

I specialize in the care of critically ill patients, whether that be during a Life Flight transport, the intensive care unit, or the operating room. My training and experiences have given me the opportunity to learn how to provide critical care services and high risk anesthesia services to a wide variety of adult patients.

CLINICAL FOCUS

- Critical Care
- Anesthesia

ACADEMIC APPOINTMENTS

- Clinical Associate Professor, Anesthesiology, Perioperative and Pain Medicine
- Member, Cardiovascular Institute

ADMINISTRATIVE APPOINTMENTS

- Medical Director - Critical Care Transport, Stanford Life Flight, (2000- present)

HONORS AND AWARDS

- Dean's Award for Research Excellence, University of Michigan (1994)
- Alexander von Humboldt Foundation Post-Doctoral Fellowship, Alexander von Humboldt Foundation (1995-1996)
- Best of Meeting Award (82nd Annual IARS Congress), IARS (2008)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Scientific Advisory Board, Spastic Paraplegia Foundation (2014 - present)

PROFESSIONAL EDUCATION

- Fellowship: Stanford University Anesthesiology Fellowships (2000) CA

- Residency: Duke University Medical Center Anesthesiology Residency (1999) NC
- Internship: St Joseph Mercy Ann Arbor Internal Medicine Residency (1995) MI
- Board Certification: Anesthesia, American Board of Anesthesiology (2000)
- Board Certification: Critical Care Medicine, American Board of Anesthesiology (2001)
- Medical Education: University of Michigan School of Medicine (1994) MI
- MD, University of Michigan (1994)
- PhD, University of Michigan , Pharmacology (1994)

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

The sympathetic nervous system (SNS) functions as an integrative peripheral nervous system to regulate vital organ function, in part by release of norepinephrine (NE). Disease states as varied as Parkinson's disease, spinal cord injury, diabetes, heart failure, and sepsis can all lead to dysfunction of the SNS and patient morbidity. Feedback modulation of NE release occurs by activation of alpha2A and alpha2C adrenergic receptors (ARs) on sympathetic neurons. Neuropharmacological differences between these two autoreceptors are not completely known, thus limiting development of specific drugs for disease treatment.

Modulation of sympathetic neuron signaling occurs by feedback inhibition of neurotransmitter release (autoreceptors), mediated in part via alpha2A and/or alpha2C adrenergic receptors. Previous research suggests that these two AR subtypes may have overlapping but unique physiological roles in neuronal signaling; however the basis for these differences is not completely known. Cellular localization is an important determinant of specialized function between homologous receptors. Preliminary data in cultured sympathetic ganglion neurons (SGN) and other cell types have found different temporal and spatial components to alpha2A&C AR localization and trafficking. These differences may relate to characteristics of SGN in culture (e.g. neurotransmitter phenotype) and thus may be important determinants of differential alpha2A&C AR modulation of neurotransmitter release. Using an array of molecular and cellular approaches and single cell amperometric analysis of neurotransmitter release, it should be possible to further delineate the interplay between protein structure, cellular localization, and physiological function of each receptor subtype. Resultant discoveries will be relevant to other similar neuromodulatory systems involved in pain and neural processing, including cannabinoid, opiate, and metabotropic glutamate receptors.

CLINICAL TRIALS

- Can Nitrous Oxide (Laughing Gas) be Used as a Sedative for GI Endoscopy Procedures?, Recruiting
- Assess Safety and Efficacy of ELAD (Extracorporeal Liver Assist System) in Subjects With Alcohol-Induced Liver Failure, Not Recruiting

Teaching

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Anesthesia (Fellowship Program)

Publications

PUBLICATIONS

- **AI-Enabled Autonomous UV-C Device Pathogen Reduction within Clinically Relevant Parameters.** *American journal of infection control*
  Barakat, M. T., Noshad, M., Angelotti, T.
  2026

- **Pathogen Reduction in an Endoscopy Unit Using AI-Enabled Autonomous UV-C Disinfection.** *American journal of infection control*

Barakat, M. T., Noshad, M., Angelotti, T.
2025

- **Beyond Duodenoscope-Transmitted Infections: Analysis of Surface Bioburden and UV-C Mitigation within a Tertiary Care Endoscopy Unit**
  Angelotti, T., Barakat, M., Banerjee, S.
  LIPPINCOTT WILLIAMS & WILKINS.2024: 589-590

- **Beyond Duodenoscope-Transmitted Infections: Analysis of Surface Bioburden and UV-C Mitigation within a Tertiary Care Endoscopy Unit.** *American journal of infection control*
  Barakat, M. T., Banerjee, S., Lee, L., Angelotti, T. P.
  2023

- **Prospective Randomized Comparison of Endoscopist-facilitated Endotracheal Intubation and Standard Intubation for ERCP.** *Gastrointestinal endoscopy*
  Barakat, M. T., Angelotti, T., Ghosh, S., Banerjee, S.
  2023

- **Exploring the eukaryotic Yip and REEP/Yop superfamily of membrane-shaping adapter proteins (MSAPs): A cacophony or harmony of structure and function?** *FRONTIERS IN MOLECULAR BIOSCIENCES*
  Angelotti, T.
  2022; 9: 912848

- **Evaluating the Utility of UV Lamps to Mitigate the Spread of Pathogens in the ICU** *APPLIED SCIENCES-BASEL*
  Gostine, A., Gostine, D., Short, J., Rustagi, A., Cadnum, J., Donskey, C., Angelotti, T.
  2020; 10 (18)

- **Use of an Ultra-slim Gastroscope to Accomplish Endoscopist-Facilitated Rescue Intubation During ERCP: A Novel Approach to Enhance Patient and Staff Safety.** *Digestive diseases and sciences*
  Barakat, M. T., Angelotti, T. P., Banerjee, S.
  2020

- **Expression and trafficking of functional G protein-coupled receptors are related, yet distinct, concepts.** *Naunyn-Schmiedeberg's archives of pharmacology*
  Hurt, C. M., Angelotti, T.
  2014; 387 (10): 1009-1012

- **Common a2A and a2C adrenergic receptor polymorphisms do not affect plasma membrane trafficking.** *Naunyn-Schmiedeberg's archives of pharmacology*
  Hurt, C. M., Sorensen, M. W., Angelotti, T.
  2014; 387 (6): 569-579

- **REEP1 and REEP2 proteins are preferentially expressed in neuronal and neuronal-like exocytotic tissues.** *Brain research*
  Hurt, C. M., Björk, S., Ho, V. K., Gilsbach, R., Hein, L., Angelotti, T.
  2014; 1545: 12-22

- **REEPs Are Membrane Shaping Adapter Proteins That Modulate Specific G Protein-Coupled Receptor Trafficking by Affecting ER Cargo Capacity** *PLOS ONE*
  Bjork, S., Hurt, C. M., Ho, V. K., Angelotti, T.
  2013; 8 (10)

- **Systematic and Quantitative Analysis of G Protein-Coupled Receptor Trafficking Motifs** *G PROTEIN COUPLED RECEPTORS: TRAFFICKING AND OLIGOMERIZATION*
  Hurt, C. M., Ho, V. K., Angelotti, T.
  2013; 521: 171-187

- **Regulation of G-Protein Coupled Receptor Traffic by an Evolutionary Conserved Hydrophobic Signal** *TRAFFIC*
  Angelotti, T., Daunt, D., Shcherbakova, O. G., Kobilka, B., Hurt, C. M.
  2010; 11 (4): 560-578

- **Pharmacology and mechanism of action of pregabalin: The calcium channel alpha(2)-delta (alpha(2)-delta) subunit as a target for antiepileptic drug discovery** *EPILEPSY RESEARCH*

Taylor, C. P., Angelotti, T., Fauman, E.
2007; 73 (2): 137-150

- **Anesthetic implications of a near-lethal sodium azide exposure** *ANESTHESIA AND ANALGESIA*
  Angelotti, T., Mireles, S., McMahon, D.
  2007; 104 (1): 229-230
- **Molecular insights into alpha2 adrenergic receptor function: Clinical implications** *Seminars in Anesthesia, Perioperative Medicine and Pain*
  Hurt CM, Angelotti T
  2007; 26 (1): 28-34
- **Differential targeting and function of alpha(2A) and alpha(2C) adrenergic receptor subtypes in cultured sympathetic neurons** *NEUROPHARMACOLOGY*
  Brum, P. C., Hurt, C. M., Shcherbakova, O. G., Kobilka, B., Angelotti, T.
  2006; 51 (3): 397-413
- **Verification of endotracheal tube placement by prehospital providers: is a portable fiberoptic bronchoscope of value?** *Air medical journal*
  Angelotti, T., Weiss, E. L., Lemmens, H. J., Brock-Utne, J.
  2006; 25 (2): 74-78
- **Endoscopy Unit Implementation of a Sealed In-Room Air Purifier with Ultraviolet Irradiation Reduces Bacterial and Airborne Particle Levels.** *Digestive diseases and sciences*
  Barakat, M. T., Lee, L. D., Conti, N., Angelotti, T.
  2025
- **Intraoperative fentanyl in endoscopic procedures and their impact on PACU time and costs.** *Perioperative medicine (London, England)*
  Akabane, M., Kukuruza, K., Angelotti, T., Banerjee, S., Ando, K.
  2025; 14 (1): 33
- **Endoscopist Facilitated Endotracheal Intubation for General Anesthesia Enhances Efficiency, Patient and Staff Safety During ERCP: A Prospective Randomized Study**
  Angelotti, T., Barakat, M., Banerjee, S.
  LIPPINCOTT WILLIAMS & WILKINS.2024: 10
- **Should All Post-Orthotopic Liver Transplant (OLT) ERCP Patients Be Intubated? Over 5-fold Higher Rate of Retained Gastric Food in Patients Undergoing ERCP after OLT Relative to Other Patient Populations**
  Angelotti, T., Barakat, M., Banerjee, S.
  LIPPINCOTT WILLIAMS & WILKINS.2024: 406
- **Intraoperative Opioids in Endoscopic Procedures and their Impact on PACU Time and Costs**
  Ando, K., Akabane, M., Kukuruza, K., Banerjee, S., Angelotti, T.
  LIPPINCOTT WILLIAMS & WILKINS.2024: 807-808
- **Magnesium and Esophageal Pain After Peroral Endoscopic Myotomy of the Esophagus: A Randomized, Double-Blind, Placebo-Controlled Trial.** *Anesthesia and analgesia*
  Kim, R. K., Kim, J. W., Angelotti, T., Esquivel, M., Tsui, B. C., Hwang, J. H.
  2024
- **Anesthetic Considerations for Patients with Locked-In Syndrome Undergoing Endoscopic Procedures.** *The American journal of case reports*
  Barakat, M. T., Banerjee, S., Angelotti, T.
  2024; 25: e942906
- **ASO Visual Abstract: Impact of BRCA Mutation Status on Tumor Dissemination Pattern, Surgical Outcome, and Patient Survival in Primary and Recurrent High-Grade Serous Ovarian Cancer (HGSOC). A Multicenter, Retrospective Study of the Ovarian Cancer Therapy-Innovative Models Prolong Survival (OCTIPS) Consortium.** *Annals of surgical oncology*
  Glajzer, J., Castillo-Tong, D. C., Richter, R., Vergote, I., Kulbe, H., Vanderstichele, A., Ruscito, I., Trillsch, F., Mustea, A., Kreuzinger, C., Gourley, C., Gabra, H., Taube, et al
  2022
- **Impact of BRCA Mutation Status on Tumor Dissemination Pattern, Surgical Outcome and Patient Survival in Primary and Recurrent High-Grade Serous Ovarian Cancer: A Multicenter Retrospective Study by the Ovarian Cancer Therapy-Innovative Models Prolong Survival (OCTIPS)Consortium.** *Annals of surgical oncology*

Glajzer, J., Castillo-Tong, D. C., Richter, R., Vergote, I., Kulbe, H., Vanderstichele, A., Ruscito, I., Trillsch, F., Mustea, A., Kreuzinger, C., Gourley, C., Gabra, H., Taube, et al
2022

- **Predictive biomarker for surgical outcome in patients with advanced primary high-grade serous ovarian cancer. Are we there yet? An analysis of the prospective biobank for ovarian cancer.** *Gynecologic oncology*
  Keunecke, C., Kulbe, H., Dreher, F., Taube, E. T., Chekerov, R., Horst, D., Hummel, M., Kessler, T., Pietzner, K., Kassuhn, W., Heitz, F., Muallem, M. Z., Lang, et al
  2022

- **Clevidipine-Induced Extreme Hypoxemia in a Neurosurgical Patient: A Case Report.** *A&A practice*
  Short, J. H., Fatemi, P., Ruoss, S., Angelotti, T.
  2019

- **A Subarachnoid Hemorrhage Presenting as Massive Nasopharyngeal Bleeding: A Case Report** *A & A PRACTICE*
  Zvara, J., Hafen, R. D., Angelotti, T.
  2018; 11 (1): 11–13

- **A Subarachnoid Hemorrhage Presenting as Massive Nasopharyngeal Bleeding: A Case Report.** *A&A practice*
  Zvara, J., Hafen, R. D., Angelotti, T.
  2018

- **A Gap, and Opportunity, in the ICU Admission, Discharge, and Triage Guidelines.** *Critical care medicine*
  Frakes, M. A., Wilcox, S. R., Bigham, M. T., Angelotti, T., Marcolini, E. G., Cohen, J.
  2017; 45 (3): e337-e338

- **ACUTE EMBOLIC STROKE DUE TO A RARE CAUSE: STREPTOCOCCUS CONSTELLATUS ENDOCARDITIS**
  Sharma, B., Angelotti, T.
  LIPPINCOTT WILLIAMS & WILKINS.2016

- **SUGAMMADEX-ASSOCIATED ANAPHYLAXIS**
  Tipimeni, N., Valdiconza, C., Vora, M., Angelotti, T.
  LIPPINCOTT WILLIAMS & WILKINS.2016

- **Editorial comment: esophageal perforation and pneumothorax after routine intraoperative orogastric tube placement.** *A & A case reports*
  Angelotti, T.
  2014; 2 (10): 125-?

- **Epitope-tagged Receptor Knock-in Mice Reveal That Differential Desensitization of alpha(2)-Adrenergic Responses Is because of Ligand-selective Internalization** *JOURNAL OF BIOLOGICAL CHEMISTRY*
  Lu, R., Li, Y., Zhang, Y., Chen, Y., Shields, A. D., Winder, D. G., Angelotti, T., Jiao, K., Limbird, L. E., Zhou, Y., Wang, Q.
  2009; 284 (19): 13233-13243

- **Evolutionarily Conserved Trafficking Signal within the Alpha2C Adrenergic Receptor Restricts Plasma Membrane Expression**
  Hurt, C., Daunt, D., Kobilka, B., Angelotti, T.
  WILEY-LISS.2008: S141

- **Sex-specific modulation of spinal nociception by alpha(2)-adrenoceptors: Differential regulation by estrogen and testosterone** *NEUROSCIENCE*
  Thompson, A. D., Angelotti, T., Nag, S., Mokha, S. S.
  2008; 153 (4): 1268-1277

- **Evolutionarily conserved trafficking signal within the alpha2c adrenergic receptor restricts plasma membrane expression**
  Angelotti, T., Daunt, D., Kobilka, B., Hurt, C.
  FEDERATION AMER SOC EXP BIOL.2008

- **Regulation of alpha 2C adrenergic receptor cell surface expression by its amino terminal domain.**
  Angelotti, T., Kobilka, B., Hurt, C.
  LIPPINCOTT WILLIAMS & WILKINS.2007: A32

- **New methods for direct verification of correct endotracheal tube placement** *ANESTHESIA AND ANALGESIA*

Angelotti, T., Brock-Utne, J.
2007; 105 (4): 1168-1168

- **Anesthesia for older patients with hypertrophic cardiomyopathy: is there cause for concern?** *JOURNAL OF CLINICAL ANESTHESIA*
  Angelotti, T., Fuller, A., Rivera, L., Schmiesing, C.
  2005; 17 (6): 478-481
- **Diagnosis of an unsuspected maternal hemorrhage via fetal heart rate tracing** *JOURNAL OF CLINICAL ANESTHESIA*
  Doyle, C., Angelotti, T.
  2004; 16 (6): 465-468
- **Differential targeting of chimeric alpha 2A and alpha 2C adrenergic receptors**
  Angelotti, T., Brum, P., Kobilka, B., Hurt, C.
  FEDERATION AMER SOC EXP BIOL.2004: A215
- **Right subclavian artery injury** *ANESTHESIA AND ANALGESIA*
  Angelotti, T., Amador, E. R.
  2003; 96 (4): 1237-1237
- **Nodular invasive tracheobronchitis due to Aspergillus in a patient with systemic lupus erythematosus** *LUPUS*
  Angelotti, T., Krishna, G., Scott, J., Berry, G., Weinacker, A.
  2002; 11 (5): 325-328
- **Physician researchers** *SCIENTIST*
  Angelotti, T.
  2000; 14 (10): 4
- **Activation of phosphatidylinositol 3-kinase is necessary for differentiation of FDC-P1 cells following stimulation of type III receptor tyrosine kinases** *CELL GROWTH & DIFFERENTIATION*
  Kubota, Y., Angelotti, T., Niederfellner, G., Herbst, R., Ullrich, A.
  1998; 9 (3): 247-256
- **The "VH1-like" dual-specificity protein tyrosine phosphatases** *MOLECULES AND CELLS*
  Martell, K. J., Angelotti, T., Ullrich, A.
  1998; 8 (1): 2-11
- **Tissue-specific expression of splice variants of the mouse voltage-gated calcium channel alpha 2/delta subunit**
  Angelotti, T., Hofmann, F.
  SPRINGER VERLAG.1998: R680
- **Tissue-specific expression of splice variants of the mouse voltage-gated calcium channel alpha 2/delta subunit** *FEBS LETTERS*
  Angelotti, T., Hofmann, F.
  1996; 397 (2-3): 331-337
- **Enhancement of recombinant alpha 1 beta 1 gamma 2L gamma-aminobutyric acid(A) receptor whole-cell currents by protein kinase C is mediated through phosphorylation of both beta 1 and gamma 2L subunits** *MOLECULAR PHARMACOLOGY*
  Lin, Y. F., ANGELOTTI, T. P., Dudek, E. M., Browning, M. D., Macdonald, R. L.
  1996; 50 (1): 185-195
- **Functional expression of recombinant GABAA receptor channels in L929 fibroblasts.** *Epilepsy research. Supplement*
  Macdonald, R. L., Saxena, N. C., ANGELOTTI, T. P.
  1996; 12: 177-185
- **THE TYPE-II ISOFORM OF CGMP-DEPENDENT PROTEIN-KINASE IS DIMERIC AND POSSESSES REGULATORY AND CATALYTIC PROPERTIES DISTINCT FROM THE TYPE-I ISOFORMS** *JOURNAL OF BIOLOGICAL CHEMISTRY*
  Gamm, D. M., Francis, S. H., ANGELOTTI, T. P., Corbin, J. D., Uhler, M. D.
  1995; 270 (45): 27380-27388
- **Fluorescent b-galactosidase staining of transfected cells prior to patch clamp recording.** *AxoBits*
  Angelotti, T., Macdonald RL
  1994; 15 (15): 6-8

- **ENHANCEMENT OF RECOMBINANT GAMMA-AMINOBUTYRIC-ACID TYPE-A RECEPTOR CURRENTS BY CHRONIC ACTIVATION OF CAMP-DEPENDENT PROTEIN-KINASE** *MOLECULAR PHARMACOLOGY*
  ANGELOTTI, T. P., Uhler, M. D., Macdonald, R. L.
  1993; 44 (6): 1202-1210

- **NATIVE AND RECOMBINANT GABA(A) RECEPTOR CHANNELS** *CELLULAR PHYSIOLOGY AND BIOCHEMISTRY*
  Macdonald, R. L., ANGELOTTI, T. P.
  1993; 3 (5-6): 352-373

- **ASSEMBLY OF GABA(A) RECEPTOR SUBUNITS - ANALYSIS OF TRANSIENT SINGLE-CELL EXPRESSION UTILIZING A FLUORESCENT SUBSTRATE MARKER GENE TECHNIQUE** *JOURNAL OF NEUROSCIENCE*
  ANGELOTTI, T. P., Uhler, M. D., Macdonald, R. L.
  1993; 13 (4): 1418-1428

- **ASSEMBLY OF GABA(A) RECEPTOR SUBUNITS - ALPHA-1-BETA-1-SUBUNIT AND ALPHA-1-BETA-1-GAMMA-2S-SUBUNIT PRODUCE UNIQUE ION CHANNELS WITH DISSIMILAR SINGLE-CHANNEL PROPERTIES** *JOURNAL OF NEUROSCIENCE*
  ANGELOTTI, T. P., Macdonald, R. L.
  1993; 13 (4): 1429-1440

- **MOLECULAR AND ELECTROPHYSIOLOGICAL CHARACTERIZATION OF A ALLELIC VARIANT OF THE RAT ALPHA-6 GABA-A RECEPTOR SUBUNIT** *MOLECULAR BRAIN RESEARCH*
  ANGELOTTI, T. P., Tan, F., Chahine, K. G., Macdonald, R. L.
  1992; 16 (1-2): 173-178

- **KINETIC-PROPERTIES OF ALPHA-1-BETA-1-GAMMA-AMINOBUTYRIC ACID(A) RECEPTOR CHANNELS EXPRESSED IN CHINESE-HAMSTER OVARY CELLS - REGULATION BY PENTOBARBITAL AND PICROTOXIN** *MOLECULAR PHARMACOLOGY*
  Porter, N. M., ANGELOTTI, T. P., Twyman, R. E., Macdonald, R. L.
  1992; 42 (5): 872-881

- **REGULATION OF GABA-A-RECEPTOR CHANNELS BY ANTICONVULSANT AND CONVULSANT DRUGS AND BY PHOSPHORYLATION** *WORKSHOP ON MOLECULAR NEUROBIOLOGY OF EPILEPSY*
  Macdonald, R. L., Twyman, R. E., RYANJASTROW, T., ANGELOTTI, T. P., Wilson, W. A., Fisher, R. S., Mody, I., Bowery, N. G., Ticku, M. K.
  ELSEVIER SCIENCE BV.1992: 265–277

- **BIOTINYLATED GRANULOCYTE MACROPHAGE COLONY-STIMULATING FACTOR ANALOGS - EFFECT OF LINKAGE CHEMISTRY ON ACTIVITY AND BINDING** *BIOCONJUGATE CHEMISTRY*
  ANGELOTTI, T. P., Clarke, M. F., Longino, M. A., Emerson, S. G.
  1991; 2 (6): 466-474

- **[1-C-13]ALDONO-1,4-LACTONES - CONFORMATIONAL STUDIES BASED ON H-1-H-1 C-13-H-1, AND C-13-C-13 SPIN COUPLINGS AND AB-INITIO MOLECULAR-ORBITAL CALCULATIONS** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
  ANGELOTTI, T., KRISKO, M., OCONNOR, T., SERIANNI, A. S.
  1987; 109 (15): 4464-4472

- **ALKYLSILSESQUIAZANES AND ARYLSILSESQUIAZANES - EFFECT OF THE R-GROUP ON POLYMER DEGRADATION AND CERAMIC CHAR COMPOSITION** *JOURNAL OF MATERIALS SCIENCE*
  BURNS, G. T., ANGELOTTI, T. P., HANNEMAN, L. F., CHANDRA, G., MOORE, J. A.
  1987; 22 (7): 2609-2614

- **[1-C-13]-ENRICHED ALDONO-1,4-LACTONES - INTERPRETATION OF H-1-H-1, C-13-H-1 AND C-13-C-13 COUPLINGS IN LACTONE RINGS**
  ANGELOTTI, T., KRISKO, M., OCONNOR, T., SERIANNI, A. S.
  AMER CHEMICAL SOC.1986: 15-CARB