

# Stanford

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## Ricardo Castillo

Associate Professor of Pediatrics (Gastroenterology) at the Lucile Salter Packard Children's Hospital, Emeritus

Pediatrics - Gastroenterology

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### Bio

#### ACADEMIC APPOINTMENTS

- Emeritus Faculty - University Medical Line, Pediatrics - Gastroenterology

#### ADMINISTRATIVE APPOINTMENTS

- ATTENDING PHYSICIAN, LIVER TRANSPLANTATION, PACKARD CHILDREN'S HOSPITAL, STANFORD UNIVERSITY, (1985- present)
- MEDICAL DIRECTOR, INTESTINAL TRANSPLANTATION, PACKARD CHILDREN'S HOSPITAL, STANFORD UNIVERSITY, (1999- present)
- DIRECTOR, PROGRAM IN INTESTINAL REHABILITATION, PACKARD CHILDREN'S HOSPITAL, STANFORD UNIVERSITY, (2005- present)

#### HONORS AND AWARDS

- WILLIAM M. HUME FACULTY SCHOLAR, STANFORD UNIVERSITY (1987)

#### PROFESSIONAL EDUCATION

- FELLOWSHIP, U.C. SAN FRANCISCO , GASTROENTEROLOGY (1982)
- RESIDENCY, STANFORD UNIVERSITY , PEDIATRICS (1978)
- INTERNSHIP, U.C. SAN FRANCISCO , PEDIATRICS (1976)
- M.D., U.C. SAN DIEGO , MEDICINE (1975)
- M.P.H., U.C. BERKELEY , NUTRITION (1974)
- B.S., STANFORD UNIVERSITY , BIOLOGY (1970)

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### Research & Scholarship

#### CURRENT RESEARCH AND SCHOLARLY INTERESTS

Study of the interaction and role of nutrients and intestinal growth factors in enhancing intestinal adaptation and allograft viability using animal models for short bowel syndrome and orthotopic intestinal transplantation.

Study of immunosuppression regimens and induction of immune tolerance in intestinal transplantation.

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### Publications

#### PUBLICATIONS

- **The challenges of closing an ileostomy in patients with total intestinal aganglionosis after small bowel transplant** *PEDIATRIC SURGERY INTERNATIONAL*  
Jazi, F., Sinclair, T. J., Thorson, C. M., Castillo, R., Bonham, A. C., Esquivel, C. O., Bruzoni, M.

2018; 34 (1): 113–16

- **Prenatal treatment of ornithine transcarbamylase deficiency.** *Molecular genetics and metabolism*  
Wilnai, Y. n., Blumenfeld, Y. J., Cusmano, K. n., Hintz, S. R., Alcorn, D. n., Benitz, W. E., Berquist, W. E., Bernstein, J. A., Castillo, R. O., Concepcion, W. n., Cowan, T. M., Cox, K. L., Lyell, et al  
2018
- **Adenovirus Hepatic Abscess: A Novel Source of Fever of Unknown Origin in a Pediatric Liver Transplant Recipient** *DIGESTIVE DISEASES AND SCIENCES*  
Haas, K., Longacre, T., Castillo, R. O.  
2017; 62 (4): 871-873
- **Mass cytometry reveals a distinct immunoprofile of operational tolerance in pediatric liver transplantation.** *Pediatric transplantation*  
Lau, A. H., Vitalone, M. J., Haas, K., Shawler, T., Esquivel, C. O., Berquist, W. E., Martinez, O. M., Castillo, R. O., Krams, S. M.  
2016
- **Donor-specific antibodies are associated with rejection after intestinal transplant in pediatric patients**  
Bonham, C., Thomas Pham, Lee, J., Castillo, R., Conlon, S., Concepcion, W., Esquivel, C.  
LIPPINCOTT WILLIAMS & WILKINS.2016: S257
- **Mass cytometry reveals NK cell and T cell subsets in pediatric liver transplant patients with acute rejection**  
Lau, A., Haas, K., Shawler, T., Esquivel, C. O., Martinez, O. M., Castillo, R. O., Krams, S. M.  
LIPPINCOTT WILLIAMS & WILKINS.2016: S134
- **Adenovirus Hepatic Abscess: A Novel Source of Fever of Unknown Origin in a Pediatric Liver Transplant Recipient.** *Digestive diseases and sciences*  
Haas, K., Longacre, T., Castillo, R. O.  
2016: -?
- **Donor Specific Antibodies Are Associated with Rejection After Small Bowel and Multi-Visceral Transplant in Children**  
Pham, T., Castillo, R. O., Concepcion, W., Esquivel, C., Bonham, A.  
LIPPINCOTT WILLIAMS & WILKINS.2015: S18
- **PRENATAL TREATMENT OF ORNITHINE TRANSCARBAMYLASE DEFICIENCY**  
Wilnai, Y., Alcorn, D., Benitz, W., Berquist, W., Bernstein, J., Blumenfeld, Y. J., Castillo, R., Concepcion, W., Cowan, T., Cox, K. L., Cusmano, K., Deirdre, L., Esquivel, et al  
ACADEMIC PRESS INC ELSEVIER SCIENCE.2014: 248
- **Successful treatment of recurrent primary sclerosing cholangitis after orthotopic liver transplantation with oral vancomycin.** *Case reports in transplantation*  
Davies, Y. K., Tsay, C. J., Caccamo, D. V., Cox, K. M., Castillo, R. O., Cox, K. L.  
2013; 2013: 314292-?
- **Toll-Like Receptor 4 Contributes to Small Intestine Allograft Rejection** *TRANSPLANTATION*  
Krams, S. M., Wang, M., Castillo, R. O., Ito, T., Phillips, L., Higgins, J., Kambham, N., Esquivel, C. O., Martinez, O. M.  
2010; 90 (12): 1272-1277
- **Analysis of clinical variables associated with tolerance in pediatric liver transplant recipients** *PEDIATRIC TRANSPLANTATION*  
Talisetti, A., Hurwitz, M., Sarwal, M., Berquist, W., Castillo, R., Bass, D., Concepcion, W., Esquivel, C. O., Cox, K.  
2010; 14 (8): 976-979
- **Acute Rejection of Small Intestine Allografts Is Associated With Increased Expression of Toll-like Receptors** *TRANSPLANTATION PROCEEDINGS*  
Castillo, R. O., Wang, M., Ito, T., Higgins, J., Esquivel, C. O., Krams, S. M., Martinez, O. M.  
2010; 42 (7): 2676-2678
- **Treatment of Recurrent Post-transplant Lymphoproliferative Disorder (PTLD) of the Central Nervous System (CNS) with High-dose Methotrexate (HD-MTX)** *11th International Symposium on Small Bowel Transplant*  
Twist, C. J., KJELSON, L., MCKENNEY, A., Bonham, C. A., Esquivel, C., Castillo, R. O.  
MEDIMOND S R L.2009: 116–121

- **T lymphocytes and Its Subsets in Transplanted Small Bowel Treated with Alemtuzumab (Campath-1H)** *11th International Symposium on Small Bowel Transplant*  
Fuentebella, J., Seki, S., Nadeau, K., Castillo, R. O.  
MEDIMOND S R L.2009: 42–47
- **Campath in pediatric intestinal transplantation** *11th International Symposium on Small Bowel Transplant*  
Merrill, M., Esquivel, C. O., Castillo, R. O.  
MEDIMOND S R L.2009: 20–23
- **Outcomes of transplantation in children with primary hepatic malignancy** *PEDIATRIC TRANSPLANTATION*  
Beaunoyer, M., Vanatta, J. M., Oiyihara, M., Strichartz, D., Dahl, G., Berquist, W. E., Castillo, R. O., Cox, K. L., Esquivel, C. O.  
2007; 11 (6): 655-660
- **Ileoscopic biopsies may be inadequate for rejection surveillance after isolated intestinal transplantation.**  
Talisetti, A. K., Berquist, W. E., Cox, K. L., Castillo, R. O.  
WILEY-BLACKWELL.2007: 97–97
- **Risk factors for small bowel bacterial overgrowth in cystic fibrosis** *JOURNAL OF PEDIATRIC GASTROENTEROLOGY AND NUTRITION*  
Fridge, J. L., Conrad, C., Gerson, L., Castillo, R. O., Cox, K.  
2007; 44 (2): 212-218
- **Pediatric intestinal transplantation at Packard children's hospital/Stanford University medical center: Report of a four-year experience** *9th International Symposium on Small Bowel Transplantation*  
Castillo, R. O., Zarge, R., Cox, K., Strichartz, D., Berquist, W., Bonham, C. A., Esquivel, C. O.  
ELSEVIER SCIENCE INC.2006: 1716–17
- **Management of Esophageal recessive dystrophic strictures in children with epidermolysis bullosa** *JOURNAL OF PEDIATRIC GASTROENTEROLOGY AND NUTRITION*  
Castillo, R. O., Davies, Y. K., Lin, Y. C., Garcia, M., Young, H.  
2002; 34 (5): 535-541
- **The role of growth hormone in adaptation to massive small intestinal resection in rats** *PEDIATRIC RESEARCH*  
Durant, M., Gargosky, S. E., Dahlstrom, K. A., Fang, R. X., Hellman, B. H., Castillo, R. O.  
2001; 49 (2): 189-196
- **Paediatric liver transplantation: Indications, timing and medical complications** *1st University-of-California-San-Francisco/Stanford Asia Liver Symposium*  
Cox, K. L., Berquist, W. E., Castillo, R. O.  
WILEY-BLACKWELL PUBLISHING, INC.1999: S61–S66
- **Long-term outcomes in pediatric liver recipients: comparison between cyclosporin A and tacrolimus.** *Pediatric transplantation*  
Cao, S., Cox, K. L., Berquist, W., Hayashi, M., Concepcion, W., Hammes, G. B., Ojogho, O. K., So, S. K., Frerker, M., Castillo, R. O., Monge, H., Esquivel, C. O.  
1999; 3 (1): 22-26
- **Liver transplantation at Stanford University Medical Center.** *Clinical transplants*  
Millan, M. T., Keefe, E. B., Berquist, W. E., Castillo, R. O., Cox, K. L., Garcia, G., Imperial, J. C., Monge, H., So, S. K., Esquivel, C. O.  
1998: 287-296
- **Regulation of postnatal intestinal maturation by growth hormone: Studies in rats with isolated growth hormone deficiency** *PEDIATRIC RESEARCH*  
Durant, M., Gargosky, S. E., Dahlstrom, K. A., Hellman, B. H., Castillo, R. O.  
1996; 40 (1): 88-93
- **REGULATION OF THE ONTOGENIC AND REGIONAL EXPRESSION OF INTESTINAL AMINOOLIGOPEPTIDASE** *JOURNAL OF PEDIATRIC GASTROENTEROLOGY AND NUTRITION*  
REISENAUER, A. M., Castillo, R. O.  
1994; 18 (1): 1-8
- **MATURATION OF JEJUNOILEAL GRADIENTS IN RAT INTESTINE - THE ROLE OF INTRALUMINAL NUTRIENTS** *BIOLOGY OF THE NEONATE*  
Castillo, R. O., Feng, J. J., Stevenson, D. K., Kwong, L. K.

1992; 62 (5): 351-362

- **ONTOGENY OF INTESTINAL LACTASE - POSTTRANSLATIONAL REGULATION BY THYROXINE** *AMERICAN JOURNAL OF PHYSIOLOGY*  
Liu, T., REISENAUER, A. M., Castillo, R. O.  
1992; 263 (4): G538-G543
- **ALTERATIONS IN POSTNATAL INTESTINAL FUNCTION DURING CHRONIC HYPOXEMIA** *PEDIATRIC RESEARCH*  
Bernstein, D., Bell, J. G., Kwong, L., Castillo, R. O.  
1992; 31 (3): 234-238
- **MECHANISM OF MATURATIONAL DECLINE OF RAT INTESTINAL LACTASE PHLORIZIN HYDROLASE** *BIOCHEMICAL JOURNAL*  
TSUBOI, K. K., Kwong, L. K., Sunshine, P., Castillo, R. O.  
1992; 282: 107-113
- **ONTOGENY OF MEMBRANE AND SOLUBLE AMINO-OLIGOPEPTIDASES IN RAT INTESTINE** *AMERICAN JOURNAL OF PHYSIOLOGY*  
REISENAUER, A. M., Lee, E. A., Castillo, R. O.  
1992; 262 (1): G178-G184
- **SYNTHESIS AND ACCUMULATION OF PROTEIN AND CARBOHYDRASES ALONG THE RAT VILLUS COLUMN** *JOURNAL OF PEDIATRIC GASTROENTEROLOGY AND NUTRITION*  
Castillo, R. O., Kwong, L. K., TSUBOI, K. K.  
1991; 13 (3): 235-241
- **PITUITARY REGULATION OF POSTNATAL SMALL INTESTINAL ONTOGENY IN THE RAT - DIFFERENTIAL REGULATION OF DIGESTIVE HYDROLASE MATURATION BY THYROXINE AND GROWTH-HORMONE** *ENDOCRINOLOGY*  
Castillo, R. O., Glasscock, G. F., NOREN, K. M., REISENAUER, A. M.  
1991; 129 (3): 1417-1423
- **ALTERED MATURATION OF SMALL INTESTINAL FUNCTION IN THE ABSENCE OF INTRALUMINAL NUTRIENTS - RAPID NORMALIZATION WITH REFEEDING** *AMERICAN JOURNAL OF CLINICAL NUTRITION*  
Castillo, R. O., Feng, J. J., Stevenson, D. K., Kwong, L. K.  
1991; 53 (2): 558-561
- **ETIOLOGY OF INTESTINAL DAMAGE IN GASTROSCHISIS .2. TIMING AND REVERSIBILITY OF HISTOLOGICAL-CHANGES, MUCOSAL FUNCTION, AND CONTRACTILITY** *21ST ANNUAL MEETING OF THE CANADIAN ASSOC OF PAEDIATRIC SURGEONS*  
Langer, J. C., Bell, J. G., Castillo, R. O., Crombleholme, T. M., Longaker, M. T., Duncan, B. W., Bradley, S. M., Finkbeiner, W. E., Verrier, E. D., Harrison, M. R.  
W B SAUNDERS CO.1990: 1122-26
- **INTESTINAL LACTASE IN THE NEONATAL RAT - MATURATIONAL CHANGES IN INTRACELLULAR PROCESSING AND BRUSH-BORDER DEGRADATION** *JOURNAL OF BIOLOGICAL CHEMISTRY*  
Castillo, R. O., REISENAUER, A. M., Kwong, L. K., TSUBOI, K. K., Quan, R., Gray, G. M.  
1990; 265 (26): 15889-15893
- **HEPATIC COPPER-METABOLISM IN A MOUSE MODEL FOR MENKES KINKY HAIR SYNDROME** *PEDIATRIC RESEARCH*  
Castillo, R. O., Thaler, M. M., OTOOLE, C., Packman, S.  
1990; 27 (5): 492-496
- **AN EVALUATION OF FOOD GROUP INTAKES BY MEXICAN-AMERICAN CHILDREN** *JOURNAL OF THE AMERICAN DIETETIC ASSOCIATION*  
Murphy, S. P., Castillo, R. O., Martorell, R., Mendoza, F. S.  
1990; 90 (3): 388-393
- **REGULATION OF INTESTINAL ONTOGENY BY INTRALUMINAL NUTRIENTS** *JOURNAL OF PEDIATRIC GASTROENTEROLOGY AND NUTRITION*  
Castillo, R. O., Feng, J. J., Stevenson, D. K., Kerner, J. A., Kwong, L. K.  
1990; 10 (2): 199-205
- **PITUITARY REGULATION OF DIGESTIVE ENZYME MATURATION AND STRUCTURE IN THE NEONATAL RAT**  
NOREN, K. M., REISENAUER, A. M., Glasscock, G. F., Castillo, R. O.  
SLACK INC.1990: A173-A173

- **PITUITARY REGULATION OF DEVELOPMENT OF JEJUNOILEAL DIFFERENCES IN MATURING RAT INTESTINE**  
Castillo, R. O., NOREN, K. M., Glasscock, G. F., REISENAUER, A. M.  
SLACK INC.1990: A172–A172
- **HUMAN INTESTINAL LACTASE-PHLORIZIN HYDROLASE - ISOLATION AND PREPARATION OF A SPECIFIC ANTISERUM** *BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS*  
Castillo, R. O., Kwong, L. K., REISENAUER, A. M., TSUBOI, K. K.  
1989; 164 (1): 94-101
- **DIETARY CHO AND STIMULATION OF CARBOHYDRASES ALONG VILLUS COLUMN OF FASTED RAT JEJUNUM** *AMERICAN JOURNAL OF PHYSIOLOGY*  
Morrill, J. S., Kwong, L. K., Sunshine, P., Briggs, G. M., Castillo, R. O., TSUBOI, K. K.  
1989; 256 (1): G158-G165
- **RELATIONSHIP BETWEEN BREATH AND TOTAL-BODY HYDROGEN EXCRETION RATES IN NEONATES** *JOURNAL OF PEDIATRIC GASTROENTEROLOGY AND NUTRITION*  
Modler, S., Kerner, J. A., Castillo, R. O., Vreman, H. J., Stevenson, D. K.  
1988; 7 (4): 554-558
- **MATURATIONAL PATTERNS OF CARBOHYDRASES IN THE ILEAL REMNANT OF RATS AFTER JEJUNECTOMY AT INFANCY** *AMERICAN JOURNAL OF CLINICAL NUTRITION*  
Hartman, G. E., Castillo, R. O., Kwong, L. K., Sunshine, P., TSUBOI, K. K.  
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- **BODY PROPORTIONS IN 3 ETHNIC-GROUPS - CHILDREN AND YOUTHS 2-17 YEARS IN NHANES-II AND HHANES** *HUMAN BIOLOGY*  
Martorell, R., Malina, R. M., Castillo, R. O., Mendoza, F. S., Pawson, I. G.  
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- **RELATIONSHIP BETWEEN BREATH AND TOTAL HYDROGEN EXCRETION RATES IN NEONATES**  
Modler, S., Kerner, J. A., Castillo, R. O., Vreman, H. J., Stevenson, D. K.  
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- **GROWTH ABNORMALITIES IN MEXICAN-AMERICAN CHILDREN IN THE UNITED-STATES - THE NATIONAL-HEALTH AND NUTRITION EXAMINATION SURVEY I-STUDY** *NUTRITION RESEARCH*  
Mendoza, F. S., Castillo, R. O.  
1986; 6 (11): 1247-1257
- **ORAL CORRECTION OF ESSENTIAL FATTY-ACID DEFICIENCY IN CYSTIC-FIBROSIS** *JOURNAL OF PARENTERAL AND ENTERAL NUTRITION*  
Landon, C., Kerner, J. A., Castillo, R., Adams, L., Whalen, R., LEWISTON, N. J.  
1981; 5 (6): 501-504