

## Channing Robertson

The Ruth G. and William K. Bowes Professor in the School of Engineering,  
Emeritus  
Chemical Engineering

### Bio

---

#### ACADEMIC APPOINTMENTS

- Emeritus Faculty, Acad Council, Chemical Engineering
- Member, Bio-X

### Teaching

---

#### COURSES

##### 2025-26

- Busting Energy Myths: ENERGY 30N (Aut)

##### 2024-25

- Busting Energy Myths: ENERGY 30N (Aut)

##### 2023-24

- Busting Energy Myths: ENERGY 30N (Aut)

##### 2022-23

- Busting Energy Myths: ENERGY 30N (Win)

### Publications

---

#### PUBLICATIONS

- **Interfacial Biocatalysis on Charged and Immobilized Substrates: The Roles of Enzyme and Substrate Surface Charge** *LANGMUIR*  
Feller, B. E., Kellis, J. T., Cascao-Pereira, L. G., Robertson, C. R., Frank, C. W.  
2011; 27 (1): 250-263
- **The Role of Electrostatic Interactions in Protease Surface Diffusion and the Consequence for Interfacial Biocatalysis** *LANGMUIR*  
Feller, B. E., Kellis, J. T., Cascao-Pereira, L. G., Robertson, C. R., Frank, C. W.  
2010; 26 (24): 18916-18925
- **Open Doorway to Truth: Legacy of the Minnesota Tobacco Trial** *MAYO CLINIC PROCEEDINGS*  
Hurt, R. D., Ebbert, J. O., Muggli, M. E., Lockhart, N. J., Robertson, C. R.  
2009; 84 (5): 446-456
- **Enzymatic Proteolysis of a Surface-Bound alpha-Helical Polypeptide** *LANGMUIR*  
Hardesty, J. O., Cascao-Pereira, L., Kellis, J. T., Robertson, C. R., Frank, C. W.  
2008; 24 (24): 13944-13956
- **Fluorescence Quantification for Surface Plasmon Excitation** *LANGMUIR*  
Feller, B. E., Kellis, J. T., Cascao-Pereira, L. G., Knoll, W., Robertson, C. R., Frank, C. W.

2008; 24 (21): 12303-12311

- **Waking a sleeping giant: The tobacco industry's response to the polonium-210 issue** *AMERICAN JOURNAL OF PUBLIC HEALTH*  
Muggli, M. E., Ebbert, J. O., Robertson, C., Hurt, R. D.  
2008; 98 (9): 1643-1650
- **Downloadable computer models for renal replacement therapy** *KIDNEY INTERNATIONAL*  
Walther, J. L., Bartlett, D. W., Chew, W., Robertson, C. R., Hostetter, T. H., Meyer, T. W.  
2006; 69 (6): 1056-1063
- **Simultaneous observation of enzyme surface diffusion and surface reaction using microfluidic patterning of substrate surfaces** *ANALYTICAL CHEMISTRY*  
Roy, S., Thomas, J. M., Holmes, E. A., KELLIS, J. T., Poulouse, A. J., Robertson, C. R., Gast, A. P.  
2005; 77 (24): 8146-8150
- **The clearance of protein-bound solutes by hemofiltration and hemodiafiltration** *KIDNEY INTERNATIONAL*  
Meyer, T. W., Walther, J. L., Pagtalunan, M. E., Martinez, A. W., Torkamani, A., Fong, P. D., Recht, N. S., Robertson, C. R., Hostetter, T. H.  
2005; 68 (2): 867-877
- **Helical crystallization on lipid nanotubes: Streptavidin as a model protein** *JOURNAL OF STRUCTURAL BIOLOGY*  
Dang, T. X., Farah, S. J., Gast, A., Robertson, C., Carragher, B., Egelman, E., Wilson-Kubalek, E. M.  
2005; 150 (1): 90-99
- **Increasing dialysate flow and dialyzer mass transfer area coefficient to increase the clearance of protein-bound solutes** *JOURNAL OF THE AMERICAN SOCIETY OF NEPHROLOGY*  
Meyer, T. W., Leeper, E. C., Bartlett, D. W., Depner, T. A., Lit, Y. Z., Robertson, C. R., Hostetter, T. H.  
2004; 15 (7): 1927-1935
- **Surface plasmon resonance/surface plasmon enhanced fluorescence: An optical technique for the detection of multicomponent macromolecular adsorption at the solid/liquid interface** *LANGMUIR*  
Roy, S., Kim, J. H., KELLIS, J. T., Poulouse, A. J., Robertson, C. R., Gast, A. P.  
2002; 18 (16): 6319-6323
- **Protease adsorption and reaction on an immobilized substrate surface** *LANGMUIR*  
Kim, J. H., Roy, S., KELLIS, J. T., Poulouse, A. J., Gast, A. P., Robertson, C. R.  
2002; 18 (16): 6312-6318
- **Surface shear rheology of a polymerizable lipopolymer monolayer** *LANGMUIR*  
Brooks, C. F., Thiele, J., Frank, C. W., O'Brien, D. F., Knoll, W., Fuller, G. G., Robertson, C. R.  
2002; 18 (6): 2166-2173
- **Point mutagenesis and cocrystallization of wild-type and mutant proteins: A study of solid-phase coexistence in two-dimensional protein arrays** *LANGMUIR*  
Farah, S. J., Wang, S. W., Chang, W. H., Robertson, C. R., Gast, A. P.  
2001; 17 (19): 5731-5735
- **Role of N- and C-terminal amino acids in two-dimensional streptavidin crystal formation** *LANGMUIR*  
Wang, S. W., Robertson, C., Gast, A., Koppenol, S., Edwards, T., Vogel, V., Stayton, P.  
2000; 16 (11): 5199-5204
- **Protease activity on an immobilized substrate modified by polymers: Subtilisin BPN ' LANGMUIR**  
Esker, A. R., Brode, P. F., Rubingh, D. N., Rauch, D. S., Yu, H., Gast, A. P., Robertson, C. R., Trigiante, G.  
2000; 16 (5): 2198-2206
- **Two-dimensional streptavidin crystals: macropatterns and micro-organization** *BIOMOLECULAR ENGINEERING*  
Gast, A. P., Robertson, C. R., Wang, S. W., Yaticilla, M. T.  
1999; 16 (1-4): 21-27
- **Two-dimensional crystallization of streptavidin mutants** *JOURNAL OF PHYSICAL CHEMISTRY B*  
Wang, S. W., Robertson, C. R., Gast, A. P.  
1999; 103 (37): 7751-7761

- **Pseudo first-order cleavage of an immobilized substrate by an enzyme undergoing two-dimensional surface diffusion** *JOURNAL OF COLLOID AND INTERFACE SCIENCE*  
Trigiante, G., Gast, A. P., Robertson, C. R.  
1999; 213 (1): 81-86
- **Pseudo First-Order Cleavage of an Immobilized Substrate by an Enzyme Undergoing Two-Dimensional Surface Diffusion.** *Journal of colloid and interface science*  
Trigiante, G., Gast, A. P., Robertson, C. R.  
1999; 213 (1): 81-86
- **An interfacial stress rheometer to study rheological transitions in monolayers at the air-water interface** *LANGMUIR*  
Brooks, C. F., Fuller, G. G., Frank, C. W., Robertson, C. R.  
1999; 15 (7): 2450-2459
- **Molecular arrangement in two-dimensional streptavidin crystals** *LANGMUIR*  
Wang, S. W., Robertson, C. R., Gast, A. P.  
1999; 15 (4): 1541-1548
- **Prying open the door to the tobacco industry's secrets about nicotine - The Minnesota Tobacco Trial** *JAMA-JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION*  
Hurt, R. D., Robertson, C. R.  
1998; 280 (13): 1173-1181
- **Orientation in a fatty acid monolayer: Effect of flow type** *LANGMUIR*  
Maruyama, T., Lauger, J., Fuller, G. G., Frank, C. W., Robertson, C. R.  
1998; 14 (7): 1836-1845
- **Influence of pH on two-dimensional streptavidin crystals** *LANGMUIR*  
Yatcilla, M. T., Robertson, C. R., Gast, A. P.  
1998; 14 (2): 497-503
- **Flow-induced deformation and relaxation processes of polydomain structures in Langmuir monolayer** *Symposium on Organic Thin Films held at the 213th National Meeting of the American-Chemical-Society*  
Yim, K. S., Brooks, C. F., Fuller, G. G., Frank, C. W., Robertson, C. R.  
AMER CHEMICAL SOC.1998: 43-56
- **Deformation and relaxation processes of mono- and bilayer domains of liquid crystalline Langmuir films on water** *LANGMUIR*  
Lauger, J., Robertson, C. R., Frank, C. W., Fuller, G. G.  
1996; 12 (23): 5630-5635
- **Flow-induced molecular orientation of a Langmuir film** *SCIENCE*  
Maruyama, T., Fuller, G., Frank, C., Robertson, C.  
1996; 274 (5285): 233-235
- **Direct visualization of flow-induced anisotropy in a fatty acid monolayer** *LANGMUIR*  
FRIEDENBERG, M. C., Fuller, G. G., Frank, C. W., Robertson, C. R.  
1996; 12 (6): 1594-1599
- **In-situ studies of flow-induced phenomena in Langmuir monolayers** *International Symposium on Ultra Materials for Picotransfer*  
Maruyama, T., Friedenber, M., Fuller, G. G., Frank, C. W., Robertson, C. R., Ferencz, A., Wegner, G.  
ELSEVIER SCIENCE SA.1996: 76-83
- **In situ optical studies of flow-induced orientation in a two-dimensional polymer solution** *MACROMOLECULES*  
FRIEDENBERG, M. C., Fuller, G. G., Frank, C. W., Robertson, C. R.  
1996; 29 (2): 705-712
- **ENZYMES ON IMMOBILIZED SUBSTRATE SURFACES - REACTION** *JOURNAL OF COLLOID AND INTERFACE SCIENCE*  
GASPERS, P. B., Gast, A. P., Robertson, C. R.  
1995; 172 (2): 518-529

- **ABSORPTION-SPECTRA INDICATE CONFORMATIONAL ALTERATION OF MYOGLOBIN ADSORBED ON POLYDIMETHYLSILOXANE** *BIOPHYSICAL JOURNAL*  
Anderson, A. B., Robertson, C. R.  
1995; 68 (5): 2091-2097
- **ENZYMES ON IMMOBILIZED SUBSTRATE SURFACES - DIFFUSION** *LANGMUIR*  
GASPERS, P. B., Robertson, C. R., Gast, A. P.  
1994; 10 (8): 2699-2704
- **FORMATION OF BILAYER DISKS AND 2-DIMENSIONAL FOAMS ON A COLLAPSING EXPANDING LIQUID-CRYSTAL MONOLAYER** *LANGMUIR*  
FRIEDENBERG, M. C., Fuller, G. G., Frank, C. W., Robertson, C. R.  
1994; 10 (4): 1251-1256
- **MOLECULAR ANALYSIS OF 2-DIMENSIONAL PROTEIN CRYSTALLIZATION** *JOURNAL OF PHYSICAL CHEMISTRY*  
Ku, A. C., Darst, S. A., Robertson, C. R., Gast, A. P., Kornberg, R. D.  
1993; 97 (12): 3013-3016
- **USE OF GLUCOSE STARVATION TO LIMIT GROWTH AND INDUCE PROTEIN-PRODUCTION IN ESCHERICHIA-COLI** *BIOTECHNOLOGY AND BIOENGINEERING*  
TUNNER, J. R., Robertson, C. R., Schippa, S., Matin, A.  
1992; 40 (2): 271-279
- **PHYSIOLOGICAL AND GENETIC STRATEGIES FOR ENHANCED SUBTILISIN PRODUCTION BY BACILLUS-SUBTILIS** *BIOTECHNOLOGY PROGRESS*  
Pierce, J. A., Robertson, C. R., Leighton, T. J.  
1992; 8 (3): 211-218
- **MANIPULATION OF HYDROPHOBIC INTERACTIONS IN PROTEIN ADSORPTION** *LANGMUIR*  
Tilton, R. D., Robertson, C. R., Gast, A. P.  
1991; 7 (11): 2710-2718
- **PERFORMANCE OF THE POLYPROPYLENE FIBER TAILSTRING ON THE COPPER-7 INTRAUTERINE-DEVICE** *JOURNAL OF APPLIED BIOMATERIALS*  
Warner, M. S., MATSUNO, S. J., VIRGIN, C. J., MASTERSON, K. B., Schneider, G. A., Wright, T. E., Robertson, C. R., FIVESTAYLOR, P.  
1991; 2 (2): 73-94
- **CHARACTERIZATION OF IMMOBILIZED CELL-GROWTH RATES USING AUTORADIOGRAPHY** *BIOTECHNOLOGY AND BIOENGINEERING*  
Stewart, P. S., KAREL, S. F., Robertson, C. R.  
1991; 37 (9): 824-833
- **HYDRAULIC PERMEABILITY OF IMMOBILIZED BACTERIAL-CELL AGGREGATES** *APPLIED AND ENVIRONMENTAL MICROBIOLOGY*  
FOWLER, J. D., Robertson, C. R.  
1991; 57 (1): 102-113
- **METABOLIC BEHAVIOR OF IMMOBILIZED AGGREGATES OF ESCHERICHIA-COLI UNDER CONDITIONS OF VARYING MECHANICAL-STRESS** *APPLIED AND ENVIRONMENTAL MICROBIOLOGY*  
FOWLER, J. D., Robertson, C. R.  
1991; 57 (1): 93-101
- **DIFFUSIONAL LIMITATIONS OF IMMOBILIZED ESCHERICHIA-COLI IN HOLLOW-FIBER REACTORS - INFLUENCE ON P-31 NMR-SPECTROSCOPY** *BIOTECHNOLOGY AND BIOENGINEERING*  
BRIASCO, C. A., KAREL, S. F., Robertson, C. R.  
1990; 36 (9): 887-901
- **A HOLLOW-FIBER REACTOR DESIGN FOR NMR-STUDIES OF MICROBIAL-CELLS** *BIOTECHNOLOGY AND BIOENGINEERING*  
BRIASCO, C. A., Ross, D. A., Robertson, C. R.  
1990; 36 (9): 879-886
- **RENAL MEDULLARY MICROCIRCULATION** *PHYSIOLOGICAL REVIEWS*  
Pallone, T. L., Robertson, C. R., Jamison, R. L.

1990; 70 (3): 885-920

- **LATERAL DIFFUSION OF BOVINE SERUM-ALBUMIN ADSORBED AT THE SOLID LIQUID INTERFACE** *JOURNAL OF COLLOID AND INTERFACE SCIENCE*  
Tilton, R. D., Robertson, C. R., Gast, A. P.  
1990; 137 (1): 192-203
- **NUTRIENT TRANSPORT AND CELLULAR MORPHOLOGY IN IMMOBILIZED CELL AGGREGATES** *6TH CONF ON BIOCHEMICAL ENGINEERING*  
FOWLER, J. D., Robertson, C. R.  
NEW YORK ACAD SCIENCES.1990: 333-349
- **AUTORADIOGRAPHIC DETERMINATION OF MASS-TRANSFER LIMITATIONS IN IMMOBILIZED CELL REACTORS** *BIOTECHNOLOGY AND BIOENGINEERING*  
KAREL, S. F., Robertson, C. R.  
1989; 34 (3): 320-336
- **CELL MASS SYNTHESIS AND DEGRADATION BY IMMOBILIZED ESCHERICHIA-COLI** *BIOTECHNOLOGY AND BIOENGINEERING*  
KAREL, S. F., Robertson, C. R.  
1989; 34 (3): 337-356
- **MICROBIAL-GROWTH IN A FIXED VOLUME - STUDIES WITH ENTRAPPED ESCHERICHIA-COLI** *APPLIED MICROBIOLOGY AND BIOTECHNOLOGY*  
Stewart, P. S., Robertson, C. R.  
1989; 30 (1): 34-40
- **EFFECTS OF INTRARENAL ADENOSINE ON RENAL-FUNCTION AND MEDULLARY BLOOD-FLOW IN THE RAT** *AMERICAN JOURNAL OF PHYSIOLOGY*  
Miyamoto, M., Yagil, Y., Larson, T., Robertson, C., Jamison, R. L.  
1988; 255 (6): F1230-F1234
- **PRODUCT INHIBITION OF IMMOBILIZED ESCHERICHIA-COLI ARISING FROM MASS-TRANSFER LIMITATION** *APPLIED AND ENVIRONMENTAL MICROBIOLOGY*  
Stewart, P. S., Robertson, C. R.  
1988; 54 (10): 2464-2471
- **THE EFFECTIVE DIFFUSIVE PERMEABILITY OF A NONREACTING SOLUTE IN MICROBIAL CELL AGGREGATES** *BIOTECHNOLOGY AND BIOENGINEERING*  
LIBICKI, S. B., Salmon, P. M., Robertson, C. R.  
1988; 32 (1): 68-85
- **ADSORPTION OF THE PROTEIN ANTIGEN MYOGLOBIN AFFECTS THE BINDING OF CONFORMATION-SPECIFIC MONOCLONAL-ANTIBODIES** *BIOPHYSICAL JOURNAL*  
Darst, S. A., Robertson, C. R., Berzofsky, J. A.  
1988; 53 (4): 533-539
- **A THEORETICAL INVESTIGATION OF CONVECTIVE-TRANSPORT IN THE HOLLOW-FIBER REACTOR** *CHEMICAL ENGINEERING COMMUNICATIONS*  
Salmon, P. M., LIBICKI, S. B., Robertson, C. R.  
1988; 66: 221-248
- **THE BEHAVIOR OF IMMOBILIZED LIVING CELLS - CHARACTERIZATION USING ISOTOPIC TRACERS** *ANNALS OF THE NEW YORK ACADEMY OF SCIENCES*  
KAREL, S. F., BRIASCO, C. A., Robertson, C. R.  
1987; 506: 84-105
- **EFFECT OF V2-RECEPTOR-MEDIATED CHANGES ON INNER MEDULLARY BLOOD-FLOW INDUCED BY AVP** *AMERICAN JOURNAL OF PHYSIOLOGY*  
Kiberd, B., Robertson, C. R., Larson, T., Jamison, R. L.  
1987; 253 (3): F576-F581

- **REACTION-RATE CALCULATIONS FOR COSUBSTRATES DIFFUSING INTO CATALYST LAYER FROM OPPOSITE SIDES** *BIOTECHNOLOGY AND BIOENGINEERING*  
KAREL, S. F., Robertson, C. R.  
1987; 30 (3): 427-438
- **BOVINE SERUM-ALBUMIN ADSORPTION AND DESORPTION RATES ON SOLID-SURFACES WITH VARYING SURFACE-PROPERTIES** *JOURNAL OF COLLOID AND INTERFACE SCIENCE*  
Cheng, Y. L., Darst, S. A., Robertson, C. R.  
1987; 118 (1): 212-223
- **EFFECT OF ATRIAL-NATRIURETIC-PEPTIDE ON VASA RECTA BLOOD-FLOW IN THE RAT** *AMERICAN JOURNAL OF PHYSIOLOGY*  
Kiberd, B. A., Larson, T. S., Robertson, C. R., Jamison, R. L.  
1987; 252 (6): F1112-F1117
- **A THEORETICAL-ANALYSIS OF A HOLLOW-FIBER REACTOR WITH 2 SUBSTRATES** *CHEMICAL ENGINEERING JOURNAL AND THE BIOCHEMICAL ENGINEERING JOURNAL*  
Salmon, P. M., Robertson, C. R.  
1987; 35 (1): B1-B8
- **MASS-TRANSFER LIMITATIONS IN GEL BEADS CONTAINING GROWING IMMOBILIZED CELLS** *JOURNAL OF THEORETICAL BIOLOGY*  
Salmon, P. M., Robertson, C. R.  
1987; 125 (3): 325-332
- **THE MEDULLARY MICROCIRCULATION** *KIDNEY INTERNATIONAL*  
ZIMMERHACKL, B. L., Robertson, C. R., Jamison, R. L.  
1987; 31 (2): 641-647
- **MODELS OF THE MEDULLARY MICROCIRCULATION** *KIDNEY INTERNATIONAL*  
MCNEELY, E. A., Pallone, T. L., Deen, W. M., Robertson, C. R.  
1987; 31 (2): 662-667
- **PROTEIN ADSORPTION AT POLYMER SURFACES - A STUDY USING TOTAL INTERNAL-REFLECTION FLUORESCENCE** *ACS SYMPOSIUM SERIES*  
Anderson, A. B., Darst, S. A., Robertson, C. R.  
1987; 343: 306-323
- **MYOGLOBIN ADSORPTION ONTO CROSS-LINKED POLYDIMETHYLSILOXANE** *JOURNAL OF COLLOID AND INTERFACE SCIENCE*  
Darst, S. A., Robertson, C. R., Berzofsky, J. A.  
1986; 111 (2): 466-474
- **MEASUREMENT OF INERT-GAS PERMEABILITIES IN COMPACT BACTERIAL-CELL AGGREGATES USING AN ANNULAR REACTOR** *ANNALS OF THE NEW YORK ACADEMY OF SCIENCES*  
LIBICKI, S. B., Salmon, P. M., Robertson, C. R.  
1986; 469: 145-151
- **THE IMMOBILIZATION OF WHOLE CELLS - ENGINEERING PRINCIPLES** *CHEMICAL ENGINEERING SCIENCE*  
KAREL, S. F., LIBICKI, S. B., Robertson, C. R.  
1985; 40 (8): 1321-1354
- **THE MICROCIRCULATION OF THE RENAL MEDULLA** *CIRCULATION RESEARCH*  
Zimmerhackl, B., Robertson, C. R., Jamison, R. L.  
1985; 57 (5): 657-667
- **VIDEOMICROSCOPIC METHOD FOR DIRECT DETERMINATION OF BLOOD-FLOW TO THE PAPILLA OF THE KIDNEY** *ANNALS OF BIOMEDICAL ENGINEERING*  
Jamison, R. L., Zimmerhackl, B., Robertson, C. R.  
1985; 13 (3-4): 273-280
- **USE OF DIGITAL CROSS-CORRELATION FOR ONLINE DETERMINATION OF SINGLE-VESSEL BLOOD-FLOW IN THE MAMMALIAN KIDNEY** *MICROVASCULAR RESEARCH*  
Zimmerhackl, B., TINSMAN, J., Jamison, R. L., Robertson, C. R.

1985; 30 (1): 63-74

- **DUAL AEROBIC HOLLOW-FIBER BIOREACTOR FOR CULTIVATION OF STREPTOMYCES-AUREOFACIENS** *BIOTECHNOLOGY AND BIOENGINEERING*  
Robertson, C. R., Kim, I. H.  
1985; 27 (7): 1012-1020
- **ETHANOL-PRODUCTION BY NITROGEN-DEFICIENT YEAST-CELLS IMMOBILIZED IN A HOLLOW-FIBER MEMBRANE BIOREACTOR** *APPLIED MICROBIOLOGY AND BIOTECHNOLOGY*  
INLOES, D. S., Michaels, A. S., Robertson, C. R., Matin, A.  
1985; 23 (2): 85-91
- **EFFECT OF ARGININE VASOPRESSIN ON RENAL MEDULLARY BLOOD-FLOW - A VIDEOMICROSCOPIC STUDY IN THE RAT** *JOURNAL OF CLINICAL INVESTIGATION*  
Zimmerhackl, B., Robertson, C. R., Jamison, R. L.  
1985; 76 (2): 770-778
- **FLUID UPTAKE IN THE RENAL PAPILLA BY VASA RECTA ESTIMATED BY 2 METHODS SIMULTANEOUSLY** *AMERICAN JOURNAL OF PHYSIOLOGY*  
Zimmerhackl, B., Robertson, C. R., Jamison, R. L.  
1985; 248 (3): F347-F353
- **PROSTAGLANDIN SYNTHESIS INHIBITORS AND VASA RECTA ERYTHROCYTE VELOCITIES IN THE RAT** *AMERICAN JOURNAL OF PHYSIOLOGY*  
Lemley, K. V., SCHMITT, S. L., Holliger, C., Dunn, M. J., Robertson, C. R., Jamison, R. L.  
1984; 247 (4): F562-F567
- **EXAMINATION OF TRANS-EPITHELIAL EXCHANGE OF WATER AND SOLUTE IN THE RAT RENAL PELVIS** *JOURNAL OF CLINICAL INVESTIGATION*  
Bargman, J., Leonard, S. L., McNeely, E., Robertson, C., Jamison, R. L.  
1984; 74 (5): 1860-1870
- **NATURE OF THE RENAL INJURY FOLLOWING TOTAL RENAL ISCHEMIA IN MAN** *JOURNAL OF CLINICAL INVESTIGATION*  
Myers, B. D., Miller, D. C., MEHIGAN, J. T., Olcott, C., GOLBETZ, H., Robertson, C. R., Derby, G., Spencer, R., Friedman, S.  
1984; 73 (2): 329-341
- **MECHANISMS OF POLARIZATION AND FOULING OF ULTRAFILTRATION MEMBRANES BY PROTEINS** *JOURNAL OF MEMBRANE SCIENCE*  
REIHANIAN, H., Robertson, C. R., Michaels, A. S.  
1983; 16 (DEC): 237-258
- **PROTEIN ADSORPTION ON CROSSLINKED POLYDIMETHYLSILOXANE USING TOTAL INTERNAL-REFLECTION FLUORESCENCE** *JOURNAL OF COLLOID AND INTERFACE SCIENCE*  
Lok, B. K., Cheng, Y. L., Robertson, C. R.  
1983; 91 (1): 104-116
- **TOTAL INTERNAL-REFLECTION FLUORESCENCE - A TECHNIQUE FOR EXAMINING INTERACTIONS OF MACROMOLECULES WITH SOLID-SURFACES** *JOURNAL OF COLLOID AND INTERFACE SCIENCE*  
Lok, B. K., Cheng, Y. L., Robertson, C. R.  
1983; 91 (1): 87-103
- **HOLLOW-FIBER MEMBRANE BIOREACTORS USING IMMOBILIZED ESCHERICHIA-COLI FOR PROTEIN-SYNTHESIS** *BIOTECHNOLOGY AND BIOENGINEERING*  
INLOES, D. S., Smith, W. J., Taylor, D. P., Cohen, S. N., Michaels, A. S., Robertson, C. R.  
1983; 25 (11): 2653-2681
- **ETHANOL-PRODUCTION BY SACCHAROMYCES-CEREVISIAE IMMOBILIZED IN HOLLOW-FIBER MEMBRANE BIOREACTORS** *APPLIED AND ENVIRONMENTAL MICROBIOLOGY*  
INLOES, D. S., Taylor, D. P., Cohen, S. N., Michaels, A. S., Robertson, C. R.  
1983; 46 (1): 264-278
- **DIRECT DETERMINATION OF VASA RECTA BLOOD-FLOW IN THE RAT RENAL PAPILLA** *CIRCULATION RESEARCH*  
Holliger, C., Lemley, K. V., SCHMITT, S. L., Thomas, F. C., Robertson, C. R., Jamison, R. L.

1983; 53 (3): 401-413

- **THEORETICAL-ANALYSIS OF ELECTROSTATIC EFFECTS ON ION-TRANSPORT IN ULTRATHIN MEMBRANES** *JOURNAL OF THE ELECTROCHEMICAL SOCIETY*  
Bradshaw, R. W., Robertson, C. R.  
1982; 129 (5): 958-962
- **THE NATURE OF THE GLOMERULAR INJURY IN MINIMAL CHANGE AND FOCAL SCLEROSING GLOMERULOPATHIES** *AMERICAN JOURNAL OF KIDNEY DISEASES*  
WINETZ, J. A., Robertson, C. R., GOLBETZ, H. V., Carrie, B. J., SALYER, W. R., Myers, B. D.  
1981; 1 (2): 91-98
- **DYNAMICS OF GLOMERULAR ULTRAFILTRATION FOLLOWING OPEN-HEART SURGERY** *KIDNEY INTERNATIONAL*  
Myers, B. D., Hilberman, M., Carrie, B. J., Spencer, R. J., Stinson, E. B., Robertson, C. R.  
1981; 20 (3): 366-374
- **A REVIEW OF TRANS-CAPILLARY FLUID AND SOLUTE EXCHANGE IN THE RENAL GLOMERULUS** *MICROVASCULAR RESEARCH*  
Robertson, C. R.  
1980; 19 (2): 131-141
- **DETERMINATION OF ERYTHROCYTE VELOCITIES IN THE MAMMALIAN INNER RENAL MEDULLA BY A VIDEO VELOCITY-TRACKING SYSTEM** *MICROVASCULAR RESEARCH*  
GUSSIS, G. L., Jamison, R. L., Robertson, C. R.  
1979; 18 (3): 370-383
- **RECENT FORMULATIONS OF THE URINARY CONCENTRATING MECHANISM - STATUS-REPORT** *KIDNEY INTERNATIONAL*  
Jamison, R. L., Robertson, C. R.  
1979; 16 (5): 537-545
- **INFLUENCE OF MOLECULAR-CONFIGURATION ON THE PASSAGE OF MACROMOLECULES ACROSS THE GLOMERULAR CAPILLARY WALL** *JOURNAL OF GENERAL PHYSIOLOGY*  
Bohrer, M. P., Deen, W. M., Robertson, C. R., Troy, J. L., BRENNER, B. M.  
1979; 74 (5): 583-593
- **ERYTHROCYTE VELOCITY IN VASA RECTA - EFFECT OF ANTI-DIURETIC HORMONE AND SALINE LOADING** *AMERICAN JOURNAL OF PHYSIOLOGY*  
GUSSIS, G. L., Robertson, C. R., Jamison, R. L.  
1979; 237 (4): F326-F332
- **PERMSELECTIVITY OF GLOMERULAR CAPILLARY WALL - FACILITATED FILTRATION OF CIRCULATING POLYCATIONS** *JOURNAL OF CLINICAL INVESTIGATION*  
Bohrer, M. P., Baylis, C., Humes, H. D., Glasscock, R. J., Robertson, C. R., BRENNER, B. M.  
1978; 61 (1): 72-78
- **Mechanisms of the puromycin-induced defects in the transglomerular passage of water and macromolecules.** *journal of clinical investigation*  
Bohrer, M. P., Baylis, C., Robertson, C. R., BRENNER, B. M., Troy, J. L., Willis, W. T.  
1977; 60 (1): 152-161
- **MECHANISM OF ANGIOTENSIN II-INDUCED PROTEINURIA IN RAT** *AMERICAN JOURNAL OF PHYSIOLOGY*  
Bohrer, M. P., Deen, W. M., Robertson, C. R., BRENNER, B. M.  
1977; 233 (1): F13-F21
- **MECHANISMS OF PUROMYCIN-INDUCED DEFECTS IN TRANSGLOMERULAR PASSAGE OF WATER AND MACROMOLECULES** *JOURNAL OF CLINICAL INVESTIGATION*  
Bohrer, M. P., Baylis, C., Robertson, C. R., BRENNER, B. M.  
1977; 60 (1): 152-161
- **SOURCE OF INULIN IN SAMPLES OF VASA RECTA BLOOD** *ANNALS OF BIOMEDICAL ENGINEERING*  
Johnston, P. A., LACY, F. B., SANJANA, V. M., Robertson, C. R., Jamison, R. L.  
1977; 5 (1): 85-94

- **TOTAL INTERNAL-REFLECTION TECHNIQUE FOR EXAMINATION OF PROTEIN ADSORPTION** *JOURNAL OF BIOMEDICAL MATERIALS RESEARCH*  
Watkins, R. W., Robertson, C. R.  
1977; 11 (6): 915-938
- **SOURCE OF INULIN IN SAMPLES OF VASA RECTA BLOOD** *ANNALS OF BIOMEDICAL ENGINEERING*  
Johnston, P. A., LACY, F. B., SANJANA, V. M., Robertson, C. R., Jamison, R. L.  
1977; 5 (1): 85-94
- **TOTAL INTERNAL-REFLECTION TECHNIQUE FOR EXAMINATION OF PROTEIN ADSORPTION** *JOURNAL OF BIOMEDICAL MATERIALS RESEARCH*  
Watkins, R. W., Robertson, C. R.  
1977; 11 (6): 915-938
- **Permeability of the glomerular capillary wall. Studies of experimental glomerulonephritis in the rat using dextran sulfate.** *journal of clinical investigation*  
Bennett, C. M., Glassock, R. J., Chang, R. L., Deen, W. M., Robertson, C. R., BRENNER, B. M., Troy, J. L., ueki, I. R., Rasmussen, B.  
1976; 57 (5): 1287-1294
- **Permeability of the glomerular capillary wall. Studies of experimental glomerulonephritis in the rat using neutral dextran.** *journal of clinical investigation*  
Chang, R. L., Deen, W. M., Robertson, C. R., Bennett, C. M., Glassock, R. J., BRENNER, B. M., Troy, J. L., Ueki, I. F., Rasmussen, B.  
1976; 57 (5): 1272-1286
- **EXAMINATION OF TRANSCAPILLARY WATER FLUX IN RENAL INNER MEDULLA** *AMERICAN JOURNAL OF PHYSIOLOGY*  
SANJANA, V. M., Johnston, P. A., Robertson, C. R., Jamison, R. L.  
1976; 231 (2): 313-318
- **Determinants of glomerular filtration rate.** *Annual review of physiology*  
BRENNER, B. M., Deen, W. M., Robertson, C. R.  
1976; 38: 11-19
- **PLATELET-AGGREGATION BY LAMINAR SHEAR AND BROWNIAN-MOTION** *ANNALS OF BIOMEDICAL ENGINEERING*  
Chang, H. N., Robertson, C. R.  
1976; 4 (2): 151-183
- **PERMEABILITY OF GLOMERULAR CAPILLARY WALL - STUDIES OF EXPERIMENTAL GLOMERULONEPHRITIS IN RAT USING NEUTRAL DEXTRAN** *JOURNAL OF CLINICAL INVESTIGATION*  
CHANG, R. L., Deen, W. M., Robertson, C. R., Bennett, C. M., Glassock, R. J., BRENNER, B. M.  
1976; 57 (5): 1272-1286
- **PERMEABILITY OF GLOMERULAR CAPILLARY WALL - STUDIES OF EXPERIMENTAL GLOMERULONEPHRITIS IN RAT USING DEXTRAN SULFATE** *JOURNAL OF CLINICAL INVESTIGATION*  
Bennett, C. M., Glassock, R. J., CHANG, R. L., Deen, W. M., Robertson, C. R., BRENNER, B. M.  
1976; 57 (5): 1287-1294
- **DETERMINANTS OF GLOMERULAR-FILTRATION RATE** *ANNUAL REVIEW OF PHYSIOLOGY*  
BRENNER, B. M., Deen, W. M., Robertson, C. R.  
1976; 38: 9-19
- **WATER EXTRACTION FROM INNER MEDULLARY COLLECTING TUBULE SYSTEM - ROLE FOR UREA** *KIDNEY INTERNATIONAL*  
SANJANA, V. M., Robertson, C. R., Jamison, R. L.  
1976; 10 (2): 139-146
- **MOLECULAR SEPARATION BARRIERS AND THEIR APPLICATION TO CATALYTIC REACTOR DESIGN** *SEPARATION AND PURIFICATION METHODS*  
Robertson, C. R., Michaels, A. S., WATERLAND, L. R.  
1976; 5 (2): 301-332
- **PERMEABILITY OF GLOMERULAR CAPILLARY WALL TO MACROMOLECULES .2. EXPERIMENTAL STUDIES IN RATS USING NEUTRAL DEXTRAN** *BIOPHYSICAL JOURNAL*

- CHANG, R. L., Ueki, I. F., Troy, J. L., Deen, W. M., Robertson, C. R., BRENNER, B. M.  
1975; 15 (9): 887-906
- **PERMSELECTIVITY OF GLOMERULAR CAPILLARY WALL .3. RESTRICTED TRANSPORT OF POLYANIONS** *KIDNEY INTERNATIONAL*  
CHANG, R. L., Deen, W. M., Robertson, C. R., BRENNER, B. M.  
1975; 8 (4): 212-218
  - **HYDRAULIC AND ONCOTIC PRESSURE MEASUREMENTS IN INNER MEDULLA OF MAMMALIAN KIDNEY** *AMERICAN JOURNAL OF PHYSIOLOGY*  
SANJANA, V. M., Johnston, P. A., Deen, W. M., Robertson, C. R., BRENNER, B. M., Jamison, R. L.  
1975; 228 (6): 1921-1926
  - **PERMSELECTIVITY OF GLOMERULAR CAPILLARY WALL TO MACROMOLECULES .1. THEORETICAL CONSIDERATIONS** *BIOPHYSICAL JOURNAL*  
CHANG, R. L., Robertson, C. R., Deen, W. M., BRENNER, B. M.  
1975; 15 (9): 861-886
  - **DYNAMICS OF GLOMERULAR ULTRAFILTRATION IN RAT .8. EFFECTS OF HEMATOCRIT** *CIRCULATION RESEARCH*  
Myers, B. D., Deen, W. M., Robertson, C. R., BRENNER, B. M.  
1975; 36 (3): 425-435
  - **EFFECT OF IONIC POLARIZABILITY ON ELECTRODIFFUSION IN LIPID BILAYER MEMBRANES** *JOURNAL OF MEMBRANE BIOLOGY*  
Bradshaw, R. W., Robertson, C. R.  
1975; 25 (1-2): 93-114
  - **GLOMERULAR ULTRAFILTRATION** *FEDERATION PROCEEDINGS*  
Deen, W. M., ROBERTSO, C. R., BRENNER, B. M.  
1974; 33 (1): 14-20
  - **PLATELET RETENTION IN COLUMNS PACKED WITH GLASS BEADS** *ANNALS OF BIOMEDICAL ENGINEERING*  
Robertson, C. R., Chang, H. N.  
1974; 2 (4): 361-391
  - **CONCENTRATION POLARIZATION IN AN ULTRAFILTERING CAPILLARY** *BIOPHYSICAL JOURNAL*  
Deen, W. M., ROBERTSO, C. R., BRENNER, B. M.  
1974; 14 (5): 412-431
  - **DYNAMICS OF GLOMERULAR ULTRAFILTRATION IN RAT .8. RESPONSE TO REDUCED RENAL MASS** *AMERICAN JOURNAL OF PHYSIOLOGY*  
Deen, W. M., Maddox, D. A., ROBERTSO, C. R., BRENNER, B. M.  
1974; 227 (3): 556-562
  - **THEORETICAL MODEL FOR ENZYMATIC CATALYSIS USING ASYMMETRIC HOLLOW FIBER MEMBRANES** *AICHE JOURNAL*  
WATERLAN, L. R., Michaels, A. S., ROBERTSO, C. R.  
1974; 20 (1): 50-60
  - **Transcapillary fluid exchange in the renal cortex.** *Circulation research*  
Deen, W. M., Robertson, C. R., BRENNER, B. M.  
1973; 33 (1): 1-8
  - **A model of peritubular capillary control of isotonic fluid reabsorption by the renal proximal tubule.** *Biophysical journal*  
Deen, W. M., Robertson, C. R., BRENNER, B. M.  
1973; 13 (4): 340-358
  - **TRANSCAPILLARY FLUID EXCHANGE IN RENAL CORTEX** *CIRCULATION RESEARCH*  
Deen, W. M., ROBERTSO, C. R., BRENNER, B. M.  
1973; 33 (1): 1-8
  - **DYNAMICS OF GLOMERULAR ULTRAFILTRATION IN RAT .4. DETERMINATION OF ULTRAFILTRATION COEFFICIENT** *JOURNAL OF CLINICAL INVESTIGATION*  
Deen, W. M., Troy, J. L., ROBERTSO, C. R., BRENNER, B. M.

1973; 52 (6): 1500-1508

● **MODEL OF PERITUBULAR CAPILLARY CONTROL OF ISOTONIC FLUID REABSORPTION BY RENAL PROXIMAL TUBULE** *BIOPHYSICAL JOURNAL*

Deen, W. M., ROBERTSO, C. R., BRENNER, B. M.  
1973; 13 (4): 340-358

● **A model of glomerular ultrafiltration in the rat.** *The American journal of physiology*

Deen, W. M., Robertson, C. R., BRENNER, B. M.  
1972; 223 (5): 1178-1183

● **Dynamics of glomerular ultrafiltration in the rat. II. Plasma-flow dependence of GFR.** *The American journal of physiology*

BRENNER, B. M., Troy, J. L., Daugharty, T. M., Deen, W. M., Robertson, C. R.  
1972; 223 (5): 1184-1190

● **Dynamics of glomerular ultrafiltration in the rat. 3. Hemodynamics and autoregulation.** *The American journal of physiology*

Robertson, C. R., Deen, W. M., Troy, J. L., BRENNER, B. M.  
1972; 223 (5): 1191-1200