



Jennifer R. Cochran

Senior Associate Vice Provost for Research, Addie and Al Macovski Professor,
Professor of Bioengineering and, by courtesy, of Chemical Engineering

CONTACT INFORMATION

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Bio

BIO

Jennifer Cochran is the Senior Associate Vice Provost for Research and Addie and Al Macovski Professor of Bioengineering and, by courtesy, of Chemical Engineering. She is a member of the Cancer Biology, Biophysics, and Immunology graduate programs. Dr. Cochran also serves as a member of the leadership team and former Director of the Stanford/NIH Biotechnology pre-doctoral training program. Her research group uses interdisciplinary approaches in chemistry, engineering, and biophysics to study complex biological systems and to develop new tools for basic science and biomedical applications. Dr. Cochran's translational interests span protein-based drug discovery and development for applications in oncology and regenerative medicine, and the development of new technologies for high-throughput protein analysis and engineering. Dr. Cochran obtained her Ph.D. in Biological Chemistry from the Massachusetts Institute of Technology, where she also completed a postdoctoral fellowship in Biological Engineering.

ACADEMIC APPOINTMENTS

- Professor, Bioengineering
- Professor (By courtesy), Chemical Engineering
- Member, Bio-X
- Member, Cardiovascular Institute
- Member, Maternal & Child Health Research Institute (MCHRI)
- Faculty Fellow, Sarafan ChEM-H
- Member, Stanford Cancer Institute
- Member, Wu Tsai Neurosciences Institute

ADMINISTRATIVE APPOINTMENTS

- Faculty Director, Innovative Medicines Accelerator Protein Therapeutics Initiative, (2021- present)
- Chair, Stanford Bioengineering, (2017-2022)
- Chair/Principle Investigator, Bioengineering Coulter Grant, (2017-2022)
- Co-Director, Stanford-NIST Pre-Doctoral Training Grant, (2015-2020)

- Director, Stanford-NIH Biotechnology Predoctoral Training Grant, (2014- present)
- Director of Graduate Studies, Stanford Bioengineering, (2014-2018)

HONORS AND AWARDS

- College of Fellows, American Institute for Medical and Biological Engineering (AIMBE) (2018)
- Hellman Faculty Scholar Award, Hellman Foundation (2008)
- Martin D. Abeloff Scholar Award, V Foundation (2008)
- Kimmel Scholars Award, Sidney Kimmel Foundation (2007)
- Mallinckrodt Faculty Scholar Award, Edward Mallinckrodt Jr. Foundation (2007)
- McCormick Award, McCormick Foundation (2007)
- Translational Partnership Award, Wallace H. Coulter Foundation (2006, 2007)
- Howard Temin Award, NIH / National Cancer Institute (2004)

PROFESSIONAL EDUCATION

- Postdoctoral Fellow, MIT , Biological Engineering
- Ph. D., MIT , Biological Chemistry (2001)
- B.S., University of Delaware , Biochemistry (1995)

LINKS

- Cochran Lab website: <https://cochranlab.stanford.edu/>

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

The Cochran laboratory uses interdisciplinary approaches in chemistry, engineering, and biophysics to study complex biological systems. Our main goals are to develop new technologies for basic science and biomedical applications. Clinical applications of our research involves wound healing, cardiac tissue regeneration, ocular disease, and cancer imaging and therapy. Our research is driven by the philosophy that in order to control physiological processes it is necessary to understand the molecular mechanisms that drive these processes. We are interested in elucidating molecular details of receptor-mediated cell signaling events; at the same time developing protein and peptide-based tools that will allow us to manipulate cellular processes on a molecular level. For biomedical applications, we are combining rational design and combinatorial methods to create designer protein therapeutics and diagnostic agents.

Examples of our work are highlighted here:

- <http://news.stanford.edu/news/2014/september/metastasis-protein-therapy-092114.html>
- <https://news.stanford.edu/2015/12/07/proteins-scale-extraction-120715/>
- <https://news.stanford.edu/2016/06/16/stanford-scientists-create-guided-chemotherapy-missiles-target-cancer-cells-spare-healthy-ones/>

Teaching

COURSES

2022-23

- BioEntrepreneurship Bootcamp: BIOE 396 (Spr)
- Bioengineering Departmental Research Colloquium: BIOE 393 (Aut)

2021-22

- Bioengineering Departmental Research Colloquium: BIOE 393 (Aut)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Beatriz Atsavaprane, Aris Kare, Netra Rajesh

Orals Chair

Katie Freitas

Postdoctoral Faculty Sponsor

Nikita Khlystov, Nicholas Sarai

Doctoral Dissertation Advisor (AC)

Nayla Abney, Robert Lee, Phillip Liu, Brianna McIntosh, Jack Silberstein, Jocelyn Valenzuela, Camille Williams

Doctoral Dissertation Co-Advisor (AC)

Phil Kim, R. Andres Parra Sperberg

Doctoral (Program)

R. Andres Parra Sperberg

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Bioengineering (Phd Program)
- Biophysics (Phd Program)
- Cancer Biology (Phd Program)
- Immunology (Phd Program)

Publications

PUBLICATIONS

- **Targeted TLR9 Agonist Elicits Effective Antitumor Immunity against Spontaneously Arising Breast Tumors.** *Journal of immunology (Baltimore, Md. : 1950)*
Miller, C. L., Sagiv-Barfi, I., Neuhöfer, P., Czerwinski, D. K., Bertozzi, C. R., Cochran, J. R., Levy, R.
2023
- **Mutational screens highlight glycosylation as a modulator of colony-stimulating factor 3 receptor (CSF3R) activity.** *The Journal of biological chemistry*
Hollander, M. J., Malaker, S. A., Riley, N. M., Perez, I., Abney, N. M., Gray, M. A., Maxson, J. E., Cochran, J. R., Bertozzi, C. R.
2023: 104755
- **An engineered ligand trap inhibits leukemia inhibitory factor as pancreatic cancer treatment strategy.** *Communications biology*
Hunter, S. A., McIntosh, B. J., Shi, Y., Sperberg, R. A., Funatogawa, C., Labanieh, L., Soon, E., Wastyk, H. C., Mehta, N., Carter, C., Hunter, T., Cochran, J. R.
2021; 4 (1): 452
- **Systemic delivery of a targeted synthetic immunostimulant transforms the immune landscape for effective tumor regression.** *Cell chemical biology*
Miller, C. L., Sagiv-Barfi, I., Neuhöfer, P., Czerwinski, D. K., Artandi, S. E., Bertozzi, C. R., Levy, R., Cochran, J. R.
2021
- **Engineering a potent receptor superagonist or antagonist from a novel IL-6 family cytokine ligand.** *Proceedings of the National Academy of Sciences of the United States of America*
Kim, J. W., Marquez, C. P., Sperberg, R. A., Wu, J., Bae, W. G., Huang, P., Sweet-Cordero, E. A., Cochran, J. R.
2020
- **Structure and Functional Binding Epitope of V-domain Ig Suppressor of T Cell Activation.** *Cell reports*
Mehta, N. n., Maddineni, S. n., Mathews, I. I., Andres Parra Sperberg, R. n., Huang, P. S., Cochran, J. R.

2019; 28 (10): 2509–16.e5

- **Antitumor activity of an engineered decoy receptor targeting CLCF1-CNTFR signaling in lung adenocarcinoma.** *Nature medicine*
Kim, J. W., Marquez, C. P., Kostyrko, K. n., Koehne, A. L., Marini, K. n., Simpson, D. R., Lee, A. G., Leung, S. G., Sayles, L. C., Shrager, J. n., Ferrer, I. n., Paz-Ares, L. n., Gephart, et al
2019
- **Integrin-targeted cancer immunotherapy elicits protective adaptive immune responses.** *Journal of experimental medicine*
Kwan, B. H., Zhu, E. F., Tzeng, A., Sugito, H. R., Eltahir, A. A., Ma, B., Delaney, M. K., Murphy, P. A., Kauke, M. J., Angelini, A., Momin, N., Mehta, N. K., Maragh, et al
2017; 214 (6): 1679-1690
- **High-throughput analysis and protein engineering using microcapillary arrays.** *Nature chemical biology*
Chen, B., Lim, S., Kannan, A., Alford, S. C., Sunden, F., Herschlag, D., Dimov, I. K., Baer, T. M., Cochran, J. R.
2016; 12 (2): 76-81
- **An engineered Axl 'decoy receptor' effectively silences the Gas6-Axl signaling axis** *NATURE CHEMICAL BIOLOGY*
Kariolis, M. S., Miao, Y. R., Li, D. S., Kapur, S., Mathews, I. I., Giaccia, A. J., Cochran, J. R.
2014; 10 (11): 977-983
- **Engineered knottin peptide enables noninvasive optical imaging of intracranial medulloblastoma.** *Proceedings of the National Academy of Sciences of the United States of America*
Moore, S. J., Hayden Gephart, M. G., Bergen, J. M., Su, Y. S., Rayburn, H., Scott, M. P., Cochran, J. R.
2013; 110 (36): 14598-14603
- **Broad-spectrum CRISPR-mediated inhibition of SARS-CoV-2 variants and endemic coronaviruses in vitro.** *Nature communications*
Zeng, L., Liu, Y., Nguyenla, X. H., Abbott, T. R., Han, M., Zhu, Y., Chemparathy, A., Lin, X., Chen, X., Wang, H., Rane, D. A., Spatz, J. M., Jain, et al
2022; 13 (1): 2766
- **Enhanced safety and efficacy of protease-regulated CAR-T cell receptors.** *Cell*
Labanieh, L., Majzner, R. G., Klysz, D., Sotillo, E., Fisher, C. J., Vilches-Moure, J. G., Pacheco, K. Z., Malipatlolla, M., Xu, P., Hui, J. H., Murty, T., Theruvath, J., Mehta, et al
2022
- **Delivery of CAR-T cells in a transient injectable stimulatory hydrogel niche improves treatment of solid tumors.** *Science advances*
Grosskopf, A. K., Labanieh, L., Klysz, D. D., Roth, G. A., Xu, P., Adebowale, O., Gale, E. C., Jons, C. K., Klich, J. H., Yan, J., Maikawa, C. L., Correa, S., Ou, et al
2022; 8 (14): eabn8264
- **Anti-GD2 synergizes with CD47 blockade to mediate tumor eradication.** *Nature medicine*
Theruvath, J., Menard, M., Smith, B. A., Linde, M. H., Coles, G. L., Dalton, G. N., Wu, W., Kiru, L., Delaidelli, A., Sotillo, E., Silberstein, J. L., Geraghty, A. C., Banuelos, et al
1800
- **Heterogeneous delivery across the blood-brain barrier limits the efficacy of an EGFR-targeting antibody drug conjugate in glioblastoma.** *Neuro-oncology*
Marin, B., Porath, K. A., Jain, S., Kim, M., Conage-Pough, J. E., Oh, J., Miller, C. L., Talele, S., Kitange, G. J., Tian, S., Burgenske, D. M., Mladek, A. C., Gupta, et al
2021
- **VISTA immune-checkpoint blunts radiotherapy induced anti-tumor immune response.**
Nambiar, D. K., Mehta, N., Maddineni, S., Cao, H., Viswanathan, V., Cheunkarndee, T., Cochran, J. R., Quynh Thu Le
AMER ASSOC CANCER RESEARCH.2021
- **LYTACs that engage the asialoglycoprotein receptor for targeted protein degradation.** *Nature chemical biology*
Ahn, G., Banik, S. M., Miller, C. L., Riley, N. M., Cochran, J. R., Bertozzi, C. R.
2021
- **Neutralizing antibodies targeting the SARS-CoV-2 receptor binding domain isolated from a naive human antibody library.** *Protein science : a publication of the Protein Society*
Bell, B. N., Powell, A. E., Rodriguez, C., Cochran, J. R., Kim, P. S.
2021

- **Use of Outpatient-Derived COVID-19 Convalescent Plasma in COVID-19 Patients Before Seroconversion.** *Frontiers in immunology*
Wirz, O. F., Roltgen, K., Stevens, B. A., Pandey, S., Sahoo, M. K., Tolentino, L., Verghese, M., Nguyen, K., Hunter, M., Snow, T. T., Singh, A. R., Blish, C. A., Cochran, et al
2021; 12: 739037
- **Identification of N-Terminally Diversified GLP-1R Agonists Using Saturation Mutagenesis and Chemical Design.** *ACS chemical biology*
Longwell, C. K., Hanna, S., Hartrampf, N., Sperberg, R. A., Huang, P., Pentelute, B. L., Cochran, J. R.
2020
- **PET reporter gene imaging and ganciclovir-mediated ablation of chimeric antigen receptor T-cells in solid tumors.** *Cancer research*
Murty, S., Labanieh, L., Murty, T., Gowrishankar, G., Haywood, T., Alam, I. S., Beinat, C., Robinson, E., Aalipour, A., Klysz, D. D., Cochran, J. R., Majzner, R. G., Mackall, et al
2020
- **An engineered antibody binds a distinct epitope and is a potent inhibitor of murine and human VISTA.** *Scientific reports*
Mehta, N., Maddineni, S., Kelly, R. L., Lee, R. B., Hunter, S. A., Silberstein, J. L., Parra Sperberg, R. A., Miller, C. L., Rabe, A., Labanieh, L., Cochran, J. R.
2020; 10 (1): 15171
- **Novel NanoLuc substrates enable bright two-population bioluminescence imaging in animals.** *Nature methods*
Su, Y., Walker, J. R., Park, Y., Smith, T. P., Liu, L. X., Hall, M. P., Labanieh, L., Hurst, R., Wang, D. C., Encell, L. P., Kim, N., Zhang, F., Kay, et al
2020
- **Multi-phase catheter-injectable hydrogel enables dual-stage protein-engineered cytokine release to mitigate adverse left ventricular remodeling following myocardial infarction in a small animal model and a large animal model.** *Cytokine*
Steele, A. N., Paulsen, M. J., Wang, H. n., Stapleton, L. M., Lucian, H. J., Eskandari, A. n., Hironaka, C. E., Farry, J. M., Baker, S. W., Thakore, A. D., Jaatinen, K. J., Tada, Y. n., Hollander, et al
2020; 127: 154974
- **CD52 Is Elevated on B cells of SLE Patients and Regulates B Cell Function.** *Frontiers in immunology*
Bhamidipati, K. n., Silberstein, J. L., Chaichian, Y. n., Baker, M. C., Lanz, T. V., Zia, A. n., Rasheed, Y. S., Cochran, J. R., Robinson, W. H.
2020; 11: 626820
- **Defining the features and duration of antibody responses to SARS-CoV-2 infection associated with disease severity and outcome.** *Science immunology*
Röltgen, K. n., Powell, A. E., Wirz, O. F., Stevens, B. A., Hogan, C. A., Najeeb, J. n., Hunter, M. n., Wang, H. n., Sahoo, M. K., Huang, C. n., Yamamoto, F. n., Manohar, M. n., Manalac, et al
2020; 5 (54)
- **Structural Basis of the Differential Binding of Engineered Knottins to Integrins alphaVbeta3 and alpha5beta1.** *Structure (London, England : 1993)*
Van Aghoven, J. F., Shams, H., Cochran, F. V., Alonso, J. L., Kintzing, J. R., Garakani, K., Adair, B. D., Xiong, J., Mofrad, M. R., Cochran, J. R., Arnaout, M. A.
2019
- **An engineered dimeric fragment of hepatocyte growth factor improves corneal epithelial wound healing in vitro**
Carter, K., Ye, A., Fernandes-Cunha, G., Cochran, J. R., Myung, D.
ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2019
- **Next-generation protein therapeutics: Challenges and opportunities**
Cochran, J.
AMER CHEMICAL SOC.2019
- **Engineering ligand-based receptor agonists or antagonists as next-generation protein therapeutics**
Cochran, J.
AMER CHEMICAL SOC.2018
- **Targeting the CLCF1-CNTFR signaling axis using directed evolution for lung cancer therapy**
Marquez, C., Kim, J., Giaccia, A., Cochran, J., Sweet-Cordero, A.
AMER ASSOC CANCER RESEARCH.2018
- **Engineering a potent inhibitor of matriptase from the natural hepatocyte growth factor activator inhibitor type-1 (HAI-1) protein** *JOURNAL OF BIOLOGICAL CHEMISTRY*
Mitchell, A. C., Kannan, D., Hunter, S. A., Sperberg, R., Chang, C. H., Cochran, J. R.

2018; 293 (14): 4969–80

- **Photoactive Split Green Fluorescent Protein: Engineering a New Optogenetic and Imaging System**
Romei, M. G., Longwell, C. K., Cochran, J. R., Boxer, S. G.
CELL PRESS.2018: 177A–178A
- **Development of a Protease Biosensor Based on a Dimerization-Dependent Red Fluorescent Protein** *ACS CHEMICAL BIOLOGY*
Mitchell, A. C., Alford, S. C., Hunter, S. A., Kannan, D., Sperberg, R., Chang, C. H., Cochran, J. R.
2018; 13 (1): 66–72
- **High-throughput screening technologies for enzyme engineering** *CURRENT OPINION IN BIOTECHNOLOGY*
Longwell, C. K., Labanieh, L., Cochran, J. R.
2017; 48: 196–202
- **Heterochiral Knottin Protein: Folding and Solution Structure** *BIOCHEMISTRY*
Mong, S. K., Cochran, F. V., Yu, H., Graziano, Z., Lin, Y., Cochran, J. R., Pentelute, B. L.
2017; 56 (43): 5720–25
- **A novel protein-engineered hepatocyte growth factor analog released via a shear-thinning injectable hydrogel enhances post-infarction ventricular function.** *Biotechnology and bioengineering*
Steele, A. N., Cai, L., Truong, V. N., Edwards, B. B., Goldstone, A. B., Eskandari, A., Mitchell, A. C., Marquardt, L. M., Foster, A. A., Cochran, J. R., Heilshorn, S. C., Woo, Y. J.
2017
- **Dual display of proteins on the yeast cell surface simplifies quantification of binding interactions and enzymatic bioconjugation reactions** *BIOTECHNOLOGY JOURNAL*
Lim, S., Glasgow, J. E., Interrante, M. F., Storm, E. M., Cochran, J. R.
2017; 12 (5)
- **Measurements of translation initiation from all 64 codons in E. coli** *NUCLEIC ACIDS RESEARCH*
Hecht, A., Glasgow, J., Jaschke, P. R., Bawazer, L. A., Munson, M. S., Cochran, J. R., Endy, D., Salit, M.
2017; 45 (7): 3615-3626
- **Targeting ligand-receptor interactions for development of cancer therapeutics.** *Current opinion in chemical biology*
Kim, J. W., Cochran, J. R.
2017; 38: 62-69
- **Engineered ligand-based VEGFR antagonists with increased receptor binding affinity more effectively inhibit angiogenesis.** *Bioengineering & translational medicine*
Kapur, S., Silverman, A. P., Ye, A. Z., Papo, N., Jindal, D., Blumenkranz, M. S., Cochran, J. R.
2017; 2 (1): 81-91
- **Engineering High Affinity Protein-Protein Interactions Using a High-Throughput Microcapillary Array Platform.** *ACS chemical biology*
Lim, S., Chen, B., Kariolis, M. S., Dimov, I. K., Baer, T. M., Cochran, J. R.
2017; 12 (2): 336-341
- **Where is the Future of Drug Discovery for Cancer?** *CELL*
Superti-Furga, G., Cochran, J., Crews, C. M., Frye, S., Neubauer, G., Prinjha, R., Shokat, K.
2017; 168 (4): 564-565
- **Inhibition of the GAS6/AXL pathway augments the efficacy of chemotherapies** *JOURNAL OF CLINICAL INVESTIGATION*
Kariolis, M. S., Miao, Y. R., Diep, A., Nash, S. E., Olcina, M. M., Jiang, D., Jones, D. S., Kapur, S., Mathews, I. I., Koong, A. C., Rankin, E. B., Cochran, J. R., Giaccia, et al
2017; 127 (1): 183-198
- **CAR T-cell immunotherapy of MET-expressing malignant mesothelioma** *ONCOIMMUNOLOGY*
Thayaparan, T., Petrovic, R. M., Achkova, D. Y., Zabinski, T., Davies, D. M., Klampatsa, A., Parente-Pereira, A. C., Whilding, L. M., van der Stegen, S. C., Woodman, N., Sheaff, M., Cochran, J. R., Spicer, et al
2017; 6 (12)
- **Engineered Proteins for Visualizing and Treating Cancer**

Cochran, J. R., Natl Acad Engn

NATL ACADEMIES PRESS.2017: 101-6

- **Emerging Strategies for Developing Next-Generation Protein Therapeutics for Cancer Treatment** *TRENDS IN PHARMACOLOGICAL SCIENCES*
Kintzing, J. R., Interrante, M. V., Cochran, J. R.
2016; 37 (12): 993-1008
- **Eradication of large established tumors in mice by combination immunotherapy that engages innate and adaptive immune responses.** *Nature medicine*
Moynihan, K. D., Opel, C. F., Szeto, G. L., Tzeng, A., Zhu, E. F., Engreitz, J. M., Williams, R. T., Rakhra, K., Zhang, M. H., Rothschilds, A. M., Kumari, S., Kelly, R. L., Kwan, et al
2016
- **Engineered knottin peptides as diagnostics, therapeutics, and drug delivery vehicles** *CURRENT OPINION IN CHEMICAL BIOLOGY*
Kintzing, J. R., Cochran, J. R.
2016; 34: 143-150
- **Integrin-Targeting Knottin Peptide-Drug Conjugates Are Potent Inhibitors of Tumor Cell Proliferation.** *Angewandte Chemie (International ed. in English)*
Cox, N., Kintzing, J. R., Smith, M., Grant, G. A., Cochran, J. R.
2016; 55 (34): 9894-9897
- **In Vivo Site-Specific Protein Tagging with Diverse Amines Using an Engineered Sortase Variant** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
Glasgow, J. E., Salit, M. L., Cochran, J. R.
2016; 138 (24): 7496-7499
- **Targeted Drug Delivery with an Integrin-Binding Knottin-Fc-MMAF Conjugate Produced by Cell-Free Protein Synthesis** *MOLECULAR CANCER THERAPEUTICS*
Currier, N. V., Ackerman, S. E., Kintzing, J. R., Chen, R., Interrante, M. F., Steiner, A., Sato, A. K., Cochran, J. R.
2016; 15 (6): 1291-1300
- **Degradable acetalated dextran microparticles for tunable release of an engineered hepatocyte growth factor fragment.** *ACS biomaterials science & engineering*
Suarez, S. L., Muñoz, A., Mitchell, A., Braden, R. L., Luo, C., Cochran, J. R., Almutairi, A., Christman, K. L.
2016; 2 (2): 197-204
- **Degradable Acetalated Dextran Microparticles for Tunable Release of an Engineered Hepatocyte Growth Factor Fragment** *ACS BIOMATERIALS-SCIENCE & ENGINEERING*
Suarez, S. L., Munoz, A., Mitchell, A. C., Braden, R. L., Luo, C., Cochran, J. R., Almutairi, A., Christman, K. L.
2016; 2 (2): 197-204
- **Engineering growth factors for regenerative medicine applications** *ACTA BIOMATERIALIA*
Mitchell, A. C., Briquez, P. S., Hubbell, J. A., Cochran, J. R.
2016; 30: 1-12
- **Cell-Binding Assays for Determining the Affinity of Protein-Protein Interactions: Technologies and Considerations** *PEPTIDE, PROTEIN AND ENZYME DESIGN*
Hunter, S. A., Cochran, J. R.
2016; 580: 21-44
- **Engineering growth factors for regenerative medicine applications.** *Acta biomaterialia*
Mitchell, A. C., Briquez, P. S., Hubbell, J. A., Cochran, J. R.
2016; 30: 1-12
- **Biocompatibility of poly(ethylene glycol) and poly(acrylic acid) interpenetrating network hydrogel by intrastromal implantation in rabbit cornea** *JOURNAL OF BIOMEDICAL MATERIALS RESEARCH PART A*
Zheng, L. L., Vanchinathan, V., Dalal, R., Noolandi, J., Waters, D. J., Hartmann, L., Cochran, J. R., Frank, C. W., Yu, C. Q., Ta, C. N.
2015; 103 (10): 3157-3165
- **Biocompatibility of poly(ethylene glycol) and poly(acrylic acid) interpenetrating network hydrogel by intrastromal implantation in rabbit cornea.** *Journal of biomedical materials research. Part A*
Zheng, L. L., Vanchinathan, V., Dalal, R., Noolandi, J., Waters, D. J., Hartmann, L., Cochran, J. R., Frank, C. W., Yu, C. Q., Ta, C. N.
2015; 103 (10): 3157-3165

- **Delivery of an engineered HGF fragment in an extracellular matrix-derived hydrogel prevents negative LV remodeling post-myocardial infarction.** *Biomaterials*
Sonnenberg, S. B., Rane, A. A., Liu, C. J., Rao, N., Agmon, G., Suarez, S., Wang, R., Munoz, A., Bajaj, V., Zhang, S., Braden, R., Schup-Magoffin, P. J., Kwan, et al
2015; 45: 56-63
- **Interpenetrating polymer network hydrogel scaffolds for artificial cornea periphery.** *Journal of materials science. Materials in medicine*
Parke-Houben, R., Fox, C. H., Zheng, L. L., Waters, D. J., Cochran, J. R., Ta, C. N., Frank, C. W.
2015; 26 (2): 107-?
- **A Chemically Cross-Linked Knottin Dimer Binds Integrins with Picomolar Affinity and Inhibits Tumor Cell Migration and Proliferation** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
Kim, J. W., Cochran, F. V., Cochran, J. R.
2015; 137 (1): 6-9
- **Applications of Yeast Surface Display for Protein Engineering.** *Methods in molecular biology (Clifton, N.J.)*
Cherf, G. M., Cochran, J. R.
2015; 1319: 155-175
- **An engineered dimeric fragment of hepatocyte growth factor is a potent c-MET agonist** *FEBS LETTERS*
Liu, C. J., Jones, D. S., Tsai, P., Venkataramana, A., Cochran, J. R.
2014; 588 (24): 4831-4837
- **An engineered Axl 'decoy receptor' effectively silences the Gas6-Axl signaling axis.** *Nature chemical biology*
Kariolis, M. S., Miao, Y. R., Jones, D. S., Kapur, S., Mathews, I. I., Giaccia, A. J., Cochran, J. R.
2014; 10 (11): 977-983
- **Cystine-knot peptides: emerging tools for cancer imaging and therapy** *EXPERT REVIEW OF PROTEOMICS*
Ackerman, S. E., Currier, N. V., Bergen, J. M., Cochran, J. R.
2014; 11 (5): 561-572
- **Cystine-knot peptides: emerging tools for cancer imaging and therapy.** *Expert review of proteomics*
Ackerman, S. E., Currier, N. V., Bergen, J. M., Cochran, J. R.
2014; 11 (5): 561-72
- **A Bioengineered Peptide that Localizes to and Illuminates Medulloblastoma: A New Tool with Potential for Fluorescence-Guided Surgical Resection.** *Cureus*
Ackerman, S. E., Wilson, C. M., Kahn, S. A., Kintzing, J. R., Jindal, D. A., Cheshier, S. H., Grant, G. A., Cochran, J. R.
2014; 6 (9)
- **A Bioengineered Peptide that Localizes to and Illuminates Medulloblastoma: A New Tool with Potential for Fluorescence-Guided Surgical Resection** *Cureus*
Ackerman, S. E., Wilson, C. M., Kahn, S. A., Kintzing, J. R., Jindal, D. A., Cheshier, S. H., Grant, G. A., Cochran, J. R.
2014
- **Beyond antibodies: using biological principles to guide the development of next-generation protein therapeutics.** *Current opinion in biotechnology*
Kariolis, M. S., Kapur, S., Cochran, J. R.
2013; 24 (6): 1072-1077
- **Engineered knottin peptide enables noninvasive optical imaging of intracranial medulloblastoma.** *Proceedings of the National Academy of Sciences of the United States of America*
Moore, S. J., Hayden Gephart, M. G., Bergen, J. M., Su, Y. S., Rayburn, H., Scott, M. P., Cochran, J. R.
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