Stanford

Chaitan Khosla

Wells H. Rauser and Harold M. Petiprin Professor and Professor of Chemistry and, by courtesy, of Biochemistry

Chemical Engineering

CONTACT INFORMATION

- **Administrative Contact**

  Susan Haskins

  Email shaskins@stanford.edu

  Tel (650) 723-0640

Bio

BIO

Research in this laboratory focuses on problems where deep insights into enzymology and metabolism can be harnessed to improve human health.

For the past two decades, we have studied and engineered enzymatic assembly lines called polyketide synthases that catalyze the biosynthesis of structurally complex and medicinally fascinating antibiotics in bacteria. An example of such an assembly line is found in the erythromycin biosynthetic pathway. Our current focus is on understanding the structure and mechanism of this polyketide synthase. At the same time, we are developing methods to decode the vast and growing number of orphan polyketide assembly lines in the sequence databases.

For more than a decade, we have also investigated the pathogenesis of celiac disease, an autoimmune disorder of the small intestine, with the goal of discovering therapies and related management tools for this widespread but overlooked disease. Ongoing efforts focus on understanding the pivotal role of transglutaminase 2 in triggering the inflammatory response to dietary gluten in the celiac intestine.

ACADEMIC APPOINTMENTS

- Professor, Chemical Engineering
- Professor, Chemistry
- Professor (By courtesy), Biochemistry
- Member, Bio-X
- Member, Maternal & Child Health Research Institute (MCHRI)
- Member, Stanford Medicine Children’s Health Center for IBD and Celiac Disease
- Institute Scholar, Sarafan ChEM-H
- Director, Innovative Medicines Accelerator (IMA)
- Member, Stanford Cancer Institute
- Member, Wu Tsai Neurosciences Institute

ADMINISTRATIVE APPOINTMENTS

- Baker Family Director, Stanford ChEM-H, (2012-2020)
- Director, Innovative Medicines Accelerator, (2020- present)

HONORS AND AWARDS

- Member, National Academy of Sciences (2020)
- Arthur C. Cope Scholar Award, American Chemical Society (2009)
- Member, National Academy of Engineering (2009)
- Professional Progress Award, American Institute of Chemical Engineers (2008)
- Member, American Academy of Arts and Sciences (2007)
- Fellow, American Association for the Advancement of Science (2006)
- Pure Chemistry Award, American Chemical Society (2000)
- Alan T. Waterman Award, National Science Foundation (1999)
- Eli Lilly Award in Biological Chemistry, American Chemical Society (1999)
- Allan P. Colburn Award, American Institute of Chemical Engineers (1997)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Scientific Policy Committee Member, SLAC National Accelerator Laboratory (2014 - 2020)

PROFESSIONAL EDUCATION

- Postdoc, John Innes Centre, U.K. , Genetics (1992)
- PhD, California Institute of Technology , Chemical Engineering (1990)

LINKS

- https://web.stanford.edu/group/khosla/cgi-bin/: https://web.stanford.edu/group/khosla/cgi-bin/

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

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For more than a decade, we have also investigated the pathogenesis of celiac disease, an autoimmune disorder of the small intestine, with the goal of discovering therapies and related management tools for this widespread but overlooked disease. Ongoing efforts focus on understanding the pivotal role of transglutaminase 2 in triggering the inflammatory response to dietary gluten in the celiac intestine.

CLINICAL TRIALS

- COVID-19 Outpatient Pragmatic Platform Study (COPPS) - Camostat Sub-Protocol, Not Recruiting
- COVID-19 Outpatient Pragmatic Platform Study (COPPS) - Master Protocol, Not Recruiting

Teaching

COURSES

2025-26

- Advanced Biochemistry: CHEM 287A, CHEMENG 487 (Win)

2024-25

- Biochemistry II: CHEM 183, CHEMENG 183, CHEMENG 283 (Win)

2023-24

- Biochemistry II: CHEM 183, CHEMENG 183, CHEMENG 283 (Win)
- Foundational Biology for Engineers: CHEMENG 55, ENGR 55 (Aut)

2022-23

- Special Topics in Biocatalysis: CHEMENG 503 (Aut)

STANFORD ADVISEES

Med Scholar Project Advisor

Harrison Besser

Doctoral Dissertation Reader (AC)

Lexie Adams, Dayanne Carvalho, Antony Chang, Crystal Chen, Sriya Chitti, Alina Cook, Signe Dahlberg-Wright, Alby Joseph, Ryan Kong, Christina Lee, Michelle Lee, Yu Tin Lin, Sofia Luna, Kelli Ann Lynch, Shadler Nguyen, Micah Olivas, Elizabeth Park, Hai Phan, Anna Pons, Prima Dewi Sinawang, Cara Starnbach

Postdoctoral Faculty Sponsor

Guljannat Ablat, Heewon Cho, Lin Liu, Jinping Yang

Doctoral Dissertation Advisor (AC)

Harrison Besser, Krystal Brodsky, Nina Fatuzzo, Seokyoung Lee, Dylan Reil, Agnele Sewa

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Biochemistry (Phd Program)
- Biophysics (Phd Program)

Publications

PUBLICATIONS

- **Mechanistic Analysis of Programmed Iteration by Module 5 of the Nocardiosis-Associated Polyketide (NOCAP) Synthase.** *Biochemistry*
  Del Rio Flores, A., Phan, H., Lynch, S. R., Liu, L., Khosla, C.
  2026
- **ApoE is Secreted as a Lipid Nanoparticle by Mammalian Cells: Implications for Alzheimer's Disease Pathogenesis.** *Biochemistry*
  Hernandez Arriaza, R., Reil, D., Fatuzzo, N., Fu, M., Dai, Y., Fernandez Martinez, D., Jiang, H., Holtzman, D. M., Greicius, M. D., Khosla, C.
  2025
- **A dendritic cell population responsible for transglutaminase 2-mediated gluten antigen presentation in celiac disease.** *JCI insight*
  Yang, F. C., Besser, H. A., Chun, H. R., Albertelli, M., Fernandez-Becker, N. Q., Jabri, B., Khosla, C.
  2025

- **Peyer's patch B cells sample transglutaminase-gluten complexes and drive celiac disease autoimmunity.** *Gastroenterology*
  Fleur du Pré, M., Kleppa, L., Dewan, A. E., Meling, M. T., Høydahl, L. S., Besser, H. A., Khosla, C., Sollid, L. M.
  2025
- **Self-Resistance Guided Discovery of a Hybrid Polyketide-Peptide Antibiotic from Vibrio ruber.** *Journal of the American Chemical Society*
  Kishore, S., Privalsky, T. M., Del Rio Flores, A., Lynch, S. R., Khosla, C.
  2025
- **Basic Science and Pathogenesis.** *Alzheimer's & dementia : the journal of the Alzheimer's Association*
  Peña-Tauber, A., Arriaza, R. H., Guen, Y. L., Khosla, C., Greicius, M. D.
  2024; 20 Suppl 1: e092053
- **New Insights into the Mechanism of Action of L-681,217, a Medicinally Promising Polyketide Inhibitor of Bacterial Protein Translation.** *Biochemistry*
  Soohoo, A. M., Aguilar, R. A., Cho, H., Privalsky, T. M., Liu, L., Nguyen, K. P., Walsh, C. T., Khosla, C.
  2024
- **Characterization of the Flavin-Dependent Monooxygenase Involved in the Biosynthesis of the Nocardiosis-Associated Polyketide†.** *Biochemistry*
  Del Rio Flores, A., Khosla, C.
  2024
- **Structural basis for intermodular communication in assembly-line polyketide biosynthesis.** *Nature chemical biology*
  Cogan, D. P., Soohoo, A. M., Chen, M., Liu, Y., Brodsky, K. L., Khosla, C.
  2024
- **Structural and mechanistic analysis of Ca2+-dependent regulation of transglutaminase 2 activity using a Ca2+-bound intermediate state.** *Proceedings of the National Academy of Sciences of the United States of America*
  Sewa, A. S., Besser, H. A., Mathews, I. I., Khosla, C.
  2024; 121 (28): e2407066121
- **Enterocyte-derived and catalytically active transglutaminase 2 in the gut lumen of mice: Implications for celiac disease.** *Gastroenterology*
  Meling, M. T., Kleppa, L., Besser, H. A., Khosla, C., du Pré, M. F., Sollid, L. M.
  2024
- **Structure and Mechanisms of Assembly-Line Polyketide Synthases.** *Annual review of biochemistry*
  Soohoo, A. M., Cogan, D. P., Brodsky, K. L., Khosla, C.
  2024
- **Past, present and future of non-invasive tests to assess gluten exposure, celiac disease activity, and end-organ damage.** *Gastroenterology*
  Silvester, J. A., Elli, L., Khosla, C., Tye-Din, J.
  2024
- **Structural and Mechanistic Analysis of Ca2+Dependent Regulation of Transglutaminase 2 Activity**
  Sewa, A., Besser, H., Mathews, I., Khosla, C.
  ELSEVIER.2024: S747
- **Discovery and Characterization of the Fully Decorated Nocardiosis-Associated Polyketide Natural Product.** *Journal of the American Chemical Society*
  Kishore, S., Del Rio Flores, A., Lynch, S. R., Yuet, K. P., Khosla, C.
  2024
- **Celiac disease: mechanisms and emerging therapeutics.** *Trends in pharmacological sciences*
  Besser, H. A., Khosla, C.
  2023
- **Targeted Lysosomal Degradation of Secreted and Cell Surface Proteins through the LRP-1 Pathway.** *Journal of the American Chemical Society*
  Loppinet, E., Besser, H. A., Lee, C. E., Zhang, W., Cui, B., Khosla, C.
  2023

- **Genomic mining and diversity of assembly line polyketide synthases.** *Open biology*
  Kishore, S., Khosla, C.
  2023; 13 (8): 230096

- **Discovery and Characterization of Antibody Probes of Module 2 of the 6-Deoxyerythronolide B Synthase.** *Biochemistry*
  Guzman, K. M., Cogan, D. P., Brodsky, K. L., Soohoo, A. M., Li, X., Sevillano, N., Mathews, I. I., Nguyen, K. P., Craik, C. S., Khosla, C.
  2023

- **Evaluation of acebilustat, a selective inhibitor of leukotriene B4 biosynthesis, for treatment of outpatients with mild-moderate COVID-19 disease: A randomized, double-blind, placebo- controlled Phase 2 trial.** *Clinical infectious diseases : an official publication of the Infectious Diseases Society of America*
  Levitt, J. E., Hedlin, H., Duong, S., Lu, D., Lee, J., Bunning, B., Elkarra, N., Pinsky, B. A., Heffernan, E., Springman, E., Moss, R. B., Bonilla, H. F., Parsonnet, et al
  2023

- **Challenges in Harnessing Shared Within-Host Severe Acute Respiratory Syndrome Coronavirus 2 Variation for Transmission Inference.** *Open forum infectious diseases*
  Walter, K. S., Kim, E., Verma, R., Altamirano, J., Leary, S., Carrington, Y. J., Jagannathan, P., Singh, U., Holubar, M., Subramanian, A., Khosla, C., Maldonado, Y., Andrews, et al
  2023; 10 (2): ofad001

- **LRP-1 links post-translational modifications to efficient presentation of celiac disease-specific Tcell antigens.** *Cell chemical biology*
  Loppinet, E., Besser, H. A., Sewa, A. S., Yang, F., Jabri, B., Khosla, C.
  2022

- **Carnitine octanoyltransferase is important for the assimilation of exogenous acetyl-L-carnitine into acetyl-CoA in mammalian cells.** *The Journal of biological chemistry*
  Hsu, J., Fatuzzo, N., Weng, N., Michno, W., Dong, W., Kienle, M., Dai, Y., Pasca, A., Abu-Remaileh, M., Rasgon, N., Bigio, B., Nasca, C., Khosla, et al
  2022: 102848

- **Early immune markers of clinical, virological, and immunological outcomes in patients with COVID-19: a multi-omics study.** *eLife*
  Hu, Z., van der Ploeg, K., Chakraborty, S., Arunachalam, P. S., Mori, D. A., Jacobson, K. B., Bonilla, H., Parsonnet, J., Andrews, J. R., Holubar, M., Subramanian, A., Khosla, C., Maldonado, et al
  2022; 11

- **Structure-Based Prototyping of Allosteric Inhibitors of Human Uridine/Cytidine Kinase 2 (UCK2).** *Biochemistry*
  Mashayekh, S., Stunkard, L. M., Kienle, M., Mathews, I. I., Khosla, C.
  2022

- **In vivo visualization and molecular targeting of the cardiac conduction system.** *The Journal of clinical investigation*
  Goodyer, W. R., Beyersdorf, B. M., Duan, L., van den Berg, N. S., Mantri, S., Galdos, F. X., Puluca, N., Buikema, J. W., Lee, S., Salmi, D., Robinson, E. R., Rogalla, S., Cogan, et al
  2022

- **Latiglutenase Protects the Mucosa and Attenuates Symptom Severity in Patients with Celiac Disease Exposed to a Gluten Challenge.** *Gastroenterology*
  Murray, J. A., Syage, J. A., Wu, T., Dickason, M. A., Ramos, A. G., Van Dyke, C., Horwath, I., Lavin, P. T., Maki, M., Hujoel, I., Papadakis, K. A., Bledsoe, A. C., Khosla, et al
  2022

- **A Mouse Model of Celiac Disease.** *Current protocols*
  Abadie, V., Khosla, C., Jabri, B.
  2022; 2 (8): e515

- **Engineering site-selective incorporation of fluorine into polyketides.** *Nature chemical biology*
  Sirirungruang, S., Ad, O., Privalsky, T. M., Ramesh, S., Sax, J. L., Dong, H., Baidoo, E. E., Amer, B., Khosla, C., Chang, M. C.
  2022

- **Favipiravir for treatment of outpatients with asymptomatic or uncomplicated COVID-19: a double-blind randomized, placebo-controlled, phase 2 trial.** *Clinical infectious diseases : an official publication of the Infectious Diseases Society of America*

Holubar, M., Subramanian, A., Purington, N., Hedlin, H., Bunning, B., Walter, K. S., Bonilla, H., Boumis, A., Chen, M., Clinton, K., Dewhurst, L., Epstein, C., Jagannathan, et al
2022

- **KIR+CD8+ T cells suppress pathogenic T cells and are active in autoimmune diseases and COVID-19.** *Science (New York, N.Y.)*
  Li, J., Zaslavsky, M., Su, Y., Guo, J., Sikora, M. J., van Unen, V., Christophersen, A., Chiou, S., Chen, L., Li, J., Ji, X., Wilhelmy, J., McSween, et al
  2022: eabi9591

- **Fragment antigen binding domains (Fabs) as tools to study assembly-line polyketide synthases.** *Synthetic and systems biotechnology*
  Guzman, K. M., Khosla, C.
  1800; 7 (1): 506-512

- **An efficient urine peptidomics workflow identifies chemically defined dietary gluten peptides from patients with celiac disease.** *Nature communications*
  Palanski, B. A., Weng, N., Zhang, L., Hilmer, A. J., Fall, L. A., Swaminathan, K., Jabri, B., Sousa, C., Fernandez-Becker, N. Q., Khosla, C., Elias, J. E.
  2022; 13 (1): 888

- **Early non-neutralizing, afucosylated antibody responses are associated with COVID-19 severity.** *Science translational medicine*
  Chakraborty, S., Gonzalez, J. C., Sievers, B. L., Mallajosyula, V., Chakraborty, S., Dubey, M., Ashraf, U., Cheng, B. Y., Kathale, N., Tran, K. Q., Scallan, C., Sinnott, A., Cassidy, et al
  1800: eabm7853

- **Solution Structure and Conformational Flexibility of a Polyketide Synthase Module.** *JACS Au*
  Klaus, M., Rossini, E., Linden, A., Paithankar, K. S., Zeug, M., Ignatova, Z., Urlaub, H., Khosla, C., Kofinger, J., Hummer, G., Grininger, M.
  1800; 1 (12): 2162-2171

- **Prospects for Antibacterial Discovery and Development** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
  Privalsky, T. M., Soohoo, A. M., Wang, J., Walsh, C. T., Wright, G. D., Gordon, E. M., Gray, N. S., Khosla, C.
  2021; 143 (50): 21127-21142

- **Properties of a "Split-and-Stuttering" Module of an Assembly Line Polyketide Synthase** *JOURNAL OF ORGANIC CHEMISTRY*
  Guzman, K. M., Yuet, K. P., Lynch, S. R., Liu, C. W., Khosla, C.
  2021; 86 (16): 11100-11106

- **An Unusual "OR" Gate for Allosteric Regulation of Mammalian Transglutaminase 2 in the Extracellular Matrix** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
  Melkonian, A., Loppinet, E., Martin, R., Porteus, M., Khosla, C.
  2021; 143 (28): 10537-10540

- **The COVID-19 Outpatient Pragmatic Platform Study (COPPS): Study design of a multi-center pragmatic platform trial.** *Contemporary clinical trials*
  Bunning, B., Hedlin, H., Purington, N., Sundaram, V., Kapphahn, K., Weng, Y., Cunanan, K., Maldonado, Y., Singh, U., Khosla, C., O'Hara, R., Nicolls, M., Springman, et al
  2021: 106509

- **GRINS: Genetic elements that recode assembly-line polyketide synthases and accelerate their diversification** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
  Nivina, A., Paredes, S., Fraser, H. B., Khosla, C.
  2021; 118 (26)

- **GRINS: Genetic elements that recode assembly-line polyketide synthases and accelerate their diversification.** *Proceedings of the National Academy of Sciences of the United States of America*
  Nivina, A., Herrera Paredes, S., Fraser, H. B., Khosla, C.
  2021; 118 (26)

- **50 Years Ago in TheJournalofPediatrics: Association of Type 1 Diabetes Mellitus and Celiac Disease: Then and Now.** *The Journal of pediatrics*
  Ni, J., Khosla, C., Maahs, D. M.
  2021; 230: 70

- **Association of Type 1 Diabetes Mellitus and Celiac Disease: Then and Now** *JOURNAL OF PEDIATRICS*
  Ni, J., Khosla, C., Maahs, D. M.
  2021; 230: 70

- **Peginterferon Lambda-1a for treatment of outpatients with uncomplicated COVID-19: a randomized placebo-controlled trial.** *Nature communications*
  Jagannathan, P. n., Andrews, J. R., Bonilla, H. n., Hedlin, H. n., Jacobson, K. B., Balasubramanian, V. n., Purington, N. n., Kamble, S. n., de Vries, C. R., Quintero, O. n., Feng, K. n., Ley, C. n., Winslow, et al
  2021; 12 (1): 1967

- **Mapping the catalytic conformations of an assembly-line polyketide synthase module.** *Science (New York, N.Y.)*
  Cogan, D. P., Zhang, K., Li, X., Li, S., Pintilie, G. D., Roh, S. H., Craik, C. S., Chiu, W., Khosla, C.
  2021; 374 (6568): 729-734

- **SARS-CoV-2 subgenomic RNA kinetics in longitudinal clinical samples** *Open Forum Infectious Diseases*
  Verma, R., Kim, E., Martinez, G., Jagannathan, ., Rustagi, A., Parsonnet, J., Bonilla, H., Khosla, C., Holubar, M., Subramanian, A., Singh, ., Maldonado, Y., Blish, et al
  2021

- **Structure and Mechanism of the Ketosynthase-Chain Length Factor Didomain from a Prototypical Polyunsaturated Fatty Acid Synthase.** *Biochemistry*
  Santin, O., Yuet, K., Khosla, C., Moncalian, G.
  2020

- **Antibody Probes of Module 1 of the 6-Deoxyerythronolide B Synthase Reveal an Extended Conformation During Ketoreduction.** *Journal of the American Chemical Society*
  Cogan, D. P., Li, X., Sevillano, N., Mathews, I. I., Matsui, T., Craik, C. S., Khosla, C.
  2020

- **Challenges and opportunities for engineering assembly-line polyketide biosynthesis in Escherichia coli.** *Metabolic engineering communications*
  Yuet, K. P., Khosla, C.
  2020; 10: e00106

- **When the Quest for a Cure Is Personal** *CELL*
  Gordon, L., Khosla, C., Fajgenbaum, D.
  2020; 181 (1): 19

- **Complete Reconstitution and Deorphanization of the 3 MDa Nocardiosis-Associated Polyketide Synthase** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
  Yuet, K. P., Liu, C. W., Lynch, S. R., Kuo, J., Michaels, W., Lee, R. B., McShane, A. E., Zhong, B. L., Fischer, C. R., Khosla, C.
  2020; 142 (13): 5952–57

- **IL-15, gluten and HLA-DQ8 drive tissue destruction in coeliac disease.** *Nature*
  Abadie, V., Kim, S. M., Lejeune, T., Palanski, B. A., Ernest, J. D., Tastet, O., Voisine, J., Discepolo, V., Marietta, E. V., Hawash, M. B., Ciszewski, C., Bouziat, R., Panigrahi, et al
  2020

- **Genome-wide analysis of targets of macrolide antibiotics in mammalian cells.** *The Journal of biological chemistry*
  Gupta, A., Okesli-Armlovich, A., Morgens, D., Bassik, M. C., Khosla, C.
  2020

- **Enhancing the Antiviral Efficacy of RNA-Dependent RNA Polymerase Inhibition by Combination with Modulators of Pyrimidine Metabolism.** *Cell chemical biology*
  Liu, Q. n., Gupta, A. n., Okesli-Armlovich, A. n., Qiao, W. n., Fischer, C. R., Smith, M. n., Carette, J. E., Bassik, M. C., Khosla, C. n.
  2020

- **Evolution and Diversity of Assembly-Line Polyketide Synthases** *CHEMICAL REVIEWS*
  Nivina, A., Yuet, K. P., Hsu, J., Khosla, C.
  2019; 119 (24): 12524–47

- **Latiglutenase Treatment for Celiac Disease: Symptom and Quality of Life Improvement for Seropositive Patients on a Gluten-Free Diet.** *GastroHep*
  Syage, J. A., Green, P. H., Khosla, C., Adelman, D. C., Sealey-Voyksner, J. A., Murray, J. A.
  2019; 1 (6): 293–301
- **Discovery of small molecule inhibitors of human uridine-cytidine kinase 2 by high-throughput screening.** *Bioorganic & medicinal chemistry letters*
  Okesli-Armlovich, A., Gupta, A., Jimenez, M., Auld, D., Liu, Q., Bassik, M. C., Khosla, C.
  2019
- **Tunable Enzymatic Synthesis of the Immunomodulator Lipid IVA To Enable Structure-Activity Analysis** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
  Sankaranarayanan, K., Antaris, X. X., Palanski, B. A., El Gamal, A., Kao, C. M., Fitch, W. L., Fischer, C. R., Khosla, C.
  2019; 141 (24): 9474–78
- **Engineering of Chimeric Polyketide Synthases Using SYNZIP Docking Domains** *ACS CHEMICAL BIOLOGY*
  Klaus, M., D'Souza, A. D., Nivina, A., Khosla, C., Grininger, M.
  2019; 14 (3): 426–33
- **Engineering of Chimeric Polyketide Synthases Using SYNZIP Docking Domains.** *ACS chemical biology*
  Klaus, M., D'Souza, A. D., Nivina, A., Khosla, C., Grininger, M.
  2019
- **From Active Sites to Machines: A Challenge for Enzyme Chemists.** *Israel journal of chemistry*
  Khosla, C.
  2019; 59 (1-2): 37-40
- **From Active Sites to Machines: A Challenge for Enzyme Chemists** *ISRAEL JOURNAL OF CHEMISTRY*
  Khosla, C.
  2019; 59 (1-2): 37–40
- **Substrates, inhibitors, and probes of mammalian transglutaminase 2.** *Analytical biochemistry*
  Zhuang, R. n., Khosla, C. n.
  2019: 113560
- **In Vivo Measurement of Redox-Regulated TG2 Activity** *FUNCTIONAL DISULPHIDE BONDS: METHODS AND PROTOCOLS*
  Melkonian, A. V., Weng, N., Palanski, B. A., Khosla, C.
  edited by Hogg, P.
  2019; 1967: 263–74
- **In Vivo Measurement of Redox-Regulated TG2 Activity.** *Methods in molecular biology (Clifton, N.J.)*
  Melkonian, A. V., Weng, N. n., Palanski, B. A., Khosla, C. n.
  2019; 1967: 263–74
- **A tribute to Professor Jay Bailey: A pioneer in biochemical engineering** *AICHE JOURNAL*
  Khosla, C., Clark, D. S., Chen, W.
  2018; 64 (12): 4179–81
- **A Tribute to James E. Bailey** *AICHE JOURNAL*
  Chen, W., Harold, M. P., Clark, D., Khosla, C.
  2018; 64 (12): 4178
- **Discovery and Characterization of a Thioesterase-Specific Monoclonal Antibody That Recognizes the 6-Deoxyerythronolide B Synthase** *BIOCHEMISTRY*
  Li, X., Sevillano, N., La Greca, F., Hsu, J., Mathews, I. I., Matsui, T., Craik, C. S., Khosla, C.
  2018; 57 (43): 6201–8
- **Discovery and Characterization of a Thioesterase-Specific Monoclonal Antibody That Recognizes the 6-Deoxyerythronolide B Synthase.** *Biochemistry*
  Li, X., Sevillano, N., La Greca, F., Hsu, J., Mathews, I. I., Matsui, T., Craik, C. S., Khosla, C.

2018

- **Interleukin 4 is inactivated via selective disulfide-bond reduction by extracellular thioredoxin** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
  Plugis, N. M., Weng, N., Zhao, Q., Palanski, B. A., Maecker, H. T., Habtezion, A., Khosla, C.
  2018; 115 (35): 8781-8786

- **Interleukin 4 is inactivated via selective disulfide-bond reduction by extracellular thioredoxin.** *Proceedings of the National Academy of Sciences of the United States of America*
  Plugis, N. M., Weng, N., Zhao, Q., Palanski, B. A., Maecker, H. T., Habtezion, A., Khosla, C.
  2018

- **Cystamine and Disulfiram Inhibit Human Transglutaminase 2 via an Oxidative Mechanism** *BIOCHEMISTRY*
  Palanski, B. A., Khosla, C.
  2018; 57 (24): 3359–63

- **Structure-Function Analysis of the Extended Conformation of a Polyketide Synthase Module** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
  Li, X., Sevillano, N., La Greca, F., Deis, L., Liu, Y., Deller, M. C., Mathews, I. I., Matsui, T., Cane, D. E., Craik, C. S., Khosla, C.
  2018; 140 (21): 6518–21

- **HEx: A heterologous expression platform for the discovery of fungal natural products** *SCIENCE ADVANCES*
  Harvey, C. J. B., Tang, M., Schlecht, U., Horecka, J., Fischer, C. R., Lin, H., Li, J., Naughton, B., Cherry, J., Miranda, M., Li, Y., Chu, A. M., Hennessy, et al
  2018; 4 (4): eaar5459

- **Endoplasmic reticulum-resident protein 57 (ERp57) oxidatively inactivates human transglutaminase 2** *JOURNAL OF BIOLOGICAL CHEMISTRY*
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