

## Lauffenburger Research with CGR



CGR research focuses on understanding how cell communication networks within and between cells and between organs are disrupted in disease, using a compendium of computational and experimental approaches that often involve highly multiplexed measurements from patient samples including peritoneal fluid, endometrial biopsies, and lesions. These approaches derive from extensive research by CGR investigator Doug Lauffenburger in cancer and other diseases (see links below). For more information about Lauffenburger's research, click [here](#).

<https://pubmed.ncbi.nlm.nih.gov/33048992/>

Mining for humoral correlates of HIV control and latent reservoir size.

Das J, Devadhasan A, Linde C, Broge T, Sassic J, Mangano M, O'Keefe S, Suscovich T, Streeck H, Irrinki A, Pohlmeier C, Min-Oo G, Lin S, Weiner JA, Cihlar T, Ackerman ME, Julg B, Deeks S, Lauffenburger DA, Alter G.

PLoS Pathog. 2020 Oct 13;16(10):e1008868. doi: 10.1371/journal.ppat.1008868. eCollection 2020 Oct.

PMID: 33048992

<https://pubmed.ncbi.nlm.nih.gov/32884153/>

Ad26 vaccine protects against SARS-CoV-2 severe clinical disease in hamsters.

Tostanoski LH, Wegmann F, Martinot AJ, Loos C, McMahan K, Mercado NB, Yu J, Chan CN, Bondoc S, Starke CE, Nekorchuk M, Busman-Sahay K, Piedra-Mora C, Wrijil LM, Ducat S, Custers J, Atyeo C, Fischinger S, Burke JS, Feldman J, Hauser BM, Caradonna TM, Bondzie EA, Dagotto G, Gebre MS, Jacob-Dolan C, Lin Z, Mahrokhian SH, Nampanya F, Nityanandam R, Pessaint L, Porto M, Ali V, Benetiene D, Tevi K, Andersen H, Lewis MG, Schmidt AG, Lauffenburger DA, Alter G, Estes JD, Schuitemaker H, Zahn R, Barouch DH.

Nat Med. 2020 Sep 3. doi: 10.1038/s41591-020-1070-6. Online ahead of print.

PMID: 32884153

<https://pubmed.ncbi.nlm.nih.gov/32753478/>

An interspecies translation model implicates integrin signaling in infliximab-resistant inflammatory bowel disease.

Brubaker DK, Kumar MP, Chiswick EL, Gregg C, Starchenko A, Vega PN, Southard-Smith AN, Simmons AJ, Scoville EA, Coburn LA, Wilson KT, Lau KS, Lauffenburger DA.

Sci Signal. 2020 Aug 4;13(643):eaay3258. doi: 10.1126/scisignal.aay3258.

PMID: 32753478

<https://pubmed.ncbi.nlm.nih.gov/32054749/>

Translating preclinical models to humans.

Brubaker DK, Lauffenburger DA.

Science. 2020 Feb 14;367(6479):742-743. doi: 10.1126/science.aay8086.

PMID: 32054749

<https://pubmed.ncbi.nlm.nih.gov/31378464/>

Fatty Acid Metabolites Combine with Reduced  $\beta$  Oxidation to Activate Th17 Inflammation in Human Type 2 Diabetes.

Nicholas DA, Proctor EA, Agrawal M, Belkina AC, Van Nostrand SC, Panneerseelan-Bharath L, Jones AR 4th, Raval F, Ip BC, Zhu M, Cacicedo JM, Habib C, Sainz-Rueda N, Persky L, Sullivan PG, Corkey BE, Apovian CM, Kern PA, Lauffenburger DA, Nikolajczyk BS.

Cell Metab. 2019 Sep 3;30(3):447-461.e5. doi: 10.1016/j.cmet.2019.07.004. Epub 2019 Aug 1.

PMID: 31378464

<https://pubmed.ncbi.nlm.nih.gov/29494996/>

In vivo systems biology approaches to chronic immune/inflammatory pathophysiology.

Starchenko A, Lauffenburger DA.

Curr Opin Biotechnol. 2018 Aug;52:9-16. doi: 10.1016/j.copbio.2018.02.006. Epub 2018 Feb 27.

PMID: 29494996 Review.