

POSTDOCTORAL TRAINING PROGRAM



REGENERON

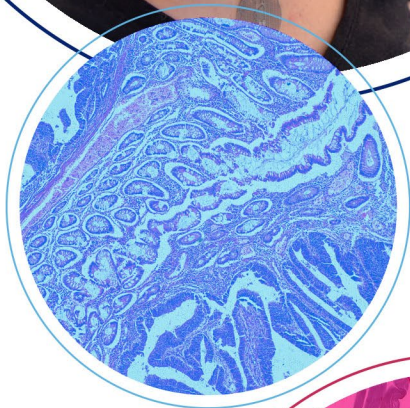
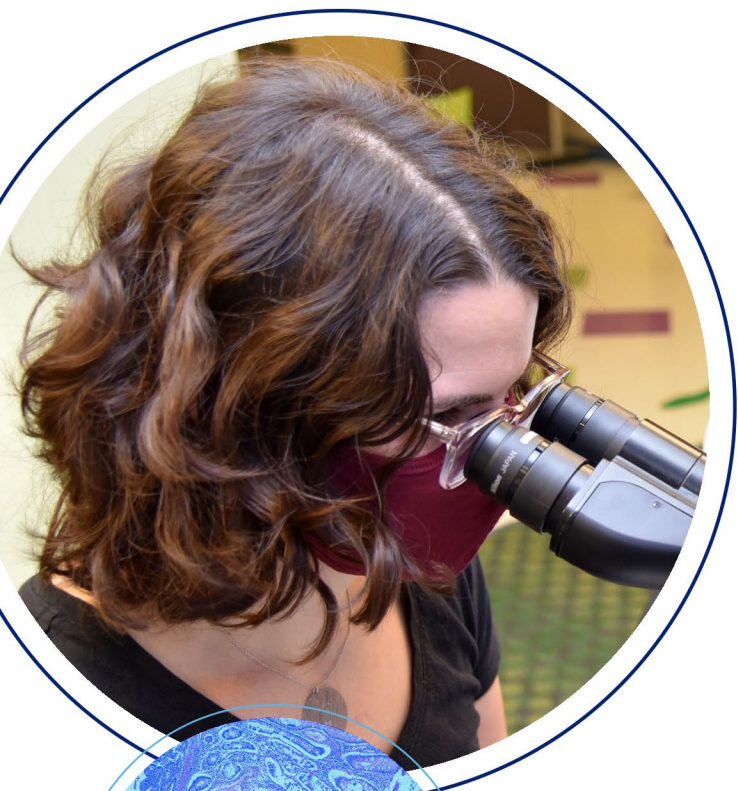


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REGENERON POSTDOCTORAL PROGRAM

RATIONALE AND MISSION

The Regeneron postdoctoral program seeks to:

- Nurture and support the growth of developing scientists
- Bolster the scientific pipeline, both internally and externally
- Increase visibility and engagement with developing scientists and academic institutions
- Excite current scientific staff by giving them an opportunity to pursue creative non-pipeline projects and mentor talented trainees
- Continue and enhance Regeneron's strong tradition of publishing innovations in basic science

Mission Statement

The Regeneron Postdoctoral Program was designed with the goal of being among the best postdoctoral training programs in the country. It is a multi-faceted program that integrates cutting edge science with didactic training, discussion groups, and focused, multi-tiered mentoring.



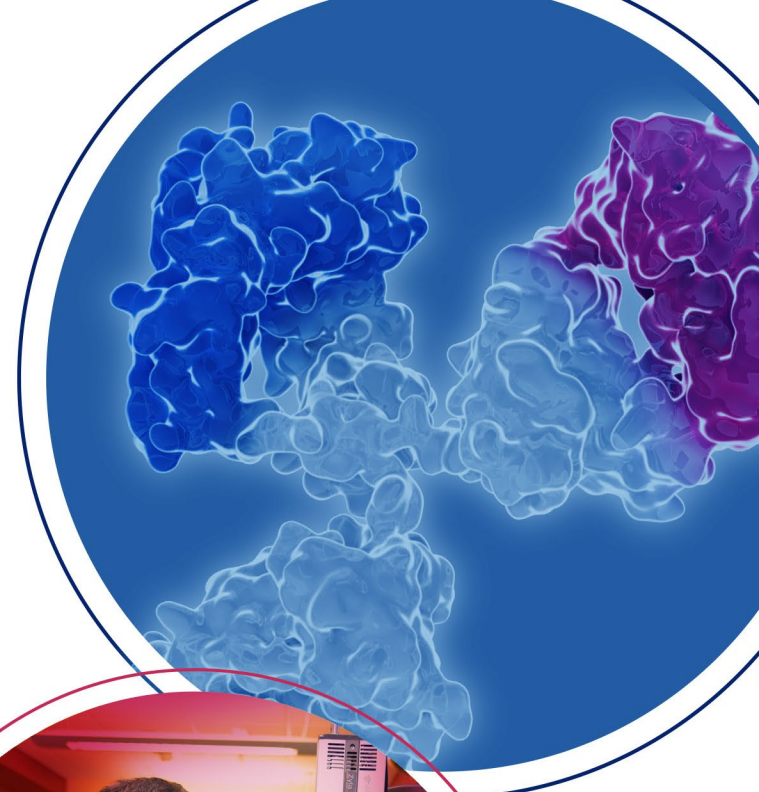
Postdoctoral Program Structure

- Up to 4 years of training in a program designed and run by award-winning educators
- Publishing, conference attendance, and external presentations required
- Small number of fellows selected each year to ensure individual attention and focused mentoring
- Optimal program start is cohort-based and occurs in the summer of each year, but start dates are flexible
- Mentors: 4 layers of mentorship provided:
 - Program Staff/Program Directors
 - Research Mentor
 - Career Mentor
 - Peer Mentor (“Buddy”)

Qualifications for Postdoctoral Research Projects

- The project contains forward-looking questions with room for creativity and critical thinking
- The project does not lie in the critical path to a timeline-driven deliverable
- The project appears feasible and is projected to produce publishable results within the postdoctoral training period

NOTE: fellows can select projects proposed by Regeneron scientists or can propose another project in collaboration with potential research mentors



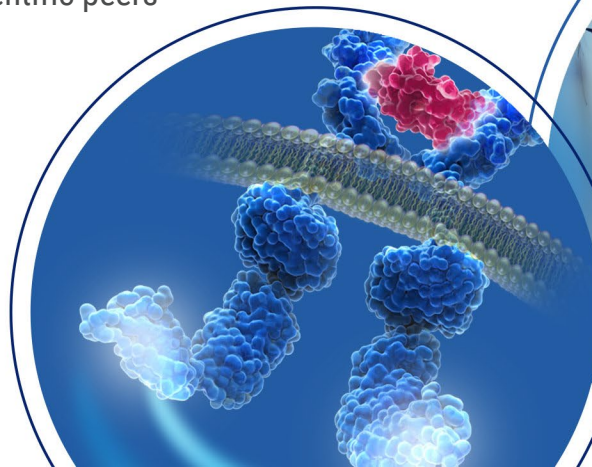
As part of the Postdoctoral Program you will:

- Conduct forward-looking, innovative, and creative research to address novel scientific question under the auspices of a scientist mentor, many of whom are highly-published Regeneron scientists
- Publish and disseminate data via external conferences and peer-reviewed publications
- Assist with mentoring and teaching interns and other more junior trainees
- Participate in postdoctoral program activities such as weekly meetings and the annual research conference
- Present data internally, including at lab meetings, company-wide seminars
- Provide ongoing reports of research progress to supervisor and program staff

Experience and required skills:

- Doctoral degree in a relevant discipline
- Scientists looking for their first postdoctoral training (or those with less than one year of postdoctoral training)
- Superior scientific skills including critical and analytical thinking
- Demonstrated publication success as evidenced by peer-reviewed publications
- Ability to interact dynamically and constructively with scientific peers
- Note: Occasional travel
- A full academic CV and letters of recommendation are required (please find additional details in the application)

[Regeneron Postdoc Application](#)



RECRUITMENT PROCESS AND TIMELINE

- Applications accepted online from October 1st – December 1st
- Starting October 1st, the links will be provided to apply online

[Regeneron Postdoc Application](#)



- A full academic CV and letters of recommendation are required (please find additional details in the application)
- Applications received after December 1st may not be considered
- Following the close date, please allow 3-4 months for review and interviews
- Targeted Start Date: Summer 2022, but the start date is flexible

[Contact Us](#)



REGENERON POSTDOC PUBLICATIONS

2021

Horowitz JE, Warner N, Staples J, Murchie R, Van Hout CV, King A, Fiedler K, Reid JG, Overton JD, Shuldiner AR, Murray MF, Baras A, Carey DJ, Dewey FE, Griffiths A, Gottesman O, Muise A, Gonzaga-Jauregui C. (2021) Mutation spectrum of NOD2 in pediatric inflammatory bowel disease reveals recessive Mendelian inheritance as a main driver of Crohn's Disease. *Sci Rep* Mar 10;11(1):5595. [📄](#)

Gao C, Marcketta A, **Backman J**, O'Dushlaine C, Staples J, Revez Ferreira M A, Lotta L, Overton J, Reid J, Mirshahi T, Baras A, Abecasis G, Shuldiner A, Van Hout C, McCarthy S. (2021) Genome-wide association analysis of serum alanine and aspartate aminotransferase, and the modifying effects of BMI in 388k European individuals. *Genetic Epidemiology* Sep;45(6):664-681. [📄](#)

Panea C, Zhang R, VanValkenburgh J, Ni M, Adler C, Wei Y, Ochoa F, Schmahl J, Tang Y, Siao C, Poueymirou W, Espert J, Lim W, Atwal G, Murphy A, Sleeman M, Hovhannisyan Z, Haxhinasto S. (2021) Butyrophilin-like 2 regulates site-specific adaptations of intestinal $\gamma\delta$ intraepithelial lymphocytes. *Commun Biol.* Jul 26;4(1):913. [📄](#)

2020

Ye X, Waite J, Dhanik A, Gupta N, Zhong M, Adler C, Evangelia M, Ni M, Wei Y, Gurer C, Zhang W, Macdonald L, Murphy A, Sleeman M, Skokos D (2020) Endogenous retroviral proteins provide an immunodominant but not requisite antigen in a murine immunotherapy tumor model. *Oncolmunology* 9(1), 1758602. [📄](#)

Asrat S, Kaur N, Liu X, Ben LH, Kajimura D, Murphy AJ, Sleeman MA, Limnander A, Orengo JM. (2020) Chronic allergen exposure drives accumulation of long-lived IgE plasma cells in the bone marrow, giving rise to serological memory. *Sci Immunol* 5(43). [📄](#)

Ye X, Waite J, **Dhanik A**, Gupta N, Zhong M, Adler C, Malahias E, Ni M, Wei Y, Gurer C, Zhang W, Macdonald L, Murphy A, Sleeman M, Skokos D. (2020) Endogenous retroviral proteins provide an immunodominant but not requisite antigen in a murine immunotherapy tumor model." *Oncoimmunology* May 13;9(1):1758602. [📄](#)

Shah S, Henry A... **Backman JD**... Kuchenbaecker K, Ellinor PT, Lang CC, Stefansson K, Smith JG, Vasan, Swerdlow, Lumbers RT. (2020) Genome-wide association and Mendelian randomization analysis provide insights into the pathogenesis of heart failure. *Nat Commun* 11(1):163. [📄](#)

Benitez A, Khalil-Agüero S, Nandakumar A, Gupta N, Zhang W, Atwal G, Murphy A, Sleeman M, Haxhinasto S. (2020) Absence of central tolerance in Aire-deficient mice synergizes with immune-checkpoint inhibition to enhance antitumor responses. *Commun Biol.* Jul 8;3(1):355. [📄](#)

REGENERON POSTDOC PUBLICATIONS

2019

Kim J, Dominguez Gutierrez G, Xin Y, Cavino K, Sung B, Sipos B, Kloeppel G, Gromada J, Okamoto H. (2019) Increased SLC38A4 Amino Acid Transporter Expression in Human Pancreatic α -Cells After Glucagon Receptor Inhibition. *Endocrinology* 160(5):979–988. [📄](#)

Zamolodchikov D, Bai Y, Tang Y, McWhirter JR, Macdonald LE, Alessandri-Haber N. (2019) A Short Isoform of Coagulation Factor XII mRNA Is Expressed by Neurons in the Human Brain. *Neuroscience* Aug 10;413:294-307. [📄](#)

Gao J, **Van Meter M**, Hernandez Lopez S, Chen G, Huang Y, Ren S, Zhao Q, Rojas J, Gurer C, Thurston G, Kuhnert F. (2019) Therapeutic targeting of Notch signaling and immune checkpoint blockade in a spontaneous, genetically heterogeneous mouse model of T-cell acute lymphoblastic leukemia. *Dis Model Mech* 12(9). [📄](#)

Decker CE, Young T, Pasnikowski E, Chiu J, Song H, Wei Y, Thurston G, Daly C. (2019) Genome-scale CRISPR activation screen uncovers tumor-intrinsic modulators of CD3 bispecific antibody efficacy. *Sci Rep* 9(1):20068. [📄](#)

Cruz JW,... Kyratsous CA, Prasad BC. (2019) A novel bispecific antibody platform to direct complement activity for efficient lysis of target cells. *Sci Rep* Aug 19;9(1):12031. doi: 10.1038/s41598-019-48461-1. [📄](#)

2018

Wolken DMA, Idone V, Hatsell, SH, Yu PB, Economides A. (2018) The obligatory role of Activin A in the formation of heterotopic bone in Fibrodysplasia Ossificans Progressiva. *Bone* Apr;109:210-217. [📄](#)


Nielsen JB, Thorolfsdottir RB...**Chung JH...** Teslovich TM, Carey DJ, Gudbjartsson DF, Stefansson K, Abecasis GR, Hveem K, Willer CJ. (2018) Biobank-driven genomic discovery yields new insight into atrial fibrillation biology. *Nature Genetics* 50(9), 1234. [📄](#)


Bai Y, Wang D, Li W, Huang Y, **Ye X**, Waite J, Barry T, Edelman KH, Levinkova N, Guo C, Skokos D, Wei Y, Macdonald LE, Fury W (2018) Evaluation of the capacities of mouse TCR profiling from short read RNAseq data. *PLOS One* 13, E0207020. [📄](#)

REGENERON POSTDOC PUBLICATIONS

2018 *(continued)*


Nielsen JB, Thorolfsdottir RB...**Backman JD**...Teslovich TM, Carey DJ, Gudbjartsson DF, Stefansson K, Abecasis GR, Hveem K, Willer CJ. (2018) Biobank-driven genomic discovery yields new insight into atrial fibrillation biology. *Nature Genetics* 50(9), 1234. 


Gutierrez GD, Xin Y, Okamoto H, Kim J, Lee AH, Ni M, Adler C, Yancopoulos GD, Murphy AJ, Gromada J (2018). Gene signature of proliferating human pancreatic α -cells. *Endocrinology* Sep 1;159(9):3177-3186. 


Xin Y, **Gutierrez GD**, Okamoto H, Kim J, Lee AH, Adler C, Ni M, Yancopoulos GD, Murphy AJ, Gromada J (2018). Pseudotime ordering of single human β -cells reveals states of insulin production and unfolded protein response. *Diabetes* Sep;67(9):1783-1794. 


Kleiner SD, Gomez B, Megra E, Na R, Bhavsar K, Cavino Y, Xin J, Rojas G. **Dominguez-Gutierrez B**, Zambrowicz B, Carrat G, Chabosseau P, Hu M, Murphy AJ, Yancopoulos GD, Rutter GA, Gromada J. (2018). "Mice harboring the human SLC30A8 R138X loss-of-function mutation have increased insulin secretory capacity", *Proc Natl Acad Sci* 115: E7642-E49 

2017

Wang L, Sui L, Panigrahi SK, Meece K, Xin Y, **Kim J**, Gromada J, Doege CA, Wardlaw SL, Egli D, Leibel RL (2017). PC1/3 deficiency impacts POMC processing in human embryonic stem cell-derived hypothalamic neurons. *Stem Cell Rep* 8(2):264-277. 

Kim Y, **Kim J**, Okamoto H, Ni M, Wei Y, Adler C, Murphy AJ, Yancopoulos GD, Lin C, Gromada J (2016). RNA sequencing of single human islet cells reveals type 2 diabetes genes. *Cell Metabol* 26(4):608-615. 


Kim J, Okamoto H, Huang Z, Anguiano G, Chen A, Liu Q, Cavino K, Xin Y, Na E, Hamid R, Lee J, Zambrowicz B, Unger R, Murphy AJ, Xu Y, Yancopoulos GD, Li W-H, Gromada J (2017). Amino acid transporter Slc38a5 controls glucagon receptor inhibition-induced pancreatic α -cell hyperplasia in mice. *Cell Metabol* 25(6):1348-1361. 


Gosalia N, Economides AE, Dewey FE, Balasubramanian S (2017) MAPPIN: A method for annotating, predicting pathogenicity, and mode of inheritance for nonsynonymous variants, *Nucleic Acids Research* 45(18), 10393. 


Gutierrez GD, Gromada J, Sussel L (2017). "Heterogeneity of the Pancreatic Beta Cell." *Front Genet* 8: 22. 

REGENERON POSTDOC PUBLICATIONS


2016


Dhanik A, Kirshner JK, Macdonald D, Thurston G, in HC, Murphy AJ, Zhang W (2016). In silico discovery of cancer-specific peptide-HLA complexes for targeted therapy. BMC Bioinformatics 17(1):1-14. 


Guinnet J, Wang TD, Laajal...**Dhanik A**... (2016). The prostate cancer challenge DREAM community. Prediction of overall survival for patients with metastatic castration-resistant prostate cancer: development of a prognostic model through a crowdsourcing challenge with open clinical trial data, Lancet Oncology Jan;18(1):132-142. 

Atansio A, Decman V, White D, Ramos M, **Ikiz B**, Lee HC, Siao CJ, Brydges S, LaRosa E, Bai Y, Fury W, Burfiend P, Zamfirova R, Warshaw G, Orengo J, Oyejide A, Fralish M, Auerbach W, Poueymirou W, Freudenberg J, Gong G, Zambrowicz B, Valenzuela D, Yancopoulos, Murphy A, Lai KM (2016). C9orf72 ablation causes immune dysregulation characterized by leukocyte expansion, autoantibody production, and glomerulonephropathy in mice. Sci Rep 16(6):23204. 


Kim Y, Okamoto H, **Kim J**, Ni M, Adler C, Cavino K, Na E, Murphy AJ, Yancopoulos GD, Lin C, Gromada J (2016). Single cell RNAseq reveals that pancreatic beta-cells from old mice have a young gene signature. Endocrinol 157(9):3431-3438. 

Xin Y, Okamoto H, **Kim J**, Ni M, Adler C, Cavino K, Na E, Murphy A, Yancopoulos G, Lin C, Gromada J. (2016) Single-Cell RNAseq Reveals That Pancreatic β -Cells From Very Old Male Mice Have a Young Gene Signature. Endocrinology. Sep;157(9):3431-8. 

Kim Y, **Kim J**, Ni M, Wei Y, Okamoto H, Lee J, Adler C, Cavino K, Murphy AJ, Yancopoulos GD, Lin C, Gromada J (2016). Use of the fluidigm C1 platform for RNA sequencing of single mouse pancreatic islet cells. PNAS 113(12):3293-3298. 

Dewey FE, Murray MF, Overton JD, Habegger L,..., **Gosalia N** et al. (2016) Distribution and clinical impact of functional variants in 50,726 whole-exome sequences from the DiscovEHR study, Science 354, 6319. 

2015

Okamoto H, **Kim J**, Aglione JP, Lee J, Cavino K, Na E, Rafique A, Kim JH, Harp J, Valenzuela DM, Yancopoulos GD, Murphy AJ, Gromada J (2015). Glucagon receptor blockade with a human antibody normalizes blood glucose in diabetic mice and monkeys. Endocrinol 156(8):2781-2794. 

Hatsell SJ, Idone V, **Wolken DMA**, Huang L, Kim HJ, Wang L, Wen X, Nannuru KC, Jimenez J, Xie L, Das N, Makhoul G, Chernomorsky R, D'Ambrosio D, Corpina RA, Schoenherr C, Feeley K, Yu PB, Yancopoulos GD, Murphy AJ, Economides AN. (2015) ACVR1R206H receptor mutation causes fibrodysplasia ossificans progressiva by imparting responsiveness to activin A. Science Translational Medicine 7(303). 