Diane Carrera

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2807 Hastings Shore Lane
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EDUCATION

California Institute of Technology, Pasadena, California **2004-2009**
Ph. D., Organic Chemistry
Advisor: Prof. David W. C. MacMillan

Stanford University, Palo Alto, California **1998-2002**
B.S. with Honors, Chemistry
Advisor: Prof. Paul A. Wender

EXPERIENCE

Scientist, Process Chemistry **May 2013-present**
Genentech

- *Early and late stage process research for prec-clinical to Ph2 small molecule development projects*
- *Experience working under cGMP conditions including writing, reviewing and executing batch records, recording incidents with the Trackwise system and setting material specifications*
- *Extensive experience with cross-functional teams to support Discovery Chemistry SAR, final target selection and preliminary toxicology studies.*

Associate Scientist, Process Chemistry **Oct 2009-May 2013**
Genentech

Graduate Research with Professor David W. C. MacMillan **2004-2009**
California Institute of Technology, Pasadena, California

- *Development of an organocatalytic, enantioselective reductive amination of ketones with a mild reductant*
- *Investigation of the mechanism and reaction kinetics of the organocatalytic reductive amination of ketones*
- *Designed and implemented a novel organocatalytic Petasis reaction of unactivated imines and enamines with potassium trifluoro(organoborate) salts*

Researcher at Johnson & Johnson, Medicinal Chemistry **2002-2003**
Johnson & Johnson, La Jolla, California

- *Developed synthetic route towards small molecule kinase inhibitors, synthesized and evaluated SAR for related analogs*

Undergraduate Research with Professor Paul A. Wender **2000-2002**
Stanford University, Palo Alto, California

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- *Designed and performed multiple step syntheses to access a key intermediate in the total synthesis of a Bryostatin analog*
- *Subsequent analysis of intermediates to define the absolute stereochemistry of the biologically active compound.*

Medicinal Chemistry Intern at Tularik **2000**
Tularik, South San Francisco, California

- *Prepared a library of small molecules in the course of designing novel antibacterial agents*
- *Optimization of a novel Cu-catalyzed Suzuki reaction with aryl boronates*

PUBLICATIONS

"Process Development of the Synthesis and Purification of a Reactive Immuno-PET Intermediate" **Carrera, D. E**.; Nguyen, Tina; Medley, Colin; Li, Yi; Angelaud, Remy; Gosselin, Francis *Organic Process Research & Development* **2016**, *20*, 312.

"Process for Making Benzoxazepin Compounds" Angelaud, Remy; Beaudry, Danial; **Carrera, D. E**.; Malhotra, Sushant; Remarchuk, T.; St-Jean, F. US Patent 14/205634, published September 18, 2014.

"Synthesis of Akt Inhibitor Ipatasertib. Part 2. Total Synthesis and First Kilogram Scale-up" Remarchuk, T.; St-Jean, F.; **Carrera, D. E**.; Savage, S.; Yajima, H.; Wong, B.; Babu, S.; Deese, A.; Stults, J.; Dong, M. W.; Askin, D.; Lane, J. W.; Spencer, K. L. *Organic Process Research & Development* **2014**, *18*, 1652.

"Identification of GNE-293, a Potent and Selective PI3K delta Inhibitor: Navigating in vitro Genotoxicity while Improving Potency and Selectivity" Safina, B. S.; Sweeney, Z. K.; Li, J.; Chan, B. K.; Bisconte, A.; **Carrera, D. E.** *et al Bioorg. & Med. Chem. Lett.* **2013**, *23*, 4953.

"A Safe Synthesis of 1,5-Disubstituted 3-Amino-1H-1,2,4-triazoles from 1,3,4-Oxadiazolium Hexafluorophosphates" Wong, B.; Stumpf, A.; **Carrera, D. E.**; Gu, C.; Zhang, H. *Synthesis* **2013**, *45(8)*, 1083.

"Development of a Scalable Strategy for the Synthesis of PI3Kδ Inibitors: Selective and Efficient Functionalization of Purine Derivatives." **Carrera, D. E.**; Sheng, P-J.; Safina, B. S.; Li, J.; Angelaud, R. *Organic Process Research & Development* **2013**, *17*, 138.

"Development of a General, Enantioselective Organocatalytic Mukaiyama-Michael Reaction with α,β-Unsaturated Aldehydes" Borths, C. J.; **Carrera, D. E.**; MacMillan, D. W. C. *Tetrahedron* **2009**, *65*, 6746. Special Issue in Honor of the 2009 Tetrahedron Prize for Creativity in Organic Chemistry, Larry Overman.

"Enantioselective Organocatalytic Reductive Amination." Storer, R. I.; **Carrera, D. E**.; Ni, Y.; MacMillan, D. W. C. *J. Am. Chem. Soc*. **2006**, *128*, 84-86.

PATENTS

"Process for Making Benzoxazepin Compounds" Angelaud, R.; Beaudry, D.; **Carrera, D. E**.; Malhotra, S.; Remarchuk, T.; St-Jean, F. Application# 14/205,634; Docket# P4974R1(2014)

INVITED PRESENTATIONS AND POSTERS

"New Platforms to Enable Delivery of the ImmunoPET Small Molecule G02776605" Carrera, D. E. 15th Meeting on Innovation and New Technologies (MINT), Basel, Swizterland May 20-22 2014

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"Early Process Research: Developing a Synthetic Strategy for PI3Kδ Inhibitors" Carrera, D. E. The 27th International Conference and Exhibition on Organic Process Research and Development, Clearwater, FL March 2013.

"Early Process Research: Developing a Synthetic Strategy for PI3Kδ Inhibitors" Carrera, D. E. 11th Winter Conference on Medicinal and Bioorganic Chemistry, Steamboat Springs, CO January 2013.

Poster presentation: "Early Process Research: Developing a Synthetic Strategy for PI3kd Inhibitors", Gordon Research Conference on Heterocycles, Newport RI, June 2012.

AWARDS AND HONORS

- REACT Award for Green Chemistry at Roche/Genentech 2016
- Zechmeister Fellowship – California Institute of Technology 2004-2005
- Summer Student Fellowship – Johnson & Johnson 2002
- University Chemistry Fellowship – Stanford University 1999-2002
- Bing Summer Research Fellowship – Stanford University 2001
- Boeing National Merit Scholarship 1998-2002
- National Hispanic Scholar 1998