

**Maxence V. Nachury**

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**EDUCATION & TRAINING**

<b>START MONTH/ YEAR</b>	<b>END MONTH/ YEAR</b>	<b>DEGREE (if applicable)</b>	<b>INSTITUTION AND LOCATION</b>	<b>TRAINING MENTOR</b>	<b>SCIENTIFIC DISCIPLINE</b>
Sept. 1994	Aug. 1996	B.Sc.	Ecole Normale Supérieure, Paris, France	N.A.	Biology & Biochemistry
Sept. 1996	Dec. 2001	Ph. D.	University of California, Berkeley, CA and Université Paris-Orsay, France	Karsten Weis and Rebecca Heald	Cell biology & Biochemistry of RanGTP
Jan. 2002	Nov. 2007	Postdoctoral	Departments of Pathology (Stanford University) and of Global Regulators (Genentech)	Peter K. Jackson	Trafficking to the primary cilium

**ACADEMIC POSITIONS**

2007-2008 Acting Assistant Professor, Dept. of Molecular and Cellular Physiology, Stanford.  
2008-*present* Assistant Professor, Dept. of Molecular and Cellular Physiology, Stanford.  
2010- Member, BioX, Stanford  
2010- Member, Cancer Center, Stanford

**HONORS AND AWARDS**

1994 Ecole Normale Supérieure entrance competition, 2<sup>nd</sup> place.  
1997 Graduated *summa cum laude*.  
1998-2001 Boehringer Ingelheim Ph.D. Fellowship.  
2003 Helen Hay Whitney Postdoctoral Fellowship (declined).  
2003-2005 Damon Runyon Postdoctoral Fellowship.  
2007 American Association for Cancer Research, "Future Leaders, New Directions".  
2008-2011 Frederick E. Terman Fellow at Stanford University.  
2009-2011 March of Dimes Basil O'Connor Award  
2009-2012 American Heart Association Scientist Development Award  
2009-2011 Alfred P. Sloan Research Fellowship in Neuroscience  
2009-2012 Klingenstein Fellowship Award  
2010-2013 Searle Scholar award  
2011 ASCB Early Career Life Scientist Award  
2013 Keynote Speaker- Life Sciences Symposium, Florida State University.

**Teaching Awards**

2013-14 Stanford Biosciences Excellence in Teaching Award, Stanford Univ. Sch. Med.

**STANFORD COMMITTEES**

2011-2012 Director of Graduate Admissions, Program in Molecular and Cellular Physiology  
2011-*present* Member, Committee on Graduate Admissions and Policies  
2011-2012 Molecular and Cellular Physiology faculty search committee  
2011-2012 Otolaryngology/Head and Neck Surgery faculty search committee  
2012-*present* Director, Graduate Program in Molecular and Cellular Physiology, Stanford

**PROFESSIONAL ACTIVITIES****Memberships**

1997-present Member, American Society for Cell Biology  
 2007-present Member, American Society of Human Genetics  
 2013-present Member, American Society for Biophysics

**Manuscript review**

*Developmental Cell, Oncogene, Experimental Cell Research, PNAS, Journal of Cell Biology, Current Biology, BMC Cell Biology, Science Signaling, Genes and Development, Journal of Cell Science, Molecular Biology of the Cell, Nature, Nature Cell Biology, Nature Genetics, Human Molecular Genetics, PLOS Genetics, EMBO Journal, BBRC, Cell and Molecular Life Science, Science, Cell, eLife.*

**Editorial Boards**

2010-present Member, Cell Biology/Cytoskeleton section, Faculty of 1000.  
 2011-present Editorial Board, Nature Scientific Reports.

**Grant review**

2010-present *Ad Hoc reviewer* for NSF and various scientific organizations in the EU, the UK, Ireland, Austria and France.  
 2014 NIH study sections, KMBD and MIST, *ad hoc* reviewer  
 2015 NIH study sections, NTRC and MBPP, *ad hoc* reviewer

**Consulting**

2012 Novartis Institutes for BioMedical Research, Ciliopathy Program

**INVITED PRESENTATIONS**2007

FASEB Summer Conference - "The Biology of Cilia and Flagella" Saxtons River, VT.  
 ASCB-ECF Summer Meeting - "Cytoskeletal and Membrane Systems" Dijon, France.  
 FASEB Summer Conference - "The Biology and Chemistry of Vision" Snowmass, CO.  
 AACR Annual Meeting - "Future Leaders, New Directions" Los Angeles, CA.  
 Harvard Medical School - Polycystic Kidney Disease Seminar, Boston, MA.  
 Gordon Research Conference - "Cilia, Mucus, & Mucociliary Interactions" Ventura, CA.

2008

ASCB Annual Meeting - "Centrosomes and Cilia". San Francisco, CA.  
 UC Davis - Joint Seminars in Molecular Biology. Davis, CA  
 Gordon Research Conference - "Molecular Cell Biology" New London, NH.  
 ASBMB Annual Meeting- "Cell and Organelle Dynamics" San Diego, CA.

2009

ASCB Annual Meeting - Session Chair "Centrosomes and Cilia" San Diego, CA.  
 Japanese Biochemical Society Annual Meeting - "New roles of the centrosome" Kobe, Japan.  
 Cell Press LabLinks Symposium- "Epithelial Biology" San Francisco, CA.

2010

National Academy of Sciences Symposium - "Kavli Frontiers of Science" Irvine, CA.  
 Harvard Medical School - Cell Biology Departmental Seminar, Boston, MA.  
 UC Berkeley - Molecular and Cell Biology Departmental Seminar, Berkeley, CA.  
 ASBMB Symposium - "Biochemistry of Membrane Traffic" Lake Tahoe, CA.  
 FASEB Summer Conference - Session chair "The Biology of Cilia and Flagella" Saxtons River, VT.  
 University of Pennsylvania - Muscle Institute seminar. Philadelphia, PA  
 Keystone Symposium - "Cilia, Signaling and Human Disease" Monterey, CA.

2011

ASCB Annual Meeting - Early Career Life Scientist Award Lecture. Denver, CO.

NYU - Developmental Genetics Symposium. New York City, NY.  
 Gordon Research Conference - "Molecular Membrane Biology" Andover, NH.  
 FASEB Summer Conference - "Polycystic Kidney Disease" Saxtons River, VT.  
 Jules Stein Eye Institute - Distinguished Lecturer Series, Los Angeles, CA.  
 CIMBR/LMB - Joint Institute Seminar, Cambridge, UK.  
 BSCB Annual Meeting - "Form and functions of cilia and flagella" Canterbury, UK.  
 Emory University - Annual Student Symposium "The Indispensable Cilium", Atlanta, GA.  
 UC San Diego - Cellular and Molecular Medicine Departmental Seminar, San Diego, CA.

## 2012

Max Planck Institute CAESAR - Molecular Sensory Systems departmental seminar. Bonn, Germany  
 Vision Research Conference - "Retina Ciliopathies: From Genes to Mechanisms". Fort Lauderdale, FL  
 EMBO Conference - "Microtubules: Structure, Regulation and Functions". Heidelberg, Germany  
 Yale University - Department of Genetics Seminar. New Haven, CT  
 ASCB Annual Meeting- Workshop Co-organizer "Getting into and out of the cilium". San Francisco, CA

## 2013

Florida State University - Keynote Speaker, Life Sciences Symposium. Tallahassee, FL  
 BioMed Conference - "The microtubule cytoskeleton in development and disease". Barcelona, Spain  
 Gordon Research Conference - "Cilia, Mucus, & Mucociliary Interactions". Lucca, Italy  
 Gordon Research Conference - "Motile and Contractile Systems". New London, NH  
 FASEB Summer Conference - "The Biology of Cilia and Flagella". Niagara Falls, NY  
 European Society Human Genetics Annual Meeting- "The expanding world of the primary cilia". Paris, France  
 UC Irvine - Department of Developmental and Cell Biology seminar. Irvine, CA  
 Medical College of Wisconsin- Department of Cell Biology seminar. Milwaukee, WI  
 Cell Press/IPSEN Exciting Biologies Annual Meeting- "Biology of Boundaries". Istria, Croatia.

## 2014

Human Frontiers Science Program Annual Meeting- Lugano, Switzerland  
 University of Florida Center for Vision Research seminar- Gainesville, FL  
 Biophysical Society Annual Meeting Workshop "Motile and Contractile Systems"- San Francisco, CA  
 Cell Press LabLinks Symposium- "Cilia: 9+n in Health and Disease" Stanford, CA.  
 ASCB Annual Meeting- Minisymposium "Small GTPases and Lipids in Membrane Dynamics". Philadelphia, PA

## 2015

Memorial Sloan-Kettering Cancer Center, Cell Biology Seminar- New York, NY  
 FASEB Summer Conference - "The Biology of Cilia and Flagella"- Keystone, CO  
 FASEB Summer Conference - "The Biology and Chemistry of Vision"- Big Sky, MT  
 Arolla Workshop "Cell and Developmental Systems"- Arolla, Switzerland  
 CAESAR Conference "The Omnipresent Cilium - Structure, Signalling, and Motion"- Bonn, Germany  
 Klenk Symposium in Molecular Medicine "Cell polarity and cell cycle control mechanisms"- Cologne, Germany  
 West Virginia University, Biochemistry Seminar- Morgantown, WV

## 2016

Stanford University, Biology Seminar- Stanford, CA  
 Max Planck Institute of Molecular Cell Biology and Genetics, Seminar. Dresden, Germany  
 International workshop "Forces in Biomolecular Systems" - Venice, Italy  
 European Cilia conference- "Cilia, from Fundamental Biology to Human Disease" - Amsterdam, Netherlands  
 ASCB Annual Meeting- Session Co-Chair "Membrane Trafficking". San Francisco, CA

## **TEACHING**

### Classes

2008-2012: Advanced Cell Biology (MCP221/Bioc224/Bio214), lecturer and instructor  
 2012-present: Foundations in Experimental Biology (Bios 200), instructor  
 2012-present: Woods Hole Course "Fundamental Issues in Vision Research", lecturer.

### Graduate Students currently in the lab

2011-Present Gerald Liew (A\*STAR fellow)

Postdoctoral Fellows currently in the lab with past affiliation and current funding

2012-Present	Fan Ye, PhD National University of Singapore	
2010-Present	David K. Breslow, PhD UCSF, San Francisco, CA	Damon Runyon fellowship Damon Runyon Frey Award K99/R00 pathway to independence award
2012-Present	David Mick, PhD University of Freiburg, Germany	EMBO long-term fellowship
2013-Present	Didier Portran, PhD University of Grenoble, France	School of Medicine Dean's fellowship
2013-Present	Andrew Nager, PhD MIT	Damon Runyon fellowship

Postdoctoral Fellows who have left the lab with past funding and current position

Hua Jin, PhD (2008-2011)		Assistant Professor, University of Illinois at Chicago
Susan R. White, PhD (2008-2012)	Dean's fellowship, NIH NRSA fellowship	Teaching Faculty, Cañada College and Santa Clara University
Andrea Aguilar, PhD (2011-2014)	Danone Foundation award, Dean's fellowship	Assistant Reviews Editor -Nature Reviews Neurology and Nature Reviews Nephrology
Nathan Pierce, PhD (2012-2015)	Helen Hay Whitney fellowship	Verily (Google Life Science)

Visiting Scientists

2009 Nikhil Bhargava, Palo Alto High School senior student. Summer intern.  
2010 Adesuwa Ighodaro, University of Kentucky SSRP-Amgen scholar.

**PUBLICATIONS**

**Peer Reviewed Articles**

1. Nachury MV, Ryder UW, Lamond AI, Weis K (1998) Cloning and characterization of hSRP1 $\gamma$ , a tissue-specific nuclear transport factor. **Proc. Natl. Acad. Sci. U S A.** 95: 582-587.
2. Nachury MV, Weis K (1999) The direction of transport through the nuclear pore can be inverted. **Proc. Natl. Acad. Sci. U S A.** 96: 9622-9627.
3. Nachury MV, Maresca TJ, Salmon WC, Waterman-Storer CM, Heald R, Weis K (2001). Importin  $\beta$  is a mitotic target of the small GTPase Ran in spindle assembly. **Cell** 104: 95-106.
4. Kaiser BK, Nachury MV, Gardner BE, Jackson PK (2004). *Xenopus* Cdc14 $\alpha/\beta$  are localized to the nucleolus and centrosome and are required for embryonic cell division. **BMC Cell Biol.** 5 :27.
5. Blower MD\*, Nachury MV\*, Heald R, and Weis K (2005). A Rae1-containing ribonucleoprotein complex is required for mitotic spindle assembly. **Cell** 121:223-34. [\* shared authorship]
6. Miller JJ, Summers MK, Hansen DV, Nachury MV, Lehman NL, Loktev A, and Jackson PK (2006). Emi1 stably binds and inhibits the anaphase-promoting complex/cyclosome as a pseudosubstrate inhibitor. **Genes Dev.** 20: 2410-2420.4

7. Ban KH, Torres JZ, Miller JJ, Mikhalov A, [Nachury MV](#), Tung JJ, Rieder CL, Jackson PK (2007). The END network controls cyclin stability in early mitosis by anchoring the anaphase-promoting complex to the mitotic spindle. **Dev. Cell.** 13: 29-42
8. [Nachury MV](#), Loktev AV, Zhang Q, Westlake CJ, Peränen J, Merdes A, Slusarski DC, Scheller RH, Bazan JF, Sheffield VC, and Jackson PK (2007). A core complex of BBS proteins cooperates with the GTPase Rab8 to promote ciliary membrane biogenesis. **Cell.** 129:1201-1213. (cover illustration).
9. Berdugo E, [Nachury MV](#), Jackson PK and Jallepalli PV (2008). The nucleolar phosphatase Cdc14B is dispensable for chromosome segregation and mitotic exit in human cells. **Cell Cycle.** 7: 1184-1190.
10. Loktev AV, Zhang Q, Beck JS, Searby CC, Scheetz TE, Bazan JF, Slusarski DC, Sheffield VC, Jackson PK\*, and [Nachury MV\\*](#) (2008) A BBSome Subunit Links Ciliogenesis, Microtubule Stability, and Acetylation **Dev. Cell.** 15: 854–865. (cover illustration).
11. Jin H, White SR, Shida T, Schulz S, Aguiar M, Gygi SP, Bazan JF, and [Nachury MV](#) (2010). The conserved Bardet-Biedl Syndrome proteins assemble a coat that traffics membrane proteins to cilia. **Cell.** 141: 1208-19. (Cover illustration).
12. Hu Q, Milenkovic L, Jin H, Scott MP, [Nachury MV](#), Spiliotis ET and Nelson WJ (2010). A Septin Diffusion Barrier at the Base of the Primary Cilium Maintains Ciliary Membrane Protein Distribution. **Science.** 329: 436-9.
13. Shida T, Cueva JG, Xu Z., Goodman MB\* and [Nachury MV\\*](#) (2010). The major  $\alpha$ -tubulin K40 acetyltransferase  $\alpha$ TAT1 promotes rapid ciliogenesis and efficient mechanosensation. **Proc. Natl. Acad. Sci. U S A.** 107: 21517-22. [\* shared authorship].
14. Westlake CJ, Baye LM, [Nachury MV](#), Wright KJ, Ervin KE, Phu L, Chalouni C, Beck JS, Kirkpatrick DS, Slusarski DC, Sheffield VC, Scheller RH and Jackson PK (2011). Primary cilia membrane assembly is initiated by Rab11 and transport protein particle II (TRAPP II) complex-dependent trafficking of Rabin8 to the centrosome. **Proc. Natl. Acad. Sci. U S A.** 108: 2759-64.
15. Seo S, Zhang Q, Bugge K, Breslow DK, Searby CC, [Nachury MV](#), Sheffield VC (2011). A novel protein LZTFL1 regulates ciliary trafficking of the BBSome and Smoothed. **PLOS Genet.** 7:e1002358.
16. Friedmann DR, Aguilar A, Fan J, [Nachury MV](#), Marmorstein R (2012). Structure of the  $\alpha$ -tubulin acetyltransferase,  $\alpha$ TAT1, and implications for tubulin-specific acetylation. **Proc. Natl. Acad. Sci. U S A.** 109:19655-60
17. Breslow DK, Koslover EF, Seydel F, Spakowitz AJ, [Nachury MV](#) (2013). A Quantitative Assay for Protein Entry into Primary Cilia. **J. Cell Biol.** 203:129-47.
18. Ye F, Breslow DK, Koslover EF, Spakowitz AJ, Nelson WJ\* and [Nachury MV\\*](#) (2013) .Single Molecule Imaging of Ciliary Membrane Protein Dynamics. **eLife.** 2:e00654. [\* shared authorship].
19. Montagnac G, Meas-Yedid V, Irondelle M, Castro-Castro A, Franco M, Shida T, [Nachury MV](#), Benmerah A, Olivo-Marin JC, Chavrier P (2013).  $\alpha$ TAT1 catalyses microtubule acetylation at clathrin-coated pits. **Nature.** 502:567-570.
20. Howes SC, Alushin GM, Shida T, [Nachury MV](#), Nogales E (2013). Effects of tubulin acetylation and tubulin acetyltransferase binding on microtubule structure. **Mol. Biol. Cell.** 25:257-66.
21. Scheidecker S\*, Etard C\*, Pierce NW\*, Geoffroy V, Schaefer E, Muller J, Chennen K, Flori E, Pelletier V, Poch O, Marion V, Stoetzel C, Strähle U, [Nachury MV](#), Dollfus H. (2014) Exome sequencing of Bardet-Biedl syndrome patient identifies a null mutation in the BBSome subunit BBIP1 (BBS18). **J. Med. Genet.** 51:132-6. [\* shared authorship].
22. Aguilar A, Becker L, Tedeschi T, Heller S, Iomini C and [Nachury MV](#) (2014).  $\alpha$ -Tubulin K40 Acetylation is Required for Contact Inhibition of Proliferation and Cell-Substrate Adhesion. **Mol. Biol. Cell.** 25:1854-66.
23. Thauvin-Robinet C, Lee JS, Lopez E, Herranz-Pérez V, Mégarbané A, Franco B, Jegou L, Shida T, Ye F, Pasquier L, Loget P, Gigot N, Aral B, Carmignac V, Thevenon J, Courcet J-B, Munnich A, Vekemans M, Huet F, Saunier S, Faivre L, Attié-Bitach T, Garcia-Verdugo JM, Rivière J-B and [Nachury MV](#) (2014). The oral-facial-digital syndrome gene *C2CD3* encodes a positive regulator of centriole elongation. **Nat. Genet.** 46:905-11.

24. Liew GM, Ye F, Nager AR, Murphy JP, Lee JS, Aguiar M, Breslow DK, Gygi SP and Nachury MV (2014). The Intraflagellar Transport Protein IFT27 Promotes BBSome Exit from Cilia through the GTPase ARL6/BBS3. **Dev. Cell.** 31:265-278. (cover feature).
25. Mourão A, Nager AR, Nachury MV and Lorentzen E (2014). Structural Basis for Membrane Targeting of the BBSome by ARL6. **Nat. Struct. Mol. Biol.** 21:1035-41.
26. Luca VC, Jude KM, Pierce NW, Nachury MV, Fischer S, Garcia KC (2015). Structural basis for Notch1 engagement of Delta-like 4. **Science.** 347:847-53.
27. Schaedel L, Gaillard J, John K, Nachury MV, Blanchoin L and Théry M. (2015). Microtubules self-repair in response to mechanical stress. **Nat. Materials.** 14:1156-63.
28. Mick DU, Rodrigues RB, Leib RD, Adams CM, Chien AS, Gygi SP, Nachury MV. (2015). Proteomics of Primary Cilia by Proximity Labeling. **Dev Cell.** 35:497-512. (cover feature).
29. See SK, Hoogendoorn S, Chung AH, Ye F, Steinman JB, Sakata-Kato T, Miller RM, Cupido T, Zalyte R, Carter AP, Nachury MV, Kapoor TM, Chen JK. (2016). Cytoplasmic Dynein Antagonists with Improved Potency and Isoform Selectivity. **ACS Chem Biol.** 11:53-60.
30. Langousis G, Shimogawa MM, Saada EA, Vashisht AA, Spreafico R, Nager AR, Barshop WD, Nachury MV, Wohlschlegel JA, Hill KL. (2016). Loss of the BBSome perturbs endocytic trafficking and disrupts virulence of *Trypanosoma brucei*. **Proc Natl Acad Sci U S A.** 113:632-7.
31. Nager AR, Ye F, Herranz-Pérez V, Lee JS, Jin H, Garcia-Verdugo JM and Nachury MV (2016). Actin-dependent ectocytosis and BBSome-mediated retrieval remove activated GPCRs from cilia. *Submitted*

### Review Articles and Book Chapters

1. Nachury MV (2008) Tandem Affinity Purification of the BBSome, a Critical Regulator of Rab8 in Ciliogenesis. **Meth. Enzymo.** 439. 501-513.
2. Jin H and Nachury MV (2009). Quick guide to the BBSome. **Curr. Biol.** 19: R472-3.
3. Seeley ES and Nachury MV (2010). The perennial organelle: assembly and disassembly of the primary cilium. **J. Cell Sci.** 123: 511-518. (Cover illustration).
4. Seeley ES and Nachury MV (2009). Constructing and Deconstructing Roles for the Primary Cilium in Tissue Architecture and Cancer. **Methods Cell Bio.** 94: 299-313.
5. Nachury MV, Seeley ES and Jin H (2010). Trafficking to the Ciliary Membrane: How to Get Across the Periciliary Diffusion Barrier? **Ann. Rev. Cell Dev. Bio.** 26: 59-87.
6. Nachury MV (2010). Maxence Nachury: a transporting view of the primary cilium (Interview by Ben Short). **J. Cell Biol.** 191:436-7.
7. Breslow DK, Nachury MV (2011). Primary cilia: how to keep the riff-raff in the plasma membrane. **Curr Biol.** 11: R434-6.
8. Nachury MV (2011). Give chance a chance. **Mol. Biol. Cell.** 21:3919-20.
9. Pierce NW, Nachury MV (2013). Cilia grow by taking a bite out of the cell. **Dev Cell.** 27:126-7.
10. Nachury MV (2014). Why signaling in the cilium? **Philosophical Transactions of the Royal Society B.** doi:10.1098/rstb.2013.0465. (Book Chapter).
11. Breslow DK, Nachury MV (2015). Analysis of Soluble Protein Entry into Primary Cilia Using Semi-Permeabilized Cells. *In R. Basto & W. F. Marshall (Eds.), Methods in Cilia & Flagella* (pp. 203–221). (Book Chapter).

### OTHER SUPPORT

#### Active

R01 GM089933 (PI Nachury)

12/01/15-11/30/19

#### NIH/NIGMS

**Molecular Studies of Primary Cilium Biogenesis**

The proposed studies dissect the mechanisms by which BBSome transports transmembrane proteins out of the primary cilium.

Young Investigator Award (co-PIs Nachury, Théry) 12/01/12-5/30/16

**Human Frontier Science Program**

*Regulating microtubule mechanics from within: towards an understanding of intraluminal acetylation*

The goal of this collaborative proposal with Manuel Théry (CEA, France) is to test an adaptive model for mechanical stabilization of microtubules linking acetylation to alterations in rigidity.

R21 HD087126 (PI Nachury) 12/01/15-11/30/17

**NIH/NICHD**

*Proteomics of Primary Cilia through Proximity Labeling*

This innovative grant proposes to leverage proximity labeling to catalogue the ciliary proteome of various mutants.

**Completed**

#1-FY11-1231 (Nachury) 06/01/11-09/30/14

**March of Dimes**

*Functional Dissection of Signaling Receptor Removal from the Primary Cilium*

This proposal was a renewal of the Basil O'Connor award. It aimed to test the interplay between the BBSome and the IFT-A complexes in ciliary trafficking.

Scholar award (Nachury) 07/01/10-06/30/13

**Searle Scholar Program**

*Molecular dissection of signaling receptor sorting to the primary cilium*

This is a national merit-based scholarship award that provided funds to study ciliary trafficking.

Scientist Development Award (Nachury) 01/01/09- 12/31/12

**American Heart Association**

*Dilated Cardiomyopathy in Alström Syndrome: What is the Function of the Cilium in Heart Development?*

The goal of this proposal was to identify the interacting network of the Alström syndrome protein ALMS1 and conduct a focused siRNA screen to functionally validate this network.

Basil O'Connor Award (Nachury) 02/01/09-01/31/11

**March of Dimes**

*Discovery of Novel Signaling Pathways that Utilize the Primary Cilium.*

The aim was to establish new techniques for the purification of ubiquitinated proteins associated with the BBSome in order to gain insight into novel ciliary signaling pathways.

Career Development Award (Nachury) 07/01/09- 06/30/11

**AACR-Pancreatic Cancer Action Network**

*Is the loss of primary cilia permissive to the development of pancreatic carcinoma?*

We generated animals with pancreas-specific expression of K-ras and pancreas-specific depletion of IFT88 to test whether the loss of primary cilia can initiate the development of PDAC.

Neuroscience Fellowship Award (Nachury) 09/01/09-08/31/12

**Klingenstein Foundation**

*Molecular Studies of Leptin Signaling at the Primary Cilium*

This application requested support for the development of a cell culture system to study leptin signaling in order to test for the requirement for BBSome function in leptin signaling.

Research Fellowship in Neuroscience (Nachury) 09/01/09-08/31/13

**Alfred P. Sloan Foundation**

This national scholarship award supported research on ciliary signaling pathways in the nervous system.