Supplementary Figures

Patterns of Cilia Gene Dysregulations in Major Psychiatric Disorders

Wedad Alhassen[1], Siwei Chen[2,3], Marquis Vawter[4], Brianna Kay Robbins[1], Henry Nguyen[1], Thant Nyi Myint[1], Yumiko Saito[5], Anton Schulmann[6], Surya M. Nauli[7], Olivier Civelli[1,8], Pierre Baldi[2,3], Amal Alachkar[1,2]*

1 Departments of Pharmaceutical Sciences, School of Pharmacy, University of California-Irvine, CA 92697

2 Department of Computer Science, School of Information and Computer Sciences, University of California-Irvine, Irvine, CA 92697, USA

3 Institute for Genomics and Bioinformatics, School of Information and Computer Sciences, University of California-Irvine, CA 92697

4 Department of Psychiatry and Human Behavior, School of Medicine,University of California, Irvine

5 Graduate School of Integrated Arts and Sciences, Hiroshima University, Japan

6 Human Genetics Branch, National Institute of Mental Health, BETHESDA MD 20814, USA

7 Pharmaceutical Sciences, School of Pharmacy, Chapman University, Health Science Campus, Chapman University, Irvine, California 92618, United States

8 Department of Developmental and Cell Biology, School of Biological Sciences, University of California-Irvine, CA 92697

*** Corresponding Author**:

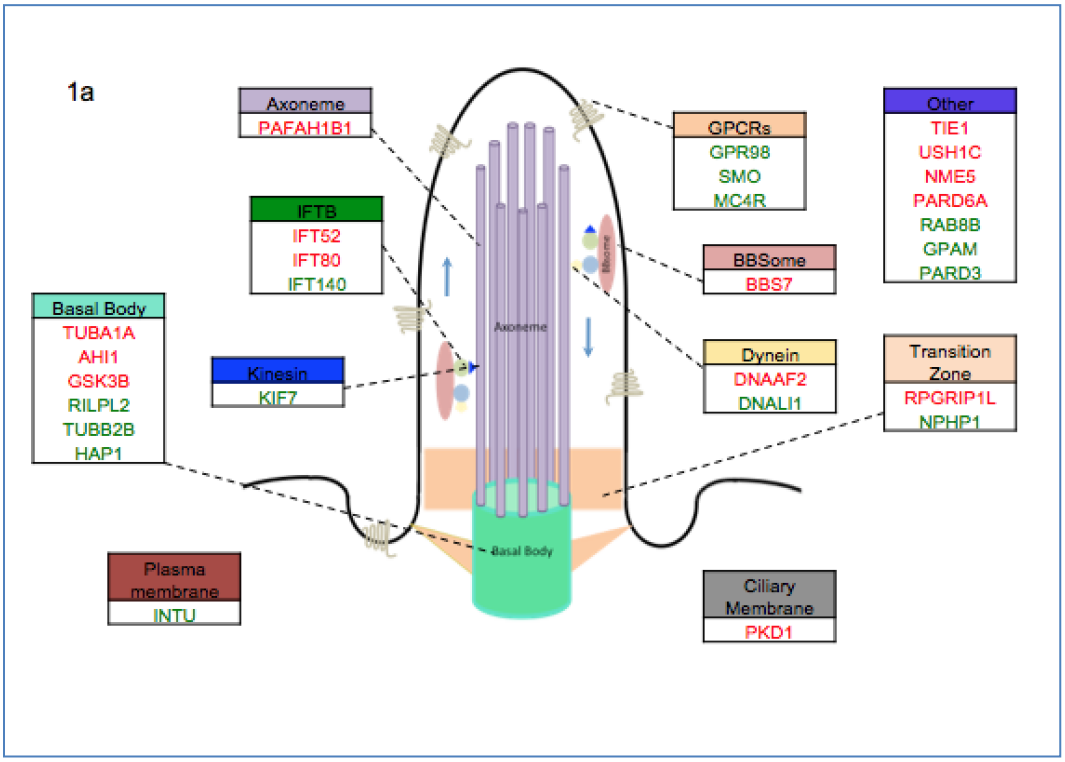
Amal Alachkar
Department of Pharmaceutical Sciences
University of California, Irvine
356A Med Surge II
Irvine CA, 92697-4625
Phone; 949-824-2522

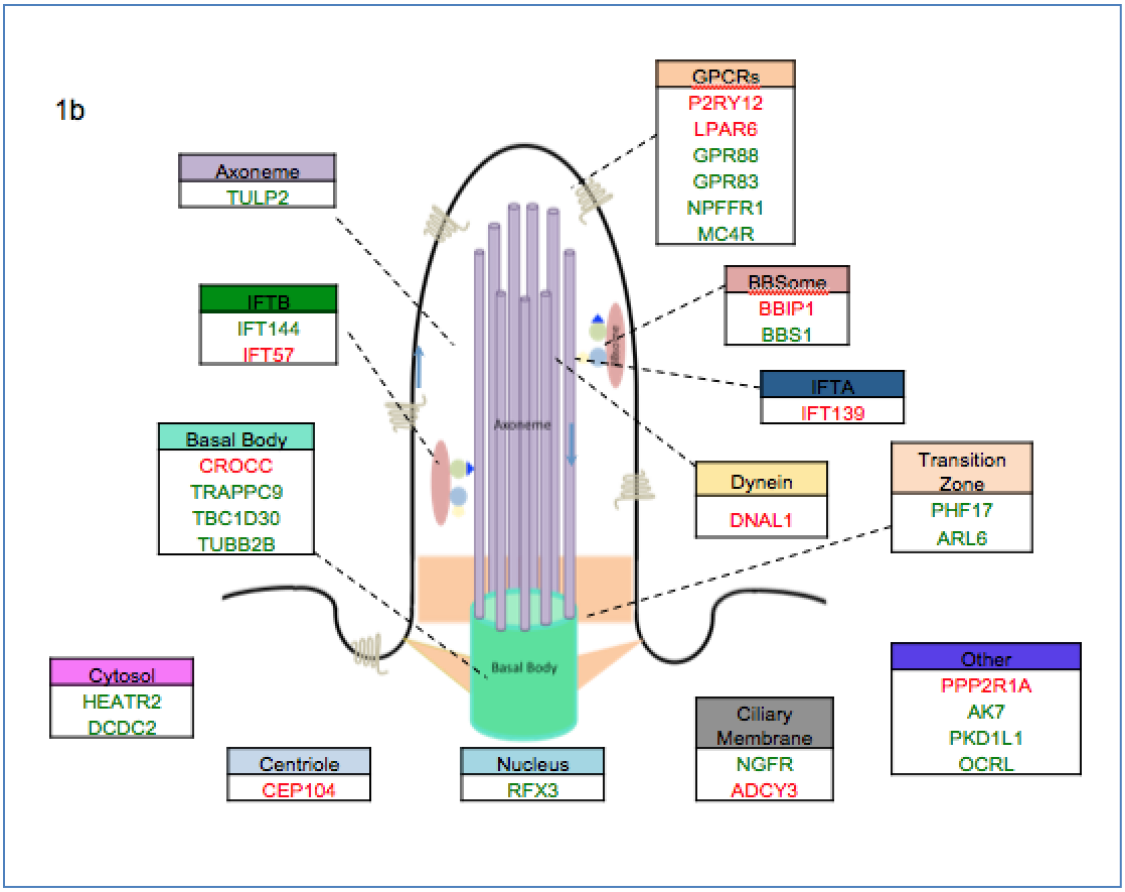
aalachka@uci.edu

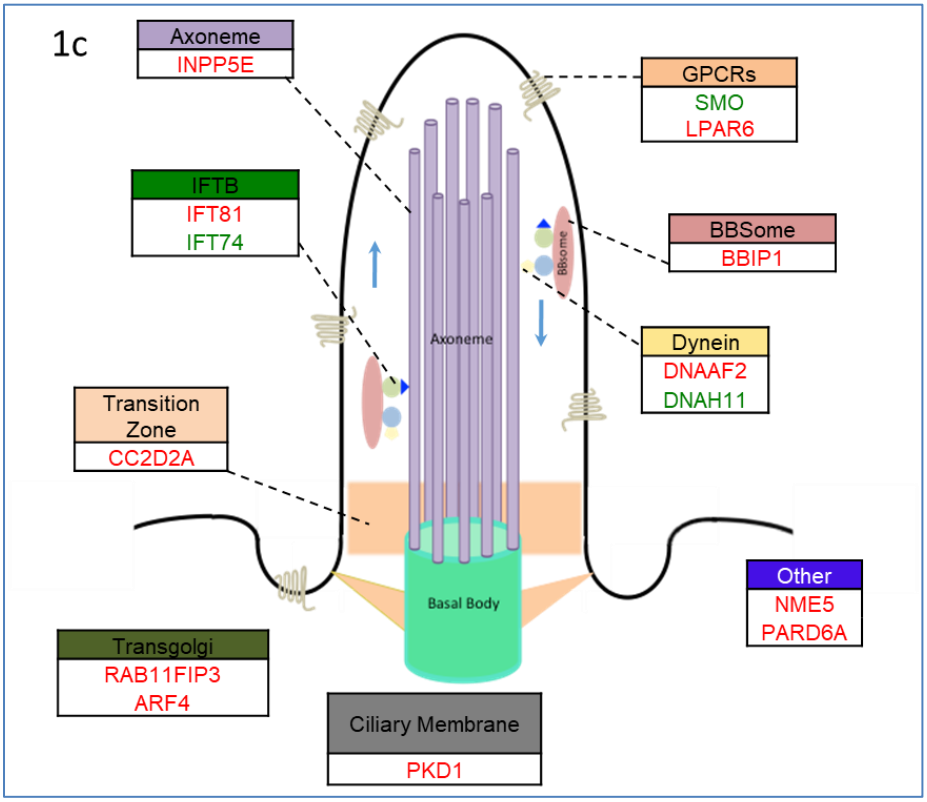
Supplementary Figures

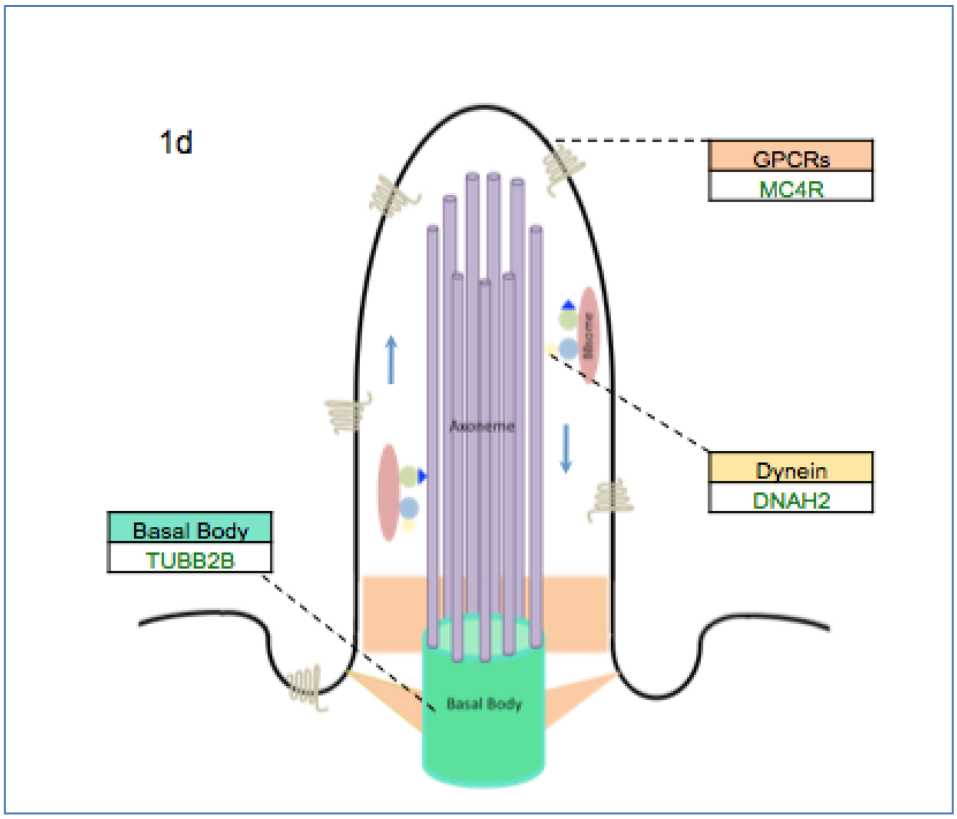
Figure S1. Sub-cilia localization of the genes that exhibited overlap between the four disorders.

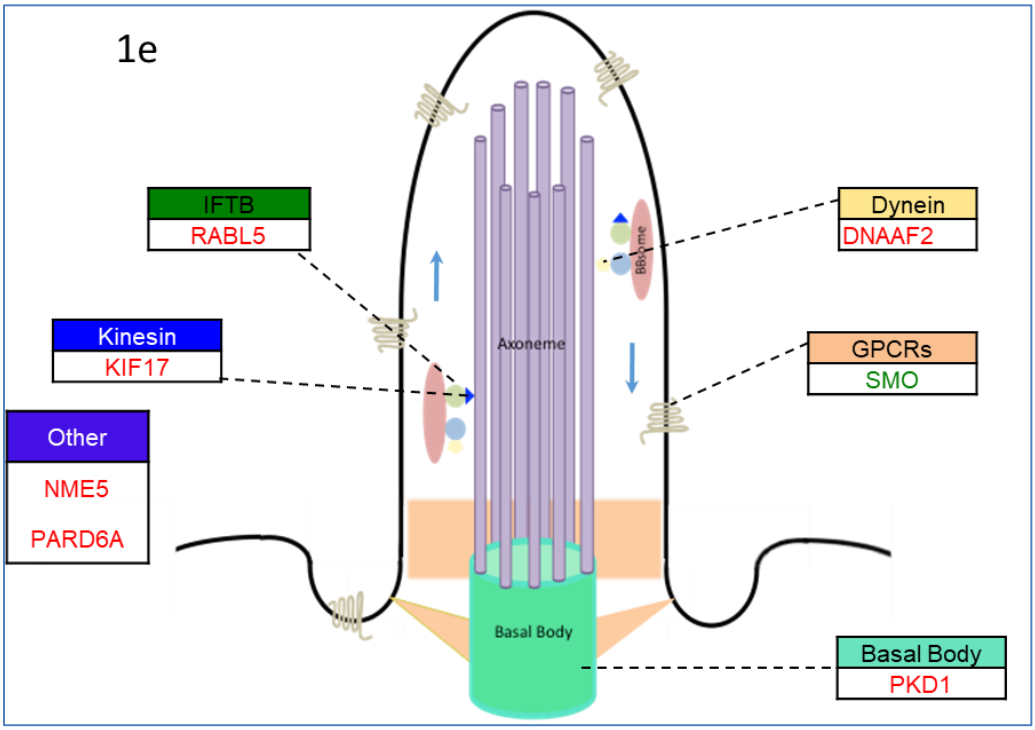
a-f. Sub-cilia localization of DEGs that exhibited overlap between **(a)** SCZ and ASD, **(b)** SCZ and BP, **(c)** SCZ and MDD, **(d)** ASD and BP, **(e)** ASD and MDD, and **(f)** BP and MDD. Upregulated and downregulated DEGs are in green and red respectively.

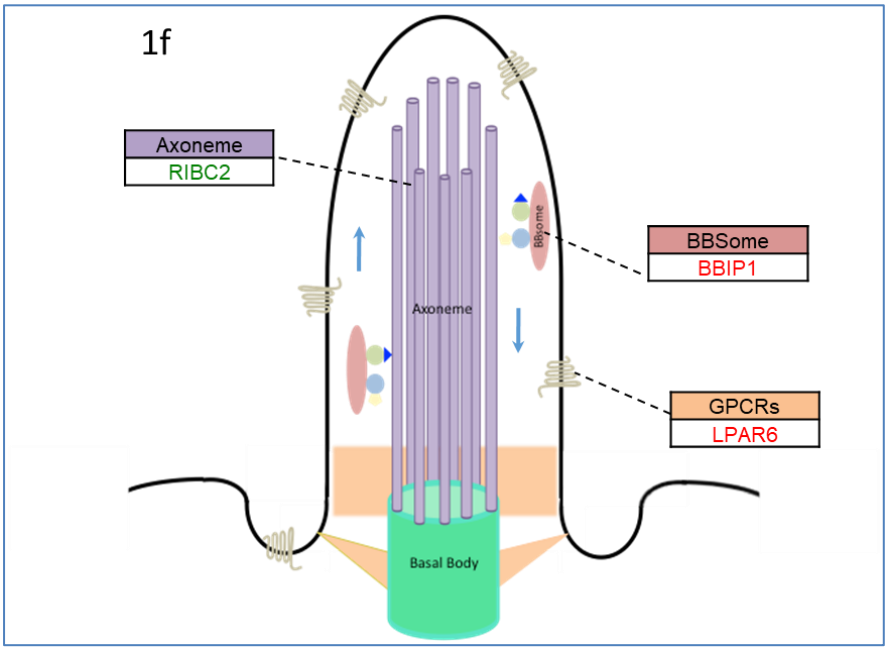



1b
GPCRs
P2RY12
LPAR6
GPR88
GPR83
NPFFR1
MC4R
Axoneme
TULP2
BBSome
BBIP1
BBS1
IFTB
IFT144
IFT57
IFTA
IFT139
Axoneme
Basal Body
CROCC
TRAPPC9
TBC1D30
TUBB2B
Dynein
DNAL1
Transition Zone
PHF17
ARL6
Basal Body
Other
PPP2R1A
AK7
PKD1L1
OCRL
Cytosol
HEATR2
DCDC2
Ciliary Membrane
NGFR
ADCY3
Centriole
CEP104
Nucleus
RFX3


1c
Axoneme
INPP5E
GPCRs
SMO
LPAR6
IFTB
IFT81
IFT74
BBSome
BBIP1
BBSome
Axoneme
Dynein
DNAAF2
DNAH11
Transition Zone
CC2D2A
Basal Body
Other
NME5
PARD6A
Transgolgi
RAB11FIP3
ARF4
Ciliary Membrane
PKD1


1d
GPCRs
MC4R
Dynein
DNAH2
Basal Body
TUBB2B
Axoneme
Basal Body


1e
IFTB
RABL5
Kinesin
KIF17
Other
NME5
PARD6A
Dynein
DNAAF2
GPCRs
SMO
Axoneme
Basal Body
Basal Body
PKD1


1f
Axoneme
RIBC2
BBSome
BBIP1
GPCRs
LPAR6
Axoneme
BBsome
Basal Body