

Budget: "Systematic characterization of transcriptional variation in retinal development at single cell resolution"							
Personnel:	Role	Base	Cal. Mos.	% Effort	Salary Req.	Fringe	YR1 Total
Loyal Goff	PD/PI	\$ 130,050	1.20	10%	\$13,005	\$4,422	\$ 17,427
Elana Fertig	Co-Investigator	\$ 119,100	1.20	10%	\$11,910	\$4,049	\$ 15,959
Brian Clark	Research Associate	\$ -	0.00	0%	\$0	\$0	\$ -
Genevieve Stein-O'Brien	Postdoctoral Fellow	\$ 47,853	6.00	50%	\$23,927	\$4,618	\$ 28,544
Michael Considine	Technician	\$ 54,765	1.20	10%	\$5,477	\$1,862	\$ 7,339
Gabrielle Cannon	Technician	\$ 37,100	3.00	25%	\$9,275	\$3,154	\$ 12,429
<i>Subtotal</i>					\$63,593	\$18,104	\$ 81,697
<b>Expenses:</b>							
<b>Supplies &amp; Materials:</b>							
Antibodies for IF validation of results							\$ 1,803
Laboratory Consumables (pipette tips, plasticware, slides, buffers, reagents)							\$ 5,000
<b>Services</b>							
Cloud computing / cluster compute time (Amazon web services)							\$ 2,000
Computational storage space and Rstudio server (Amazon web services)							\$ 2,500
<b>Computers</b>							
Laptop computer							\$ 3,000
<b>Publications</b>							
Publication fees/expenses							\$ 2,000
<b>Travel</b>							
Biology of Genomes Conference (Stein-O'Brien travel funds)							\$ 2,000
<i>Subtotal</i>							\$ 18,303
<b>Total Direct Costs, Year 1:</b>							\$ 100,000
<b>TOTAL COSTS, YEAR 1</b>							
							\$ 100,000
<b>Budget Justification</b>							
<p>• Salaries for PD/PI reflect contributions to overall project design and coordination (Loyal Goff, Elana Fertig), collaborative efforts on P-GAPS development (Goff, Fertig), and collaborative efforts on retinal validation and biological interpretation (Goff). Brian Clark is the research associate who will validate identified patterns in the developing mouse retina. Genevieve Stein-O'Brien is a postdoctoral fellow in the Goff and Fertig labs and is a principle developer and contributor to the CoGAPS package and will be responsible for implementing the parallel processing. Michael Considine will support Genevieve Stein-O'Brien in software development and release of P-GWCoGAPS to Bioconductor. Gabrielle Cannon will contribute to pattern validation and is responsible for maintenance and organization of the single cell metadata. Data processing and analysis will be conducted by Genevieve Stein-O'Brien and Brian Clark with joint guidance from all three investigators.</p>							