

5. REFERENCES

- Ackert JM, Farajian R, Chheda S, Volgyi B, Bloomfield SA (2007) ON Direction Selective Ganglion Cells Display a Directional OFF Response Received via Gap Junctions With Polyaxonal Amacrine Cells. In: ARVO Annual Meeting. Fort Lauderdale, Florida.
- Amthor FR, Grzywacz NM, Merwine DK (1996) Extra-receptive-field motion facilitation in on-off directionally selective ganglion cells of the rabbit retina. *Vis Neurosci* 13:303-309.
- Barlow HB (1953) Summation and inhibition in the frog's retina. *J Physiol* 119:69-88.
- Barlow HB, Hill RM (1963) Selective sensitivity to direction of movement in ganglion cells of the rabbit retina. *Science* 139:412-414.
- Barlow HB, Levick WR (1965) The mechanism of directionally selective units in rabbit's retina. *J Physiol* 178:477-504.
- Barlow HB, Hill RM, Levick WR (1964) Retinal Ganglion Cells Responding Selectively To Direction And Speed Of Image Motion In The Rabbit. *J Physiol* 173:377-407.
- Barlow HB, Derrington AM, Harris LR, Lennie P (1977) The effects of remote retinal stimulation on the responses of cat retinal ganglion cells. *J Physiol* 269:177-194.
- Borg-Graham LJ, Grzywacz NM (1992) A model of the directional selectivity circuit in retina: transformations by neurons singly and in concert. In: Single neuron computation (McKenna T, Davis J, Zornetzer SF, eds), pp 347-375: Academic Press Professional, Inc.
- Chalupa LM, Werner JS, eds (2004) The Visual Neurosciences: The MIT Press.
- Chiao CC, Masland RH (2002) Starburst cells nondirectionally facilitate the responses of direction-selective retinal ganglion cells. *J Neurosci* 22:10509-10513.
- Chiao CC, Masland RH (2003) Contextual tuning of direction-selective retinal ganglion cells. *Nat Neurosci* 6:1251-1252.
- Enroth-Cugell C, Robson JG (1966) The contrast sensitivity of retinal ganglion cells of the cat. *J Physiol* 187:517-552.
- Enroth-Cugell C, Jakielia HG (1980) Suppression of cat retinal ganglion cell responses by moving patterns. *J Physiol* 302:49-72.
- Fried SI, Munch TA, Werblin FS (2002) Mechanisms and circuitry underlying directional selectivity in the retina. *Nature* 420:411-414.
- Fried SI, Munch TA, Werblin FS (2005) Directional selectivity is formed at multiple levels by laterally offset inhibition in the rabbit retina. *Neuron* 46:117-127.
- Hartline HK (1940) The receptive fields of optic nerve fibers. *Am J Physiol* 130:690-699.

- Hubel DH, Wiesel TN (1961) Integrative action in the cat's lateral geniculate body. *J Physiol* 155:385-398.
- Ikeda H, Wright MJ (1972) The outer disinhibitory surround of the retinal ganglion cell receptive field. *J Physiol* 226:511-544.
- Kuffler SW (1953) Discharge patterns and functional organization of mammalian retina. *J Neurophysiol* 16:37-68.
- Lee S, Zhou ZJ (2006) The synaptic mechanism of direction selectivity in distal processes of starburst amacrine cells. *Neuron* 51:787-799.
- Levick WR (1967) Receptive fields and trigger features of ganglion cells in the visual streak of the rabbits retina. *J Physiol* 188:285-307.
- Levick WR (1972) Another tungsten microelectrode. *Med Biol Eng* 10:510-515.
- McIlwain JT (1964) Receptive Fields Of Optic Tract Axons And Lateral Geniculate Cells: Peripheral Extent And Barbiturate Sensitivity. *J Neurophysiol* 27:1154-1173.
- Olveczky BP, Baccus SA, Meister M (2003) Segregation of object and background motion in the retina. *Nature* 423:401-408.
- Passaglia CL, Enroth-Cugell C, Troy JB (2001) Effects of remote stimulation on the mean firing rate of cat retinal ganglion cells. *J Neurosci* 21:5794-5803.
- Rodieck RW, Stone J (1965) Analysis of receptive fields of cat retinal ganglion cells. *J Neurophysiol* 28:832-849.
- Schwartz G, Harris R, Shrom D, Berry MJ, 2nd (2007) Detection and prediction of periodic patterns by the retina. *Nat Neurosci* 10:552-554.
- Shapley RM, Victor JD (1979) Nonlinear spatial summation and the contrast gain control of cat retinal ganglion cells. *J Physiol* 290:141-161.
- Solomon SG, Lee BB, Sun H (2006) Suppressive surrounds and contrast gain in magnocellular-pathway retinal ganglion cells of macaque. *J Neurosci* 26:8715-8726.
- Taylor WR, Vaney DI (2002) Diverse synaptic mechanisms generate direction selectivity in the rabbit retina. *J Neurosci* 22:7712-7720
- Taylor WR, Vaney DI (2003) New directions in retinal research. *Trends Neurosci* 26:379-385.
- Thibos LN, Werblin FS (1978a) The response properties of the steady antagonistic surround in the mudpuppy retina. *J Physiol* 278:79-99.
- Thibos LN, Werblin FS (1978b) The properties of surround antagonism elicited by spinning windmill patterns in the mudpuppy retina. *J Physiol* 278:101-116.
- Vaney DI, Taylor WR (2002) Direction selectivity in the retina. *Curr Opin Neurobiol* 12:405-410.
- Vaney DI, He S, Taylor WR, Levick WR (2001) Direction-selective ganglion cells in the retina. In: Motion Vision - Computational, Neural, and Ecological Constraints

- (Zanker JM, Zeil J, eds), pp 13 - 56. Berlin Heidelberg New York: Springer Verlag.
- Wassle H (2004) Parallel processing in the mammalian retina. *Nat Rev Neurosci* 5:747-757.
- Werblin FS (1972) Lateral interactions at inner plexiform layer of vertebrate retina: antagonistic responses to change. *Science* 175:1008-1010.
- Werblin FS (1974) Control of retinal sensitivity. II. Lateral interactions at the outer plexiform layer. *J Gen Physiol* 63:62-87.
- Werblin FS, Copenhagen DR (1974) Control of retinal sensitivity. III. Lateral interactions at the inner plexiform layer. *J Gen Physiol* 63:88-110.
- Wiesel TN (1959) Recording Inhibition and Excitation in the Cat's Retinal Ganglion Cells with Intracellular Electrodes. *Nature* 183:264-265.
- Wyatt HJ, Daw NW (1975) Directionally sensitive ganglion cells in the rabbit retina: specificity for stimulus direction, size, and speed. *J Neurophysiol* 38:613-626.

