

Yael Eshed-Eisenbach

**Personal details:**

Married, 2 children; Born: August 1978, Israel.

Israeli citizenship, Compulsory army service: 1996-1998.

Address: 11 Haela st Mazkeret Batia 76804

Pone: +972-77-8840282

Cell: +972-50-7590213

Email: yael.eshed@weizmann.ac.il

**Current academic position:**

Staff scientist in the Department of Molecular Cell Biology, laboratory of Prof. Elijor Peles, Weizmann Institute of Science, Rehovot, Israel.

**Education:**

2004-2009: Feinberg Graduate School of the Weizmann Institute of Science, Rehovot, Israel. Ph.D. degree, Biology, May 2009.

Department of Molecular Cell Biology.

Thesis topic: Mechanisms of node of Ranvier formation.

Thesis advisor: Prof. Elijor Peles.

2002-2004: Feinberg Graduate School of the Weizmann Institute of Science, Rehovot, Israel. M.S. degree, May 2004.

Department of Molecular Cell Biology.

Thesis topic: Neuron-glia interactions in myelinated nerves.

Thesis advisor: Prof. Elijor Peles.

1998-2001: The Hadassah Medical School of the Hebrew University, Jerusalem, Israel. B.Sc. degree in Medical Sciences, June 2001, with high honors.

## **International Recognition:**

### Awards and Honors:

- John F. Kennedy Prize, the Feinberg Graduate School of the Weizmann Institute of Science, May 2009.
- Adams fellowship of the Adams foundation and the Israel Academy of Sciences and Humanities for 2005/2006. A four-year scholarship for outstanding doctoral students in the exact sciences, mathematics and the life sciences.
- Feinberg Graduate School Dean's list, 2006.
- The Hadassah Medical School Dean's list (Medical Sciences) 1999-2001.

### Presentations at meetings:

1. Glia in health and disease, Cold Spring Harbor Laboratory, New-York, July 2006. Poster presentation, title: Gliomedin, a Schwann cell adhesion and ECM molecule, mediates the molecular assembly of the node of Ranvier.
2. Myelin Gordon conference, Lucca (Barga), Italy, May 2008. Poster presentation, title: Mechanisms of PNS node formation.
3. Society For Neuroscience annual meeting, Washington DC, November 2008. Poster presentation, title: Gliomedin: a Schwann cell mediator of sodium channel clustering. Eshed-Eisenbach Y, Feinberg K, Peles E.
4. ISN Satellite Meeting on Myelin Biology, Kolymvari, Crete, August 2011. Oral presentation, title: Proteolytic processing of gliomedin regulates the formation of nodes of Ranvier.

### Publications:

1. Eshed Y, Feinberg K, Poliak S, Sabanay H, Sarig-Nadir O, Spiegel I, Bermingham JR Jr, Peles E. Gliomedin mediates Schwann cell-axon interaction and the molecular assembly of the nodes of Ranvier. *Neuron*. 2005 Jul 21;47(2):215-29.
2. Spiegel I, Adamsky K, Eisenbach M, Eshed Y, Spiegel A, Mirsky R, Scherer SS, Peles E. Identification of novel cell-adhesion molecules in peripheral nerves using a signal-sequence trap. *Neuron Glia Biol*. 2006 Feb;2(1):27-38.
3. Eshed Y, Feinberg K, Carey DJ, Peles E. Secreted gliomedin is a perinodal matrix component of peripheral nerves. *J Cell Biol*. 2007 May 7;177(3):551-62.

4. Spiegel I, Adamsky K, Eshed Y, Milo R, Sabanay H, Sarig-Nadir O, Horresh I, Scherer SS, Rasband MN, Peles E. A central role for Necl4 (SynCAM4) in Schwann cell-axon interaction and myelination. *Nat Neurosci*. 2007 Jul;10(7):861-9.
5. Eisenbach M, Kartvelishvily E, Eshed-Eisenbach Y, Watkins T, Sorensen A, Thomson C, Ranscht B, Barnett SC, Brophy P, Peles E. Differential clustering of Caspr by oligodendrocytes and Schwann cells. *J Neurosci Res*. 2009 Nov 15;87(15):3492-501
6. Feinberg K, Eshed-Eisenbach Y, Frechter S, Amor V, Salomon D, Sabanay H, Dupree JL, Grumet M, Brophy PJ, Shrager P, Peles E. A glial signal consisting of gliomedin and NrCAM clusters axonal Na<sup>+</sup> channels during the formation of nodes of Ranvier. *Neuron*. 2010 Feb 25;65(4):490-502.
7. Ng JK, Malotka J, Kawakami N, Derfuss T, Khademi M, Olsson T, Linington C, Odaka M, Tackenberg B, Prüss H, Schwab JM, Harms L, Harms H, Sommer C, Rasband MN, Eshed-Eisenbach Y, Peles E, Hohlfeld R, Yuki N, Dornmair K, Meinl E. Neurofascin as a target for autoantibodies in peripheral neuropathies. *Neurology*. 2012 Dec 4;79(23):2241-8.
8. Susuki K, Chang KJ, Zollinger DR, Liu Y, Ogawa Y, Eshed-Eisenbach Y, Dours-Zimmermann MT, Oses-Prieto JA, Burlingame AL, Seidenbecher CI, Zimmermann DR, Oohashi T, Peles E, Rasband MN. Three mechanisms assemble central nervous system nodes of Ranvier. *Neuron*. 2013 May 8;78(3):469-82
9. Golan N, Kartvelishvily E, Spiegel I, Salomon D, Sabanay H, Rechav K, Vainshtein A, Frechter S, Maik-Rachline G, Eshed-Eisenbach Y, Momoi T, Peles E. Genetic deletion of *Cadm4* results in myelin abnormalities resembling Charcot-Marie-Tooth neuropathy. *J Neurosci*. 2013 Jul 3;33(27):10950-61.
10. Eshed-Eisenbach Y, Peles E. The making of a node: a co-production of neurons and glia. *Curr Opin Neurobiol*. 2013 Dec;23(6):1049-56.
11. Eshed-Eisenbach Y, Peles E. Axonal spectrins: all-purpose fences. *J Cell Biol*. 2013 Nov 11;203(3):381-3.
12. Amor V, Feinberg K, Eshed-Eisenbach Y, Vainshtein A, Frechter S, Grumet M, Rosenbluth J, Peles E. Long-term maintenance of Na<sup>+</sup> channels at nodes of Ranvier depends on glial contact mediated by gliomedin and NrCAM. *J Neurosci*. 2014 Apr 9;34(15):5089-98.

