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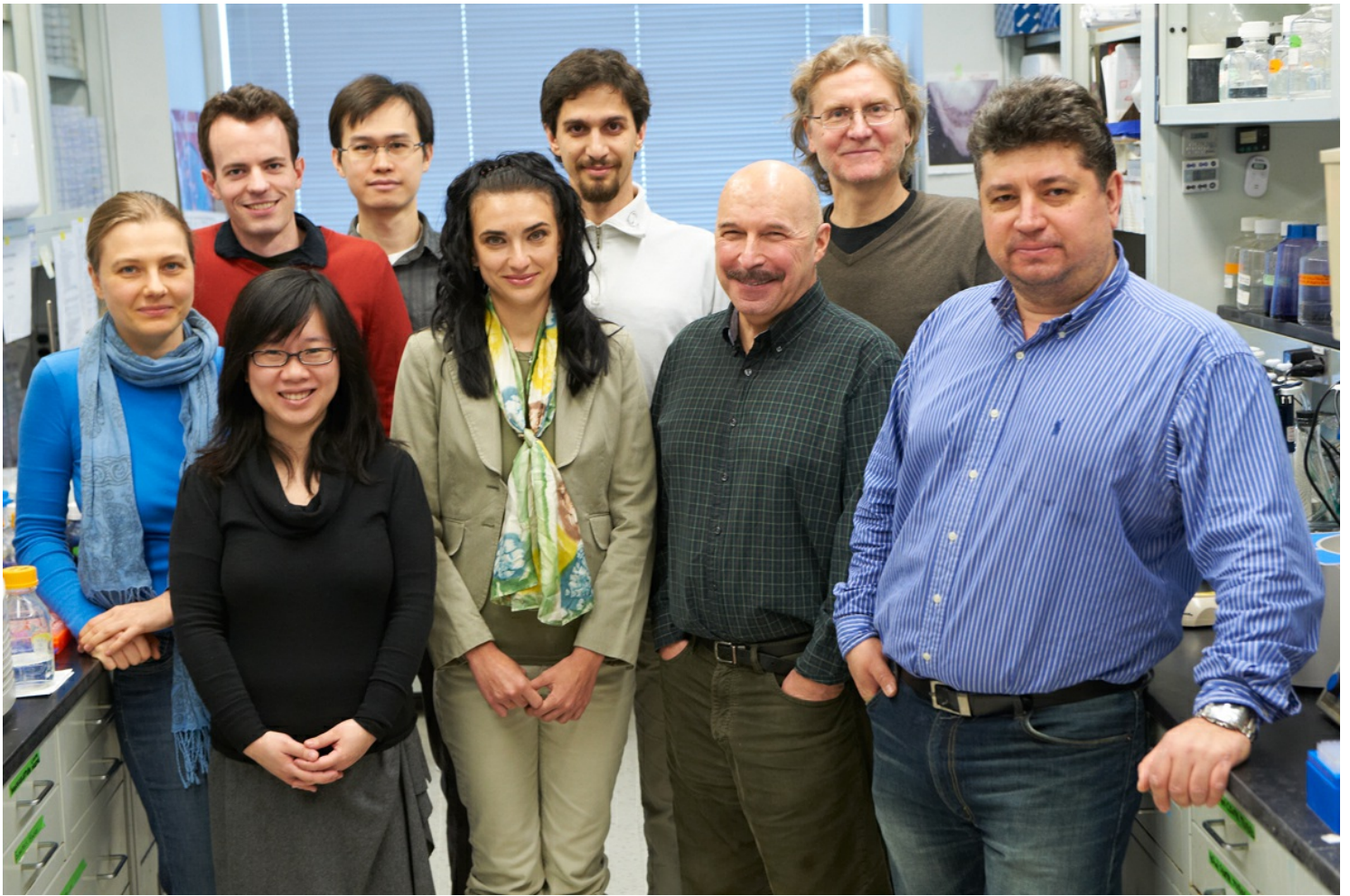
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Dimitar B. Nikolov, PhD

Research in our laboratory aims to characterize the molecular mechanisms underlying cell-to-cell interactions and signal transduction across the cell membrane. We are particularly interested in understanding how receptors located on the surface of developing axons and neurons interact with extracellular ligands to guide the development of the nervous system and the wiring of the brain.

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Publications Highlights

[Xu K, Wu Z, Renier N, Antipenko A, Tzvetkova-Robev D, Xu Y, Minchenko M, Nardi-Dei V, Rajashankar KR, Himanen J, Tessier-Lavigne M, Nikolov DB., Structures of netrin-1 bound to two receptors provide insight into its axon guidance mechanism., Science. \(2014\), May 29, pii: 1255149. \[Epub ahead of print\]](#)

[Barton WA, Dalton AC, Seegar TC, Himanen JP, and Nikolov DB, Tie2 and Eph Receptor Tyrosine Kinase Activation and Signaling, Cold Spring Harbor Perspectives in Biology: "Signaling by Receptor Tyrosine Kinases" edited by Joseph Schlessinger and Mark A. Lemmon, Cold Spring Harbor Laboratory Press, ISBN978-1-936113-33-0, pages 287-303, \(2014\).](#)

[Xu K, Tzvetkova-Robev D, Xu Y, Goldgur Y, Chan YP, Himanen JP, Nikolov DB., Insights into Eph receptor tyrosine kinase activation from crystal structures of the EphA4 ectodomain and its complex with ephrin-A5. Proc Natl Acad Sci U S A. 110\(36\):14634-9, \(2013\).](#)

[Yu X, Seegar TC, Dalton AC, Tzvetkova-Robev D, Goldgur Y, Rajashankar KR, Nikolov DB, Barton WA, Structural basis for angiopoietin-1-mediated signaling initiation. Proc Natl Acad Sci U S A. ; 110\(18\):7205-10, \(2013\).](#)

[P.W. Janes, N. Saha, W.A. Barton, M.V. Kolev, S.H. Wimmer-Kleikamp, E. Nievergall, C.P. Blobel, J-P. Himanen, M.](#)

[Lackmann, and D.B. Nikolov, Adam Meets Eph: An ADAM Substrate Recognition Module Acts as a Molecular Switch for Ephrin Cleavage In trans. *Cell* 123\(2\): 291-304, \(2005\).](#)

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People



Dimitar B. Nikolov, PhD

The Nikolov laboratory focuses on the structural, biophysical, and biochemical characterization of the molecular mechanisms of cell-cell interactions and signal transduction in the nervous system.

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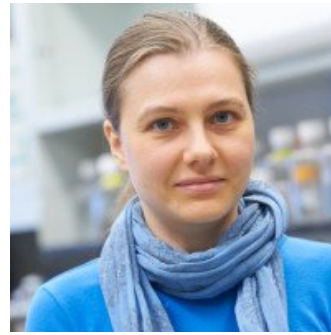
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