


Dr. François Nédélec	
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<p>11/04/1970, Chatenay-Malabry, France</p>	<p>BIOMS Junior Group Leader</p>

SCIENTIFIC VITA

1990 Engineer from Ecole Polytechnique, applied mathematics.
1992 DEA Université Paris XI, Particle-physics.
1993- Started PhD with A.C. Maggs, Physico-chimie Theorique.
1994-97 Visiting PhD student with S. Leibler, Molecular Biology, Princeton U. USA.
1998 PhD in physics, université Paris XI, with highest honors.
1998- Postdoctoral training at EMBL Heidelberg, laboratory of Eric Karsenti.
2001- Staff scientist, EMBL, laboratory of Eric Karsenti.
2002- Team Leader, EMBL (first independent position).
2005- BioMS group leader, EMBL.

SUPERVISING FUNCTIONS

Postdoctoral trainees: Maria Mora-Corral (3rd year), Thomas Clausen (alumni).
PhD students: Dietrich Foethke (3rd year), Cleopatra Kozlowski (3rd year).
Diploma student: Martin Loose (Chemistry student).
Visiting student (1 year): Rose Loughlin (Harvard U., Physics student)
Summer students (3 months each): Christine Plet, Sandrine Ellero, Bastien Pellet, Olivier Francois, Essylt Louarn, Pascale Verant.

CURRENTLY FUNDED PROJECTS AND COLLABORATIONS

- IBM strategic university shared resources, Feb 2004: IBM offered a cluster of 128 CPU to be shared between Peer Bork's (EMBL) and Nedelec's groups.
- EU FP6 STREP COMBIO (<http://www.pdg.cnb.uam.es/COMBIO/>): An integrative approach to cellular signalling and control processes: Bringing computational biology to the bench. The funded experimental project is a collaboration with Joachim Spatz (University of Heidelberg) and Isabelle Vernos (EMBL).

- The BIOMS Junior-group leader position comes with 250 kEuros per year for five years. Since January 2005, this is the main financial support of the research group, covering most expenses, including the salary of the principal investigator.
- HFSP (www.hfsp.org): Young Investigator Grants, with Tomoyuki Tanaka (Wellcome Trust Biocenter, University of Dundee, UK) and Arshad Desai (Ludwig Institute for Cancer Research, San Diego, USA). Starting date December 2005.
- VolkswagenStiftung (<http://www.volkswagen-stiftung.de>) will provide 190 kEuros to support our proposal Regulatory Mechanisms in Cellular Fiber Systems answering the call New Conceptual Approaches to Modeling and Simulation of Complex Systems.
- EU FP6 STREP Active Biomimetic systems. This is an integrated project at the interface between cellular biology and physics, of which Thomas Surrey (EMBL) is also part. It will provide 36 months of postdoctoral training.

ADDITIONAL COLLABORATIONS

- Damian Brunner (EMBL Heidelberg).
- Tony Hyman (MPI-CBG, Dresden)
- Marcel Janson, Phong Tran (U. of Philadelphia, USA)

PUBLICATIONS (10 selected publications since 2000)

Goshima, G., **F. Nédélec** and R. Vale. 2005. Mechanisms for focusing mitotic spindle poles by minus end-directed motor proteins. *Journal of Cell Biology*. **171(2)**: 229-40.

Karsenti, E. and **F. Nédélec**. 2004. The mitotic Spindle and Actin Tails. *Biology of the Cell*. **96(3)**: 237-40.

Nédélec, F., T. Surrey and E. Karsenti. 2003. Self-organisation and Forces in the Microtubule Cytoskeleton *Current Opinion in Cell Biology* **15(1)**: 118-24.

Nédélec, F. (2002). Computer Simulations Reveal Motor Properties Generating Stable Anti-parallel Microtubule Interactions. *Journal of Cell Biology* **158(6)**: 1005-1015.

Nédélec, F. and T. Surrey. 2001. Dynamics of Microtubule Aster Formation by Motor Complexes. *C. R. Acad. Sci.*, Paris, t. 2, **Serie iv**, p. 841-847.

Surrey, T.*, **F. Nédélec***, S. Leibler, E. Karsenti. 2001. Physical Properties Determining Self-Organization of Motors and Microtubules. *Science*, **Vol 292**, pp.1167-71. *First-authors.

Nédélec, F., T. Surrey, A.C. Maggs. 2001. Dynamic Concentration of Motors in Microtubule Arrays. *Physical Review Letters*. **86(14)**: 3192-3195.

Nédélec, F., T. Surrey. 2000. De l'Action Collective des Moteurs à l'Ordre Cellulaire. *Médecine/Sciences* vol. **16**, pp. 739-744.

Nédélec, F., T. Surrey. 2001. Assaying Spatial Organization of Microtubules by Kinesin Motors. *Methods in Molecular biology*. **Vol 164**, kinesin protocols, Humana Press Inc. Totowa NJ. 07512 U.S.A.