

Yves MELY

Professor of Physics and Biophysics
Director of the Laboratory of Bioimaging and Pathologies
Leader of the Biophotonics Team

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Diplomas and career

Doctor in Pharmacy, 1984, Doctor in Biophysics, University Louis Pasteur, Strasbourg, 1988. Support from a government fellowship. Military service 1988-89 in a Hospital in Fribourg. Habilitation (Habilitation à diriger des recherches), 1996. Professor Assistant in Biophysics, Faculty of Pharmacy, Strasbourg, 1989. Sabbatical (1997) with the support of a von Humboldt fellowship at the Max Planck Institute of Biophysics, Frankfurt, Germany Professor of Biophysics, since 1998. Promoted at the first class in 2003 and at the exceptional class 1 (2009) and 2 (2013).

Research interests

Being the head of a large team, my research activity can be divided in two research axes. The first relates to the development of fluorescence techniques (quantitative and high resolution microscopy) and innovative fluorescence probes for membranes, proteins and nucleic acids. The second axis deals with the application of these techniques and probes to characterize the properties and functions of HIV-1 virus proteins (notably the nucleocapsid protein) as well as those of proteins involved in epigenetic regulation (UHRF1 and DNMT1 proteins) and more recently of proteins from *Pseudomonas aeruginosa*. In addition to understand the molecular mechanisms and functions of these proteins in interaction with their ligands, my research aims to discover new therapeutic avenues.

Scientific animation

- ▶ From 1999-2008, leader of the team "Photophysics of the biomolecular interactions".
- ▶ Since 2009, leader of the team "Biophotonics of the molecular and cellular interactions".
- ▶ Since 2009, **head of the Laboratory of Biophotonics and Pharmacology**, UMR 7213 CNRS.
- ▶ From 2003-08, co-director of the French network GDR 2588 CNRS "Functional microscopy of the living" that federates about 80 French public laboratories in the Biophotonics field.
- ▶ Since 2011, **chair of the Methods and Applications in Fluorescence conference series**.
- ▶ Since 2014, co-chair of the conference series « Fluorescent Biomolecules and their Building Blocks Design and Applications (FB3).
- ▶ Since 2018, **head of the Laboratory of Bioimaging and Pathologies**, UMR 7021CNRS.

Awards

- ▶ Adrerus thesis prize in 1990.
- ▶ Research and doctoral directory bonus from 1993-2009. Excellence research bonus since 2009.
- ▶ **Honorary Doctor of the National Taras Shevchenko University of Kiev**, November 7th, 2011.
- ▶ Invited Senior scientist, Riken, Saitama, 2015
- ▶ **Gregorio Weber Award for Excellence in Fluorescence Theory and Applications**, February 11, 2017.
- ▶ **Senior member of Institut Universitaire de France**, 2018.

National committee

- ▶ Member of the national committee of the Universities (39th section) from 1999 to 2004.
- ▶ Member of the national committee of the Universities (85th section) from 2009 to 2012.
- ▶ Member of the National Committee of the CNRS (30th section) from 2009 to 2012.
- ▶ Member of the National Committee of the CNRS (28th section) from 2012 to 2016.
- ▶ Member of the administration council of the Université Louis Pasteur 2002-06.
- ▶ Member of the scientific committee of the « Ligue contre le Cancer, région Alsace » 2002-05.
- ▶ Member of a committee from the National Agency against AIDS, 2004-08 ;
- ▶ Member of selection committees for professor-assistant and professor positions, since 1993.

Editorial activities

- ▶ **Founder and editor in chief of Methods and Applications in Fluorescence, since 2012.**
- ▶ Editor of The protein journal

Organization of conferences

- ▶ Member of the scientific committee of the 1st « International retroviral NC symposium », Frederick, 1997 ; 2nd « International retroviral NC symposium », Lyon, 1999 ; 3rd « International retroviral NC symposium », Annapolis, Maryland (USA), September 2001, 5th « International retroviral NC symposium », Montréal, 18-20 September 2005, 6th « International retroviral NC symposium », Amsterdam, September 2007, 7th « International retroviral NC symposium », Minneapolis, September 2009, 8th « International retroviral NC symposium », Barcelona, 19-21 September, 2011, 9th international retroviral NC symposium, Montreal, 25-28 August 2013, 10th international retroviral NC symposium, Montpellier, 19-21 septembre 2016, 11th International Retroviral Nucleocapsid and Assembly Symposium (IRNCAS 2019), Boston, August 15-17, 2019..
- ▶ **Chair of the organizing committee of the 4th international retroviral NC symposium, Illkirch, 14-17 September 2003, 120 participants.**
- ▶ Nominated in 2006, as a member of the permanent steering committee (PSC) of the Methods and Applications in Fluorescence conference series.
- ▶ Member of the scientific committee of the 8th conference on Methods and Applications in Fluorescence MAF8, Prague, August 24-27, 2003, MAF10, Salzburg, September 9-12, 2007, MAF11, Budapest, September 6-9, 2009, and MAF13, Genoa September 8-11, 2013 ; MAF14, Wurzburg, 13-16 September 2015; MAF15; Brugges, 10-13 September, 2017, MAF16, San Diego, 20-24 août 2019.
- ▶ **Chair of the organization committee of the Methods and Applications in Fluorescence MAF12, September 11-14, 2011, 400 participants.**
- ▶ Chair with R. Pansu of the Organisation of the conference « Chimie pour l'imagerie optique », 8 July 2004, ENS Cachan.
- ▶ Member of the scientific committee of the thematic school « Microbiologie fonctionnelle en biologie », Oléron, 12-17 September 2004 and La Grande Motte, 21-26 September 2006.
- ▶ Member of the scientific committee of the European workshop on Fluorescence Correlation Spectroscopy Techniques, Paris, 24-25 March 2005.
- ▶ Member of the organization committee of the CNRS thematic school « Nanophysics for Health », November 5-9, 2012, Mittelwihr, France
- ▶ Member of the scientific committee of Dijon domains. AgroSup, Dijon, November 27-30, 2012.
- ▶ Member of the Organization committee « 7th Imaging the cell », August 28-30, 2013, Strasbourg, France.
- ▶ Member of the Scientific Committee of "International conference in optics", April 21-23, 2013, Setif, Algeria
- ▶ Co-chair of the conferences « Fluorescent Biomolecules and their Building Blocks Design and Applications (FB3) », University of California, San Diego, La Jolla, USA, August 6th – August 9th, 2014 and Tianjin University, China, July 7-11, 2016; Glasgow UK, June 30-july 2, 2018.
- ▶ Member of the scientific committee of the joint SFB-GTBIO meeting, December 13-16, 2016, Obernai, France.
- ▶ Co-chair of University of Strasbourg - Riken 20th Anniversary Workshop, Strasbourg, 27-28 October 2016.
- ▶ Member of the scientific committee of the "Kiyv conference on analytical chemistry", October 18-22, 2016, Kiev, Ukraine.
- ▶ Advisory board of the 2nd Microscopy congress, London, November 14-15, 2016.

Research contracts

- ▶ Agence Nationale de la Recherche (x7, three as coordinator)
- ▶ Agence Nationale de la Recherche sur le Sida (x20)
- ▶ Sidaction (x3)
- ▶ Agence Française contre les myopathies (x3)
- ▶ Association de la Recherche contre le Cancer (x3)
- ▶ European contracts TRIOH (FP6) and Thinpad (FP7)
- ▶ Fondation pour la Recherche Médicale (x 2)
- ▶ Sanofi-Pasteur (x10)
- ▶ Supports for bilateral collaborative projects with Ukraine (x2), Turkey, Russia and Czech Republic.
- ▶ Région Grand Est: Post-doc, PhD and Fonds Régional de la Coopération pour la Recherche.
- ▶ Member of the ARCUS program (Ukraine, Russia and France).

Publications and conferences

- ▶ 330 international publications. H =58.
- ▶ Most productive scientist in HIV-1 nucleocapsid protein within the last 10 years (Web of Science).
- ▶ Most productive French scientist in fluorescence within the last 20 years (Web of Science).
- ▶ 140 invited conferences
- ▶ Direction of 40 PhD thesis (35 defended and 5 in progress). Six of them got a PhD award.