

David Karlin, PhD
Researcher in virology and Professional trainer

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WORK EXPERIENCE

2014-15 Marseille, France	Professional trainer (scientific management and communication), COSENS Private scholar (virus bioinformatics).
2010- 2014 Oxford, UK	Wellcome Trust Research Fellow University of Oxford
2009 London, UK	Project manager, public engagement The Wellcome Trust
2007-2008 Marseille, France	Head of Public Programmes and Budget manager Tous Chercheurs Institute (educational charity)
2002-2006 Marseille, France	Founder and Director The DNA School (educational charity)

TEACHING AND VOCATIONAL TRAINING

Between 2002 and 2015:

Taught 10 vocational courses for French Inserm and CNRS researchers in molecular biology, biochemistry, and bioinformatics.

Taught 8 training courses to PhD students in France, Italy and China (publishing scientific articles, giving scientific talks, setting up collaborations ...)

Taught 2 MSc courses in bioinformatics in Plymouth, UK and Wuhan, China.

Created a lab-based training program on biology for patient groups, unique in Europe.

Taught 70 hands-on biotechnology workshops for school students and for the public (1,000 persons).

MANAGEMENT

Jan-Dec 2009 The Wellcome Trust London, UK	Supervised public engagement projects funded by the Wellcome Trust (e.g. Researchers in Residence, budget €100,000).
2007-2008 Tous Chercheurs Marseille, France	Managed an annual budget of €250,000
2002-2006 Ecole de l'ADN Marseille, France	Created and Directed the DNA school of Marseille (Ecole de l'ADN), an educational charity. Managed a team of 4 employees.

FELLOWSHIPS AND AWARDS

National prize for innovation of the Roche foundation for chronic diseases (2010).

Between 2002 and 2015, obtained **€900,000 in funding** for research and for public engagement projects from French and British local councils, research organisations, research charities, ministries of health and research.

EDUCATION

1998-May 2002 Marseille, France	PhD in Structural Virology University of Marseille, AFMB laboratory
1996-1997 Villejuif, France	MSc in Cellular and Molecular Pharmacology CNRS, Cancer Research Institute
1993-1996 St-Etienne, France & Dublin, Ireland	Engineering Degree (Process Engineering) Ecole des Mines de St-Etienne & University College Dublin (3 rd year exchange)

SCIENTIFIC PUBLICATIONS IN PEER-REVIEWED JOURNALS

1. Ahola T, **Karlin DG** (2015) **Biology Direct** 10(1):16.
Sequence analysis reveals a conserved extension in the capping enzyme of the alphavirus supergroup, and a homologous domain in nodaviruses.
2. Lo M, Sogaard TM, **Karlin DG** (2014) **PLoS One** 9(2):e90003.
Evolution and structural organization of the C proteins of Paramyxovirinae.
3. Kuchibhatla DB, Sherman WA, Chung BYW, Cook S, Schneider G, Eisenhaber B, **Karlin DG** (2014) **J. Virol** 88:10-20. Powerful Sequence Similarity Search Methods and In-Depth Manual Analyses Can Identify Remote Homologs in Many Apparently “Orphan” Viral Proteins.
4. Pavesi A, Magiorkinis G, **Karlin DG** (2013) **PLoS Comp Biol**. 9:e1003162
Viral proteins originated de novo by overprinting can be identified by codon usage: application to the “gene nursery” of deltaretroviruses.
5. Yu C & **Karlin DG (joint 1st author)**, Lu Y, Chen J, MacFarlane S (2013) **J Gen Virol** 94: 2117-28. Experimental and bioinformatics evidence that Emaravirus P4 is a movement protein of the 30K superfamily.
6. Sabath N, Wagner A, **Karlin D.** (2012) **Mol Biol Evol** 29:3767-80.
Evolution of viral proteins originated de novo by overprinting.
7. **Karlin D**, Belshaw R (2012). **PLoS One** 7:e31719
Detecting remote sequence homology in disordered proteins: discovery of conserved motifs in the N-termini of Mononegavirales phosphoproteins.
8. Rancurel C, Khosravi M, Dunker AK, Pedro PR, **Karlin D** (2009). **J Virol** 83:10719-36.
Overlapping genes produce proteins with unusual sequence properties and offer insight into de novo protein creation.
9. Ferron F, Canard B, Longhi S, **Karlin D** (2006). **Proteins** 65:1-14.
A practical overview of protein disorder prediction methods.
10. Longhi S, Receveur-Bréchet V, **Karlin D**, Johansson K, Darbon H, Bhella D, Yeo R, Finet S, Canard B (2003). **J Biol Chem** 278:18638-48.
The C-terminal domain of the measles virus nucleoprotein is intrinsically disordered and folds upon binding to the C-terminal moiety of the phosphoprotein.
11. **Karlin D**, Ferron F, Canard B, Longhi S (2003). **J Gen Virol** 84:3239-52.
Structural disorder and modular organization in Paramyxovirinae N and P.
12. **Karlin D**, Longhi S, Canard B. (2002). **Virology** 302:420-32.
Substitution of two residues in the measles virus nucleoprotein results in an impaired self-association.
13. **Karlin D**, Longhi S, Receveur V, Canard B (2002). **Virology** 296:251-62.
The N-terminal domain of the phosphoprotein of Morbilliviruses belongs to the natively unfolded class of proteins.

PUBLIC ENGAGEMENT PUBLICATIONS IN PEER-REVIEWED JOURNALS

14. Mathieu M, Hammond C, **Karlin DG** (2015). **PLoS Biology** 13(2):e100206
An innovative lab-based training program to help patient groups understand their disease and the research process.
15. Thimonier J, **Karlin D**, Hammond C (2010). **PLoS Biology** 8(9).
Creative research science experiences for high school students.