

# JULIEN MUZARD

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38 y. old • 2 kids • driving license • Paris, FR

## EDUCATION

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PhD (honor), <b>Diderot University, Biology &amp; Biotechnology, Paris</b>	2007
Degree Immuno-technologies, <b>Descartes University, Medical School, Paris</b>	2004
Master/Engineer (honor), <b>Sorbonne's Institute for Advanced Studies (EPHE), Paris</b>	2004
National Technical Degree, Diagnostics <b>Biomedical Institute, Hospital, Amiens, FR</b>	2002

## INDUSTRIAL EXPERIENCE

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<b>Chief Scientist, Izon Science Ltd</b> Chief Scientist, EMEA zone. Administration of a portfolio of collaborative projects, customers/industrial partners management. Supply chain & business grow operation. Application science, high-resolution. Customers trainings on various instruments	2015 - present Paris, FR
<b>Senior Scientist (in residence) Autodesk Research, Bio/Nano Programmable Matter</b> Prototyping 3D/4D printing, computational & synthetic biology, polymers, active materials, shape memory. Designing new objects by 3D, laser & water jet technologies	2014 - 2015 San Francisco, CA
<b>Consultant, National Institute for Bioprocessing Research &amp; Training</b> Development of new purification systems at large industrial scale	2009 - 2012 Dublin, IE
<b>Laboratory Technician, basic &amp; industrial biochemistry lab</b> Running operation in molecular biology & applied immunology practical sessions to students	2002 - 2004 Paris, FR

## ACADEMIC EXPERIENCE

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<b>Scientist, Lawrence Berkeley National Laboratory</b> Design & fabrication of new tools for 3D molecular visualization & programmable matter <b>Technologies:</b> 3D/4D (bio-) printing, bio-informatics, biological engineering & prototyping Point of Contact: Dr. Ron. Zuckermann	<b>2014 - 2016</b> Berkeley, CA
<b>Assistant Professor (non-tenure track), Conservatoire National des Arts &amp; Métiers</b> Developing new databanks, bio-visualization & IT technologies <b>Technologies:</b> structural bio-informatics, databanks, drug designs, servers Point of Contact: Dr. JF. Zagury	<b>2013 – 2014</b> Paris, FR
<b>Scientist, Center for Molecular Innovation, University College Dublin</b> Interface: bio-nanotechnology & computational biology for personalized medicine Administration of R&D programs. Supervise four PhD students & one visiting professor <b>Technologies:</b> high resolution engineering, single-molecule & new magnetic materials Point of Contact: Pr. G. U. Lee	<b>2009-2013</b> Dublin, IE
<b>Postdoctoral fellow Nanotechnologies, ESPCI-Paris Tech</b> Develop single-molecule detection technologies based on nanopore & nanomaterials - Supervise a team of 3 members. <b>Technologies:</b> single molecule, nanopore, molecular biology, prototype Point of Contact: Dr. V. Viasnoff	<b>2008-2009</b> Paris, FR
<b>PhD student INSERM &amp; Museum National d'Histoire Naturelle</b> Fellowship – French Foundation Recherche Medicale Develop new technologies/ molecules for biotherapy. Supervise students & visiting scientist <b>Technologies:</b> molecular engineering & evolution, antibody, bacterial display, genome design Point of Contact: Pr. P. Billiard	<b>2005-2007</b> Paris, FR

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## PUBLICATIONS, ART & PATENTS

(full list available upon request)

- [27] J. MUZARD & al. **Integrated method for purification and single-particle characterization of lentiviral vector systems by size exclusion chromatography & tunable resistive pulse sensing** Mol. Biotechnol. 2017
- [26] J. MUZARD & al. **From nanotechnology to 3D printed tangible foldable molecular models** Maker Exhibitor @ Maker Fair, Oakland, CA, USA, 2014  
*Media: Today At Berkeley Lab - Autodesk Gallery, One Market SF*
- [25] J. MUZARD & al. **Rapid, highly sensitive detection of herpes simplex virus-1 using multiple antigenic peptide-coated superparamagnetic nanoparticles.** The Analyst, 2014  
*Media: Hot Article Royal Chemical Society*
- [24] Artist in Residence. **"The Art of Science"** Exhibit 3D/ #PDB BioPark & UNESCO, Paris, FR, May 2014
- [23] C. FIELDS, (5 authors) & J. MUZARD. **Creation of recombinant antigen-binding molecules derived from hybridomas secreting specific antibodies** Nature Protocols, 2013  
*Media: Medical Xpress & University College Dublin Magazine*
- [21] M. PLATT, J. MUZARD & al. **Multiplexed detection of HSV-1 and 2 with a magnetic bead agglutination (MBA) Assay** NanoSciences, 2013
- [19] J. MUZARD, M. PLATT & G.U. LEE. **M13 bacteriophage-activated superparamagnetic beads for affinity separation** Small, 2012  
*Media: Wiley Hot Topics & Journal Cover*
- [9] J. MUZARD & al. **Design and humanization of a murine scFv which blocks human platelets glycoprotein VI in vitro** FEBS Journal, 2009  
*Media: FEBS 2012 Virtual Issue*
- [2] J. MUZARD & al. **Recombinant antibodies: a new application in scorpion envenomation?** Bull. Society Path. Ex., 2005
- [Patent 4] Design of molecular & specific probes EP11193316.4
- [Patent 3] Creation of nanobiomaterials EP11150252.2
- [Patent 2] Novel synthetic peptides EP2008067275 / WO2009074628
- [Patent 1] Novel therapeutic antibodies EP2007061569 / WO2008049928

## COMPETENCY

- Computer MATLAB, (bio)Python, Javascript, HTML, AutoCAD, 3D design, MS Office, 3D analysis, databanks, servers, Salesforce...
- Laboratory molecular biology, biochemistry, high definition biophysics, nano-particles, diagnostics, therapeutics, plasmon resonance, 3D/4D printing, laser, microbiology, sequencing, electronics, open source...

## SUMMARY & CAREER OBJECTIVES

*My career has been devoted to executing & managing the development of biological technologies for the treatment of human diseases. These include exploration of in silico & in vitro aspects of molecular recognition & creation of smart molecules with new & useful functions as tools for nanoscale research, diagnostic & potential therapeutics. I use a wide variety of modern interdisciplinary techniques to develop programmable molecules/biomaterials/lab equipment from scratch.*

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