

## CURRICULUM VITAE

### EL-AMRAOUI Aziz, Associate Professor, Institut Pasteur

Citizenship: French

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**Biographical sketch:** After my PhD in Neuroscience from the University of Lyon-I in 1995, I joined the laboratory of Professor C. PETIT at the Institut Pasteur where resorting to identified deafness genes as an entry point has enabled us to enlighten both fundamental and medical aspects of hearing functioning and related disorders. Multidisciplinary approaches owing to the biochemical properties of the encoded proteins, identification of their molecular networks, animal modelling of the disease have provided major cues for understanding how the hearing organ develops and functions, illustrated by the more than 50 high-level published papers. Over the last 20 years, I contributed to the elucidation of the disease mechanisms of dozen deafness genes, several of which are involved in Usher syndrome (deafness and blindness in humans) (Jean-Valade Prize 2005, Fond Mazet-Danet Fondation de France, 2006; Chaire of Excellence Charles Nicolle, Institut Pasteur (2017-2019). Through integrative investigations, calling upon genetic, molecular biology, biochemistry, cell imaging, cell biology and physiology studies, we ascertained the involvement of most of these genes in several key processes of hearing and vision, and unraveled the corresponding disease mechanisms. My efforts are now aimed to speed up translating this progress into therapeutic approaches aiming to delay, prevent or cure progressive hearing and/or vision loss in animal preclinical models, and accelerate their transfer into clinics.

### EDUCATION

**1987-1990:** B Sc Biological Sciences, Animal Biology, Option: Immunology  
University of Cadi Ayad, (Marrakech, Morocco)

**1991-1995:** M2 and PhD in Neuroscience, University of Claude Bernard, Lyon-I (Lyon, France):  
**Title:** "The hypothalamo-adenohypophyseal gonadotrope function (GnRH neurons, Gonadotropic cells): commitment, origin and interactions."

**2004:** HDR (Accreditation to direct research), Neuroscience, University Paris VI (UPMC)  
**Title:** "The hair bundle: a complex architecture designed for the mechano-electrical transduction."

### RESEARCH AND PROFESSIONAL EXPERIENCE

**1997-2001:** Research Assistant, Institut Pasteur

**2002-2007:** Assistant Professor, Institut Pasteur

**2008-present:** Associate Professor, Institut Pasteur

**2015-present:** Associate Professor, Group leader, Institut Pasteur

### ADMINISTRATIVE RESPONSABILITIES AND EXPERTISE

- Member of the Institut Pasteur Scientific Council (evaluation of IP teams) **(since 2015)**
- Member of the « COMESP », Institut Pasteur (evaluation IP scientists) **(2007-2011)**
- Member of « fellowships committee », Institut Pasteur **(since 2011)**
- Member of the Institut Pasteur General Assembly « *Assemblée des 100* » **(since 2014)**
- Member of the executive committee of the foundation "Voir et Entendre" **(since 2012)**
- Member of the Board of Neuroscience Department **(2006-2017)**
- Member **(2006-2014)** and President elect **(2011-2014)** of the "site committee" (Fernbach building)
- Member of the selection committee of the university Paris Diderot for a MCF position **(2009)**
- Member of the Scientific Council of the association APE.MEG, Universities Paris Diderot and Paris Descartes **(since 2016)**

## FELLOWSHIPS, AWARDS AND HONORS

- Postgraduate Scholarship by The Moroccan Ministry of Education and Research (Major of Univ. Adyad promotion 1991) paid as a stipend over 4 years (1990-1994)
- Fellowship by FAUN Stiftung (Suchert Foundation) (1995-1997)
- Jean Valade prize (Fondation de France), *Physiopathology and molecular mechanisms defective in the Usher syndrome (deafness-blindness in humans)* (2005)
- Fond MAZET-DANET (Fondation de France): *Physiopathology of Hereditary Deafness* (2006)
- Chaire of Excellence Charles Nicolle, Institut Pasteur (*deaf-blindness in the Usher syndrome, from disease mechanisms to therapy*) (2017-2019)

## TEACHING & SCIENTIFIC ACTIVITIES, AND RESEARCH DISSEMINATION

- ~ 64 publications (articles & reviews; sum of cites: ~3800); > 60 invited lectures and contributed talks: e.g. 27 invited oral presentations in the period 2012-2017: national (x 10) & international (x 17); Chariman of sessions at national and international Symposia, and member of program committee for International meeting (2017, & 2018),
- Regular teaching (~ 12 hours per year) of courses about hearing and vision perception, and related disorders in Master and PhD University programs: @ University Paris V, Paris VI/UPMC, Paris VII, and Veterinary school, Maison Alfort.
- Ad hoc reviewing for PNAS, JCB, JCS, MoBC, HMG, FASEB, JMCB, BBADIS, Plos one, J. Neurophysiol, Biochem J, Sem Cell Dev Biol, JARO. ...etc.
- Evaluations of Grants: national (ANR-Blanc SVSE, Paris V, Institut Pasteur-DARRI, Clinique de la souris, Fondation de France, Fondation Maladies Rares, Retina-France, ...), and international (Action on hearing UK, NSF, FNRS Belgium).
- 14 PhD Juries (as Director (x3), reporting referee (x8), examiner (x2), or president (x1)); 1 HDR (examiner); tutor of 8 PhD Students (Institut Pasteur), and member of 11 PhD committees (UPMC, Université d'Auvergne).
- Dissemination of knowledge towards public, professional and medical actors, e.g. patients' organizations (France), ENTs (France, Belgium, Algeria), audioprothesists (France); and participation to press releases & interviews: e.g. Tf1 TV News, 20h00, November 23, 2012; France 5 TV, "Santé Magasine", 14h00, June 18, 2014 (e.g.: <http://www.allodocteurs.fr/actualite-sante-sourd-aux-voix-dans-le-brouhaha-les-chercheurs-savent-pourquoi--13723.asp?1=1>).

## FIVE MAJOR PUBLICATION LIST (last 5 years)

1. Cortese M., Papal S., Pisciotano F., Elgoyhen A.B., Hardelin J.-P., Petit C., Franchini L.F\*, & El-Amraoui A\*. (2017) Spectrin  $\beta$ V adaptive mutations and changes in subcellular location correlate with emergence of hair cell electromotility in mammals. *Proc. Natl Acad. Sci. USA*. 114(8):2054-2059. doi: 10.1073/pnas.1618778114. \*Co-senior and corresponding authorships.
2. Schietroma S., Parain K., Estivalet A., Aghaie A., Boutet de Monvel J., Picaud S. Sahel J-A. Perron M., El-Amraoui A\* & Petit C\*. (2017) Shaping of the photoreceptor outer segment by the calyceal processes of the inner segment. *J. Cell Biol.* 216, 1849-1864. \*Co-senior and corresponding authorships. F1000 Medicine "Recommended" selection
3. Lelli A, Michel V, Boutet de Monvel J, Cortese M, Bosh-Grau M, Aghaie A, Perfettini I, Dupont T, Avan P, El-Amraoui A\*, Petit C\*. (2016) Class III myosins shape the auditory hair bundles by limiting microvilli and stereocilia growth. *J. Cell Biol.* 212, 231-44. \*Co-senior and corresponding authors. F1000 Medicine "Recommended" selection; # cover article; # subject to a commentary: My oh my(osin): Insights into how auditory hair cells count, measure, and shape., Pollock LM, Chou SW, McDermott BM Jr. *J. Cell Biol.* 212:135-137.
4. Kamiya K, Michel V, Giraudet F, Riederer B, Foucher I, Papal S, Perfettini I, Le Gal S, Verpy E, Xia W, Seidler U, Georgescu MM, Avan P\*, El-Amraoui A\*, Petit C\*. (2014) An unusually powerful mode of low-frequency sound interference due to defective hair bundles of the auditory outer hair cells. *Proc Natl Acad Sci USA*. 111: 9307-9312. \*Co-senior and corresponding authorships. # Press release & news articles (Le Figaro, and multiple health websites); # Interview in France 5 TV, "Santé Magasine", 14h00, June 18, 2014
5. Papal S, Cortese M, Legendre K, Soroush N, Dragavon J, Sahly I, Shorte S, Wolfrum U, Petit C, El-Amraoui A\*. (2013) The giant spectrin  $\beta$ V couples the molecular motors to phototransduction and Usher syndrome type I proteins along their trafficking route. *Hum. Mol. Genet.* 22, 3773-3788. \* Corresponding author