

## Pr. Christophe SOLA

Pharm.D, Ph.D

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**Former Fellow of Institut Pasteur-  
Former Resident of Lyon's Hospitals**

### PERSONAL

Name	<b>SOLA</b>
Firstname	Christophe, Noël
Grade	first class professor
Employer	Université Paris Saclay
File number	84682
Date of Birth	26 Décembre, 1960 in La Tronche
Section CNU	65
Nationality	French
Family Status, Kids:	separated, two children.
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**CURRENT POSITION:** Professor of Microbiology, University of Paris-Saclay, Senior Researcher, UMR1137 INSERM, Paris

**Full Professor, Microbiology**, University of Paris-Saclay since Sept. 1, 2007.

**Head of Research team** in Institut de biologie Intégrative de la Cellule, (I2BC, UMR9198) Team « Infection, Genetics, Emerging Pathogens Evolution » (IGEPE) between 1<sup>er</sup> september 2007 till January 2020. Staff= 5-9 people including 2 permanent (1 Professor and Assistant Professor) and 4-5 contracts (PhD fellows, Post-doct, student) ; Founder of the Beamedex genotyping and reagents services platform

**Since Jan 1<sup>st</sup> 2021: INSERM, Senior Scientist, UMR1137**

First Administrative link:	Université Paris-Saclay
Second Administrative link:	INSERM (UMR1137)
Current Laboratory Affiliation:	Infection, Antimicrobials, Modeling, Evolution, IAME INSERM-Université de Paris.
passed research affiliation:	From sept 2007- until Jan 2020 I2BC, UMR9198, CEA-CNRS-Université Paris-Saclay, PI, head of IGEPE research team.

### EDUCATION, DEGREES

1979-1984:	Faculty of Pharmacy, University of Grenoble 1
1984:	Pharmacist (University of Grenoble I), option : Medical Biology
1985:	Diplôme D'Etudes Supérieures Spécialisées (DESS Biologie Médicale), module d'Hématologie, Université Lyon 1 1985. Niveau : module de Biochimie (non validé).
1986:	Master degree (DEA) Cellular and Molecular biology, University Paris 6.

- 1988: Pharmaceutical Sciences Doctor (**D. Pharm**), Université Grenoble I  
 1991: University Doctorate, (**PhD**), Biochemistry, option : Cellular and Molecular biology University of Paris 6, nov. 1991. Dissertation Title : "*A cell and molecular approach of blood pressure regulation system ; works on renin, atrial natriuretic and endothelin genes*".  
 2001: Habilitation to Direct Research (**HDR**) Université of Lesser Antillas and French Guyana, 30th March 2001. "*from renin-angiotensin system genetics to tubercle bacilli genetics or evolution as a constant*"

## SCIENTIFIC PRODUCTIVITY INDICES

- 157 articles total in PubMed**, with « Sola C and (Mycobacterium or Salmonella or Legionella or ANF or Renin or tuberculosis or CRISPR) as keywords on Jun. 1<sup>st</sup> 2021.  
 -**167 refered articles in ISI Web of Knowledge** with Topic (Mycobacterium or Salmonella or Legionella or ANF or Renin or tuberculosis or CRISPR) and Author=(Sola C) as keywords on Jun. 1<sup>st</sup> 2021.  
 -**Hirsch Index (H-index)= 40** computed on ISI Web of science on Jun. 1<sup>st</sup> 2021 (H-index=**55**) on Google scholar on Jun. 1<sup>st</sup> 2021, H-index=**30** since 2016.

extracted from ISI Web of Science, Citation Activity Report, and Google Scholar, C. Sola, done on Jun. 1<sup>st</sup> 2021

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## TITLES AND MEMBERSHIPS

- Former Fellow of the Pasteur Institute/Ancien Elève de l'Institut Pasteur, Paris, 1985-1988
- Former advisor of the town council of Meylan/Ancien Conseiller municipal de la ville de Meylan, 1983-1986, in charge of : general administration, youth affairs sport, environment.
- Excellency Chair in Microbiology**/Lauréat de la Chaire d'Excellence en Microbiologie, Université Paris-Sud, 2007.
- Member of the Society for Ethnopharmacology/Membre de la Société d'Ethnopharmacologie, 1989-1990
- Member of the European Society for Mycobacteriology/Membre de la Société Européenne de Mycobactériologie since/depuis 1996
- Member of the American Society for Microbiology/Membre de la Société Américaine de Microbiologie (ASM) (between 1996-1999 and since 2008)
- Member of the European Clinical Microbiology and Infectious Diseases Society (ESCMID) 2006-2010.
- Member of the Association of Former fellows of the Institut Pasteur since 2013.

**Academic Editor** : PLoS ONE since december 2011,  
 BMC Infectious Diseases since 2020

Reviewer: J.Clin.Microbiol., PLoS ONE, Int. J. Tuberc. Lung. Dis, Infect. Genet. Evol, Lancet Infect. Dis., Bioinformatics, Genome Res...Clin. Microbiol. Infect...  
 Reviewer: French Ministry of Research, Italy, Kazakhstan, Wellcome Trust Fundation, University of Stellenbosch South Africa.

## SCIENTIFIC AWARDS, INVITED PROFESSOR, HONOURS

**Collective Price**: Louis D. International Network of Pasteur Institutes, 2000

**Personal Price**: -Excellency chair in Microbiology, Université Paris-Sud, 2007  
 -Award of the French National Academy of Medicine 2013 (Prix du Dr. L. Deschiens).

**Invited Professor** : University of São Paulo, Faculty of Medicine, Ribeirão Preto, Brazil, July-Sept. 2017

## **FORMER POSITIONS** (start-end time, duration, place of work, **position**, department)

- Apr-Oct.1984:6 months, Grenoble Hospital, **Resident-like position**, Nuclear Medicine
- Nov.1984-Oct.1985:1 year, Lyon's Hospitals, University of Lyon, **Resident** : Hematology, Virology Emergency Biochemistry (night and week-end duties)
- Nov.1985-Feb.1988:2,5 years, **Research Assistant**, "Unité de Génétique et Biochimie du Développement", Institut Pasteur, Pr. François Rougeon.
- Feb.1988-Jun.1989:1,5 years, **Research Assistant**, "Unité de Pathobiologie", Institut de Recherche Clinique de Montréal (IRCM), Québec, Canada, Pr. Marc Cantin.
- Nov.1989-Dec.1990:1 year (13 months), **Research Engineer**, groupe Limagrain, Bioinitiatives, Chappes 63, France.
- Nov.1991-Apr.1994:2,5 years, **Clinical Research Assistant**, Groupe Boehringer-Mannheim, Mannheim, Germany (filiale française, Paris).
- May-Oct.1994 : 6 month, **Project Leader**, Parexel Corporation, Boston, USA (bureau de Paris).
- Nov. 1994- Dec.1998:4 years, **Senior Scientist** (under short-term contracts), Institut Pasteur, Institut Pasteur de Guadeloupe, Unité de la Tuberculose et des Mycobactéries.
- Jan.1999-Aug.2006:8 years, **Senior Scientist**, (permanent position) Institut Pasteur, détaché à l'Institut Pasteur de Guadeloupe, Unité de la Tuberculose et Mycobactéries
- Sept.006-Aug.2007:1 year, **Senior Scientist** Institut Pasteur, Unité de Génétique Mycobactérienne, Paris

## **GRANTS and VALORIZATION ACTIVITIES**

- Excellency Chair in Microbiology/Lauréat de la Chaire d'Excellence Microbiologie, Université Paris-Sud 2007, 170 k€,
- Investment Ile de France Region/Lauréat Investissement Région Ile de France Domaine Intérêt Majeur –Maladies Infectieuses 2009, 50 k€, 2013-2014, 50k€
- Private and Public Contract Research/Contrats de Recherche Privés et subventions diverses, 2007-2010 : contrats Gilson, Luminex Corp., Fondation Mérieux, >80 k€
- Délégation Générale Armement/Ministry of Defence (DGA) REI-ITODYDYS; 2010-2012 ; 53k€
- European Development Clinical Trials Partnership (EDCTP) 2013-2015, 115k€ with UK, Spain, Nigeria, Ethiopia
- Beads4Med genotyping services : 180k€ (income 2009-2013)
- Founder of the Beamedex® SAS company, January 2015
- UE Horizon 2020 (Pierre et Marie Incoming fellowship, benefit : Dr. Stefan Panaiotov, Oct.2015-Sept.2017)
- Member of the COST Action 16107: Euroxanth *Integrating science on Xanthomonadaceae for integrated plant disease management in Europe* (2016-2020)
- Partnership Hubert Curien (NAPATA) with Sudan, 2019 *“Improving Tuberculosis control and evolutionary history knowledge in Sudan by integrated molecular epidemiology and patient-centered approach*
- Co-Founder and partner of Beamedex®, created Dec 1st 2014, University Paris-Sud, bât 400, F-91400, Orsay. Income 2015-2018 : 65 k€/year

## **MANAGEMENT EXPERIENCE**

- Former R&D Staff from Pharmaceutical and Biotechnological Industries 1989-1994**  
French, German, American companies respectively: Limagrain (1989-1990), Boehringer Mannheim (1991-1994) Parexel Corporation (1994).

-Manager of the IGEPE Team since 2007, Management of International R&D Public Health and Microbiology programs. R&D consultant, Beamedex®.

## SCIENTIFIC DIRECTION (20 PhD direction or co-direction)

- **11 PhD co-directions at « Université des Antilles et de la Guyane » between 1994 and 2007** (Microbiology, Bioinformatics), **9 PhD direction in Université Paris-Sud 11 since 2007**, +numerous Master students, Licence, and Post-Docs.

1994-2001 period before habilitation (Institut Pasteur, with estimated percentage of management)

**1. Anne DEVALLOIS** : Université d'Aix-Marseille : “Diagnostic rapide et Epidémiologie des infections à mycobactéries : développement et mise en place de méthodes moléculaires dans la région Antilles-Guyane. 12 Nov.

1997”. *Rapid diagnosis and epidemiology of mycobacterial infections: development and molecular methods in the Antilles-Guyana region* (50%).

**2. Lionel HORGEN** : Université de Marne La vallée “Etude des mycobactéries dans la région Antilles-Guyane

épidémiologie moléculaire, résistance aux antibiotiques et interactions bactéries-macrophages. 1 Dec. 1998”.(50%)

**3. Eric LEGRAND** : Université Paris VI “Développement et Mise en Place de méthodes moléculaires pour le diagnostic et l'épidémiologie des mycobactéries dans la Caraïbe”, 2001 (50%).

**4. Ingrid FILLIOL** : Université Grenoble I : “Evaluation de différents marqueurs moléculaires pour l'épidémiologie et la phylogénie de la tuberculose. 10 Sept., 2002. *Evaluation of different molecular markers for the epidemiology and the phylogeny of tuberculosis* (50%).

since 2001 (since habilitation to direct research, Institut Pasteur, with estimated percentage of management)

**5. Séverine FERDINAND** : Université Paris VII “Contribution à l'Etude de l'épidémiologie et de la génétique évolutive de la TB en milieux insulaires. 22 Juillet 2004” *Contribution to the study of epidemiology and evolutionary genetics of TB in insular systems* (50%).

**6. Georges VALETUDIE (with Dr. M. G. Desachy)**, Université des Antilles et de la Guyane. “Nouvelles méthodes en data-mining et extraction de connaissances à partir de données : applications au complexe *M. tuberculosis*”, 15 Septembre 2006 -co-direction (Bioinformatics). *New methods in data mining and extraction of knowledge from data: applications to the M. tuberculosis complex* (50%).

**7. Karine BRUDEY**: Université des Antilles et de la Guyane. Etude de la biodiversité globale des génotypes de *Mycobacterium tuberculosis*: applications épidémiologiques, 12 Decembre, 2005.” *Study of the overall biodiversity of the genotypes of Mycobacterium tuberculosis: epidemiological applications* (80%).

**8. Thierry ZOZIO**: Université des Antilles et de la Guyane. “Etude de la génétique des populations de bacilles tuberculeux dans la Caraïbe : applications épidémiologiques et phylogénétiques” : (2009) *Study of the population genetics of the TB bacteria in the Caribbean: epidemiological and phylogenetic applications* (50%).

**9. Julie MILLET** : Université des Antilles et de la Guyane “Etude de la diversité génétique moléculaire des populations de bacilles tuberculeux en milieux insulaires, l'exemple du Japon” (2010)(30%).

**10.** Participation à l'encadrement d'une thèse avec l'IRD (Institut de Recherche pour le Développement) **Vanina GUERNIER** Université d'Orléans. (co-direction Université d'Orléans M. JM. Fotsing et de l'IRD Montpellier, Dr. J. F. Guegan) “Epidémiologie de la Tuberculose sur l'île de Cayenne, en Guyane. Analyse des facteurs de risque et d'étude des dynamiques spatio-temporelles”, Janvier 2006 (25%).

11. Université Paris 7 (direction : Pr. Brigitte Gicquel, Institut Pasteur : Participation à l'encadrement de M. **Tiago DOS VULTOS**, thèse soutenue en novembre 2008 (25%).

since 2007 as PI, (University Paris-Saclay, with percentage of management)

12. **Jian ZHANG**: University Paris-Sud-11 : doctoral school: "Genes Genomes Cells". "Epidémiologie moléculaire et diversité génétique d'agents pathogènes bactériens humains : mise en œuvre de nouvelles techniques de génotypage multiplexées et à haut débit sur *Mycobacterium tuberculosis* et *Salmonella enterica* (defence : 15 September 2010, mention very honorable). *Molecular Epidemiology and genetic diversity of human bacterial pathogens: implementation of new techniques of multiplexed genotyping on Mycobacterium tuberculosis and Salmonella enterica.* (100%).

13. **Michel GOMGNIMBOU**: University Paris-Sud-11 doctoral school: "Genes Genomes Cells". start : Oct. 2010. Financed by Fondation Mérieux and CNRS. Sujet : Nouvelles méthodes de diagnostic, de contrôle et de surveillance de la tuberculose à Bacilles tuberculeux sensibles ou multirésistants dans des pays à forte co-infection au VIH. *New methods of diagnosis, control and surveillance of sensitive or multidrug-resistant TB tuberculosis in countries with high HIV co-infection.* Defended on 27th Sept. 2013 (100%)

14. **Noël RATOvonIRINA**: Université Paris-Sud-11 doctoral school: "Genes Genomes Cells". start: Oct. 2011. Co-direction with Dr. V. Rasolofo-Razanamparany, Institut Pasteur of Madagascar and University of Antananarivo. *Development of innovative molecular methods for TB early diagnostics* , defence : scheduled Dec. 11th 2017.(50%, co-direction with V. Rasolofo)

15. **Lizania SPINASSE-BORGES (MD)**: (in collaboration with Federal University of Rio de Janeiro: Nov. 2011. *Study of Resistant Hypertension by cohort analysis of CYP2D6 genes polymorphisms.* defence : 29 November 2013 (30%, co-direction with Dr. Salles and Dr. Suffy, Brazil)

16. **Memona YASMIN**: in collaboration with National Center for Biotechnology and Engineering, Faisalabad, Pakistan : Feb. 2012. *Characterization of MDR-TB clinical isolates in Pakistan.*(30%) co-direction with Pakistan.

17. **Nayanne DANTAS (MD)**: in collaboration with Federal University of Minas Gerais, Pr. S. Spindola de Miranda., *Molecular epidemiology of drug-resistant tuberculosis in Minas Gerais, Brazil* : defence : Feb. 2015 (30%) co-direction with Pr. S. Spindola, Brazil.

18. **Emilyn COSTA-CONCEICAO** : in collaboration between Evandro Chagas Institute, Pr. Karla Lima Federal University of Pará, UFPa, Belém, Brazil, and Federal University of Rio de Janeiro, Dr. Rafael Silva Duarte, PhD, Head, Laboratory of Mycobacteria. *Molecular evolution and epidemiology of Tuberculosis in Para, Brazil* : defence : April. 2016 (30%) co-direction with Pr. K. Lima, Brazil.

19. **Bernice KLOTUE** : Université Paris-Saclay *Development of new methods for surveillance of « Beijing » Mycobacterium tuberculosis and applications in former Soviet*, start:2015, financed by Beamedex® and Frechh ANRS; defence : 17th October 2018. (50%, co-direction with Dr. G. Refregier).

20. **Muhammed RABIU SAHAL** : Université Paris-Saclay start : jan 2020, « *Data-mining and phylodynamics of Mycobacterium tuberculosis complex genomes with a focus on M. africanum* ». financed by Nigerian PTDF; Expected defence : July 2023 (50%, co-direction with Dr. G. Refregier).

Done in Paris on Jun 1<sup>st</sup> 2021, I, C underlined, certify the authenticity of these informations,

**Christophe Sola**



-Former Resident of Lyon's Hospitals

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