Curriculum vitae

Aminata TOURE

Web site: **www.tourelab.fr**

ORCID 0000-0001-5629-849X ; https://www.researchgate.net/profile/Aminata-Toure-2

EDUCATION

2000 **PhD:** Rho GTPases signaling pathways & male germ cells. **Paris Descartes Univ. France**
1995 **Master**: Genetics, Developmental Diseases & Oncogenesis. **Paris Descartes Univ. France**

CURRENT POSITION(S)

Since 2020 **CNRS Research Director (DR2)**. Institute for Advanced Biosciences. **Grenoble, France**

Team Leader 'Physiology and Pathophysiology of Sperm Cells' (PPS)

- **Violaine Simon**. PhD. Lecturer & Researcher (Permanent staff. Université Paris Cité)
- **Marjorie Whitfield**. PhD, Researcher (Permanent staff. CRCN Inserm)
- **Emma Cavarocchi**. PhD. Research Engineer (ANR funding)
- **Maeva Drouault**. PhD. Post-doctoral fellow (ANR funding)
- **Abderazak Sidi-Salah**. Master 2 student (ANR funding)

PREVIOUS POSITIONS

2013 – 2020 CNRS Research Director (DR2). Institut Cochin. Paris, France
2004 – 2013 CNRS Researcher Junior position (CR1, CR2). Institut Cochin. Paris, France

FELLOWSHIPS AND AWARDS

2001 – 2003 European Marie Curie individual fellowship (post-doctoral position. MRC, London, UK)
2000 – 2001 Inserm individual fellowship (post-doctoral position. MRC, London, UK)
2000 Award - Fondation Bettencourt-Schueller (PhD. Paris, France).

SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

Since 2020 **2 Postdoc, 1 PhD student** (competitive university grant), **1 Master student, 1 Engineer** Institute for Advanced Biosciences. Grenoble, France
2004 – 2020 **3 Postdocs, 4 PhD students** (3/4 competitive university grant), **15 Master students, 2 Engineers** (Inserm permanent positions)**.** Institut Cochin. Paris, France

TEACHING ACTIVITIES

Master 1 & Master 2 (MD, Pharm students) – Reproductive Biology, Paris University, France
Master 2 – Reproduction & Development (Genetics), Paris University, France
Master 2 – Cellular Biology and Development, Paris University, France

REVIEWING ACTIVITES

Review for Scientifical Journals: Reviewer of over 65 manuscripts in reproduction, genetics and cellular biology journals: *Am J Hum Genetics, Clin Genet, J Med Genet, Plos Genet, Scientific Report, Dev Biol, Hum Mutation, Human Reprod, J Cell Science, Andrology …*
Review for funding agencies: Agence National de la Recherche (ANR, France), Israel Foundation (Israel)

REVIEWING ACTIVITIES AS JURY MEMBER

PhD defense committees: 21 national PhD defenses, 5 national PhD mid-term reviews.
HDR defense committees: 3 national defenses

REVIEWING ACTIVITIES AS MEMBER OF NATIONAL COMMITTEES

Member of the **CSS3 INSERM committee 2022-2027** (nominated member)
Member of the **ANR – CE14 Physiology & Pathophysiology committee 2021**

MEMBERSHIPS OF SCIENTIFIC SOCIETIES

The American Society for the Study of Human Reproduction,
The American Society of Human Genetics
Societé d'Andrologie de Langue Française

French research Networks: *GDR* Cnrs 3606 *Reproduction*, GDR Cnrs 3581*Cilia and Flagella*

MAJOR COLLABORATIONS

SLC26 anion transporters in sperm fertilization potential
- Dr Marie-Odile Fauvarque. CEA, Grenoble, France (Screening of SLC26 compounds)
- Pr Ursula Seidler. Hannover Medical School, Germany (Epithelial electrophysiology, SLC26 channels)

Cilia and Flagella assembly
- Pr Bénédicte Durand. Université Lyon 1, France (Cilia and flagella in Drosophila model)
- Dr Mélanie Bonhivers. Université de Bordeaux, France (Flagella in Trypanosoma model)
- Dr Anu Sironen. Natural Resources Institute Finland (Luke), Finland (Cilia protein network & pathways)
- Dr Zhibing Zhang. Wayne State University, Michigan, USA (Intra Flagellar Transport in mouse model)

Genetics of Male infertility
- Pr Serge Amselem Hôpital Trousseau, Paris, France (Primary Ciliary Dyskinesia with Male Infertility)
- Dr Emanuel Dulioust & Pr Catherine Patrat. AP-HP Cochin, Paris, France (Human male infertility)
- Pr Pierre Ray. CHU Grenoble Alpes, Grenoble, France (Human male Infertility)
- Dr Feng Zhang. Fundan University, Shangai, China (Human male Infertility)

FUNDING ID

Total Funding obtained: 3 2710 000 €

Total as Principal Investigator: 1 273 000 €.
ANR SPERMetabo (2022), IRGA SLC26 Therapeutics (2021), ANR MUCOFERTIL (2013), Vaincre la Mucoviscidose, Université Paris Descartes (2012), ANR JC07 (2007), INSERM PNR Reproduction/Endocrinologie (2005), Marie Curie European Reintegration Grant (2004)

Total as consortium member: 1 937 000 €.
ANR FLAGEL-OME (2019)**,** ANR DIVERCIL (2017)**,** ANR MAS FLAGELLA (2014).

CAREER TOTAL PUBLICATIONS: 62 publications.

10 selected publications [2011-2021]: (*) Equal contribution**,** (xx) Staff under supervision

1. Cavarocchi E, Whitfield M, Chargui A, Stouvenel L, Lorès P, Coutton C, Arnoult C, Santulli P, Patrat C, Thierry-Mieg N, Ray PF, Dulioust E, **Touré A**. *The sodium/proton exchanger SLC9C1 (sNHE) is essential for human sperm motility and fertility*. **Clin Genet. 2021**. PMID: 33462806.
2. Gadadhar S, Alvarez Viar G, Hansen JN, Gong A, Kostarev A, Ialy-Radio C, Leboucher S, Whitfield M, Ziyyat A, **Touré A**, Alvarez L*, Pigino G*, Janke C*. *Tubulin glycylation controls axonemal dynein activity, flagellar beat, and male fertility.* **Science. 2021.** PMID: 33414192.
3. Lorès P, Dacheux D, Kherraf ZE, Nsota Mbango JF, Coutton C, Stouvenel L, Ialy-Radio C, Amiri-Yekta A, Whitfield M, Schmitt A, Cazin C, Givelet M, Ferreux L, Fourati Ben Mustapha S, Halouani L, Marrakchi O, Daneshipour A, El Khouri E, Do Cruzeiro M, Favier M, Guillonneau F, Chaudhry M, Sakheli Z, Wolf JP, Patrat C, Gacon G, Savinov SN, Hosseini SH, Robinson DR, Zouari R, Ziyyat A, Arnoult C, Dulioust E, Bonhivers M, Ray PF, **Touré A**. *Mutations in TTC29, Encoding an Evolutionarily Conserved Axonemal Protein, Result in Asthenozoospermia and Male Infertility*. **Am J Hum Genet. 2019**. PMID: 31735292.
4. Whitfield M*, Thomas L*, Bequignon E, Schmitt A, Stouvenel L, Montantin G, Tissier S, Duquesnoy P, Copin B, Chantot S, Dastot F, Faucon C, Barbotin AL, Loyens A, Siffroi JP, Papon JF, Escudier E, Amselem S, Mitchell V*, **Touré A*** and Legendre M*. *Mutations in DNAH17, encoding a sperm-specific axonemal outer dynein arm heavy chain, cause isolated male infertility due to asthenozoospermia.* **Am J Hum Genet. 201**. PMID: 31178125
5. El Khouri E, Whitfield M, Stouvenel L, Kini A, Riederer B, Lores P, Roemermann D, di Stefano G, Drevet JR, Saez F, Seidler U, **Touré A**. *Slc26a3 deficiency is associated with epididymis dysplasia and impaired sperm fertilization potential in the mouse*. **Mol Reprod Dev. 2018**. PMID: 30118583.
6. Dirami T, Rode B, Wolf JP, Gacon G, Dulioust E, **Touré A**. *Assessment of the frequency of sperm annulus defects in a large cohort of patients presenting asthenozoospermia*. **Basic Clin Androl. 2015**. PMID: 26576287.
7. Chikhoune A, Stouvenel L, Iguer-Ouada M, Hazzit M, Schmitt A, Lorès P, Wolf JP, Aissat K, Auger J, Vaiman D, **Touré A**. *In-vitro effects of Thymus munbyanus essential oil and thymol on human sperm motility and function.* **Reprod Biomed Online. 2015**. PMID: 26194886.
8. Lorès P, Vernet N, Kurosaki T, Van de Putte T, Huylebroeck D, Hikida M, Gacon G, **Touré A**. Deletion of MgcRacGAP in the male germ cells impairs spermatogenesis and causes male sterility in the mouse. **Dev Biol. 2014.** PMID:24355749.
9. Dirami T, Rode B, Jollivet M, Da Silva N, Escalier D, Gaitch N, Norez C, Tuffery P, Wolf JP, Becq F, Ray PF, Dulioust E, Gacon G, Bienvenu T, **Touré A**. *Missense mutations in SLC26A8, encoding a sperm-specific activator of CFTR, are associated with human asthenozoospermia*. **Am J Hum Genet. 2013**. PMID: 23582645.
10. Rode B, Dirami T, Bakouh N, Rizk-Rabin M, Norez C, Lhuillier P, Lorès P, Jollivet M, Melin P, Zvetkova I, Bienvenu T, Becq F, Planelles G, Edelman A, Gacon G, **Touré A**. *The testis anion transporter TAT1 (SLC26A8) physically and functionally interacts with the cystic fibrosis transmembrane conductance regulator channel: a potential role during sperm capacitation.* **Hum Mol Genet. 2012.** PMID: 22121115.

Major monographs

1. **Touré A**, Martinez G, Kherraf ZE, Cazin C, Beurois J, Arnoult C, Ray PF, Coutton C. *The genetic architecture of morphological abnormalities of the sperm tail*. **Hum Genet. 2020**. PMID: 31950240.
2. **Touré A.** *Importance of SLC26 Transmembrane Anion Exchangers in Sperm Post-testicular Maturation and Fertilization Potentia*l. **Front Cell Dev Biol. 2019.** PMID: 31681763.
3. **El Khouri E, Touré A**. Functional interaction of the cystic fibrosis transmembrane conductance regulator with members of the SLC26 family of anion transporters (SLC26A8 and SLC26A9): physiological and pathophysiological relevance. **Int J Biochem Cell Biol. 2014**. PMID: 24530837.

Book chapters:

Touré A. *Genetics and Pathophysiology of the Cystic Fibrosis Transmembrane Conductance Regulator in Male Reproduction: New Evidence of a Direct Effect on the Male Germline*. (Book chapter). **Genetics of Human Infertility. Monogr Hum Genet. Basel, Karger, 2017**