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Review article

## “Flâneur neurologique in paris” – A guide to pinpointing the houses of famous neurologists in the late XIX century

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## ABSTRACT

**Introduction:** During the last quarter of the XIX century, Paris, France, particularly the Salpêtrière Hospital was the most important centre of reference of Clinical Neurology in the world. The group based on the Salpêtrière Hospital, led by Professor Charcot, who was arguably the most celebrated neurologist in Europe.

**Objective:** In this historical review, we present and locate the addresses of the houses of these famous Parisian neurologists from the late XIX century.

**Discussion:** At that time, Charcot and the triumvirate of his most famous pupils, Pierre Marie, Joseph Babinski and Gilles de la Tourette, lived in different streets of Paris, predominantly in a small cluster in the districts known as 7<sup>ème</sup> and 8<sup>ème</sup> *arrondissements* (7th and 8th neighbourhoods). Professor Charcot lived in different streets and *arrondissements* of Paris, including the Rue du Faubourg Poissonnière, Paris IX; Cité de Trévisse, Paris IX; Avenue du Coq, Paris IX; l'Hôtel de Chimay, Quai Malaquais Paris; and finally his most famous address at the Boulevard Saint-Germain, 217 (previously l'Hôtel de Varangeville), in the Faubourg Saint-Germain, Paris VII. (1884).

**Conclusion:** The best urban organization in Paris provided an interaction between Charcot and other privileged minds of his day. We were remembering and visiting, as a “*Flâneur Neurologique in Paris*”, the addresses of the houses of these famous and outstanding Parisian neurologists from the late XIX century.

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During the last quarter of the XIX century, Paris, France, particularly the Salpêtrière hospital was the most important centre of reference of Clinical Neurology in the world. Jean-Martin Charcot, the founder and the “father of Neurology”, reigned absolute as arguably the most celebrated professor of Neurology [1–4]. At that time, Professor Charcot, and his pupils – including Pierre Marie, Joseph Babinski, Georges Gilles de la Tourette, among others – received several foreigner neurologists, such as Bechterew, Darkschewitch, Kojewnikow from Russia; Marinesco from Romania; Starr, Sachs, and Mitchell from the USA; and Sigmund Freud from Austria [1–4]. Aside from the neurologists who came from different parts of the world, Charcot, attended a huge number of famous patients in his private office, including Dom Pedro II,

Emperor of Brazil, the Gran-Duke Nicholas of Russia, and Cardinal Lavigerie, the archbishop of Algiers [1–4]. As a result, the French School of Neurology, whose epicentre was the Salpêtrière hospital, became a so-called “*Mecca of Neurology*” [1–3]. The aim of this historical review is to present a promenade through the streets of Paris, as a visiting guide to the houses of famous Parisian neurologists from the late XIX century, namely Professor Charcot and the triumvirate of his most famous pupils: Pierre Marie, Joseph Babinski and Georges Gilles de la Tourette (Fig. 1).

### 1. Paris, capital of the XIX century

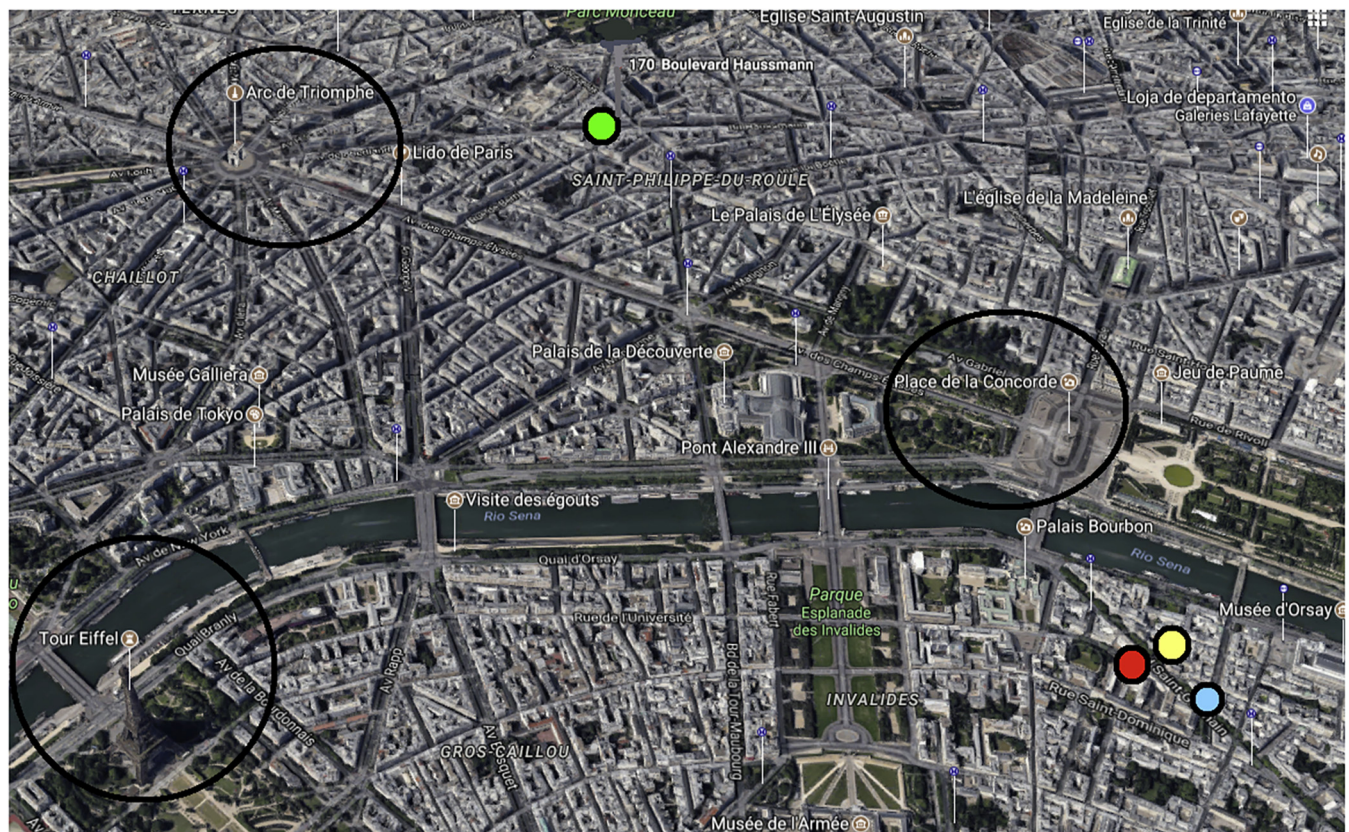
Under the guidance of Baron Haussmann, the right-hand man of Napoleon III's Second Empire and the architect imbued with the task of refurbishing and modernizing the city, during the better part of second half of the XIX century, Paris underwent major structural changes that would ultimately lead it to become the modern and effective city it has been known far, earning the nickname of City of Lights [5].

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**Fig. 1.** Map of Paris *Arrondissements* (neighbourhoods) with the location of Charcot's and his triumvirate of favourite pupils' houses. Marked with coloured pins: Red/Charcot; Yellow/Pierre-Marie; Green/Babinski; Blue/Tourette. (Modified from <https://www.google.com.br/maps/place/Place+le+la+Concorde/@48.8656366,2.319047,735m/data=!3m1!1e3!4m5!3m4!1s0x47e66fcd61ae0a01:0x18030de10e25ab2c18m2!3d48.8656331!4d2.3212357>, accessed on October 30th, 2017).

At the dawn of the XIX century Paris was the most crowded city of Europe, growing exponentially in a hectic manner, without any proper planning, to the point that urban saturation led to what was known as a “medieval space crisis”, ultimately unorganised growth of urban space without any prior conception like that of medieval times [6]. The Industrial Revolution of the XVIII century led to the widespread of miserable housing and collective slums so that in the more crowded neighbourhoods a mixture of insalubrity, traffic congestion and utter ugliness made them unwholesome [5].

Successive epidemics, impractical urban mobility and over 60% of the populace living in miserable conditions urged the government to take major steps into implementing the renovation of the city structure. Some changes had already begun in the XVIII century, such as the broadening of the Champs-Élysées avenue, structuring of the Place da la Concorde, the demolition of old slums and the construction of public buildings, such as the Theatre Odéon. Haussmann's plans for amplifying and modifying Paris were based on three pillars: road system, architectonic urbanism and sanitary urbanism with landscaping of green space [5].

A new grid of wide and straight roads, linking the city centre to the newly constructed train stations was developed; an impressive number of buildings were either built or refurbished; the hydraulic system got renovated with new aqueducts, reservoirs and public fountains; sewerage became more efficient with the sewer system growing from a mere 135 km in 1850 to 600 km by 1870; finally a number of parks and other green areas were constructed [5].

The Roman Empire expanded and influenced the whole known world by building roads. Knowledge now walks along virtual roads. By the time that Charcot rose to prominence at the Salpêtrière in the 1870s, Paris had become a much more organised and extremely gorgeous city with 1,800,000 inhabitants [7]. Some problems

inherent to any great metropolis still existed, but by and large, they had been minimised and the newly implemented urban improvements made it easier for patients to have access to hospitals and individual doctors, particularly the privileged minds that fostered the birth of modern neurology.

## 2. Professor Charcot at the Boulevard Saint-Germain

Professor Charcot's (1825–1893) (Fig. 2) contribution to Neurology is outstanding and well-known worldwide, including the description of several neurological diseases, such as lateral amyotrophic sclerosis (ALS) (named after him as Charcot's disease), multiple sclerosis (Charcot and Vulpian described it as *sclerose in plaques*), Charcot-Marie-Tooth's disease (hereditary sensory and motor neuropathy), tabetic arthropathy (Charcot's joints), the clinical description of Parkinson's disease, the pathogenesis of intracerebral hemorrhage (the microaneurysms of Charcot-Bouchard), among so many others. He was also particularly interested in hysteria and studied different aspects of this puzzling condition [1–3]. Professor Charcot lived in different streets and *arrondissements* of Paris, including the Rue du Faubourg Poissonnière, Paris IX; Cité de Trévis, Paris IX; Avenue du Coq, Paris IX; l'Hôtel de Chimay, Quai Malaquais Paris; and finally, his most famous address at the Boulevard Saint-Germain, 217 (previously l'Hôtel de Varangeville), in the Faubourg Saint-Germain, Paris VII. (1884) (Fig. 2). Charcot also had a summer house at Neuilly Sur Seine (Ile-de-France), in the outskirts of Paris, and the street of this country home now bears the name of his son – Boulevard du Commandant Charcot [1,4]. In his aristocratic mansion at 217, Boulevard Saint-Germain, Charcot and his family had the habit of





**Fig. 2.** Professor Jean-Martin Charcot (1825–1893) and his house at the Boulevard Saint-Germain (Hôtel de Varangeville), Paris. (Charcot's picture extracted from Google Images: Wikipedia, accessed on 30th October 2017; House's picture taken by one of the authors, Olivier Walusinski).

receiving important guests from the medical and scientific areas, also including political figures and artists, the intellectuality dubbed “*crème de la crème*”, for a special dinner on Tuesday nights, between the months of October and May, the so-called *Soirées du Mardi* [1,2]. Following Charcot's death his mansion was sold to Alfred Edwards, who was Jeanne Charcot's husband. Therefore his son-in-law – this mansion is currently used as the “*Maison de l'Amérique Latine*” [2]

### 3. Pierre Marie at Rue de Lille

Pierre Marie (1853–1940) (Fig. 3) was a prominent member of the French neurological world of the late nineteenth and early twentieth centuries, and he is considered one of the most outstanding of Charcot's pupils, as well as his favourite, and clearly his most aggressive defender [1,2,8,9]. Marie's contributions to Neurology and Internal Medicine include the description of the hereditary motor and sensory neuropathy known as Charcot-

Marie-Tooth disease; hereditary cerebellar ataxia, known as Marie's ataxia; a sporadic idiopathic cerebellar ataxia with late-onset known as Marie-Foix-Alajouanine's disease; acromegaly or “*maladie de Marie*”; and ankylosing spondylitis [8,9]. Pierre Marie lived in Paris, in the Paris VII (“7<sup>ème</sup> Arrondissement”), at 76 Rue de Lille (Fig. 3) [8].

### 4. Joseph Babinski at Boulevard Haussmann

Joseph Babinski (1857–1932) (Fig. 4) worked for several years together with his eminent master, and he was his Chief Resident during the years of 1885 and 1887 under Charcot's tutelage [1,2,10,11]. He had a filial affection for Charcot and became very famous worldwide because of his prolific career and scientific works [1,2,10,11]. Among them are the outstandingly famous Babinski's sign; the semiology of deep tendon reflexes; cerebellar and vestibular semiology; the description of many of the symptoms of neurosyphilis; as well as works on hysteria, or



**Fig. 3.** Pierre Marie (1853–1940) and his house at Rue de Lille, Paris. (Marie's picture was extracted from Google Images: Wikipedia on 30th October 2017. His house is now destroyed and a bank's building replaces it. Bank's Picture was extracted from <https://www.google.com.br/maps/place/24+Rue+de+Lille,+75007+Paris-7E-Arrondissement,+França/@48.8581702,2.3288735,735m/data=!3m2!1e3!4b1!4m5!3m4!1s0x47e66e284ee67c5f:0xb4caed9ae190d532!8m2!3d48.8581667!4d2.3310622> on 4th November 2017).



**Fig. 4.** Joseph Babinski (1857–1932) and house, at Boulevard Haussmann, Paris. (Extracted from Google Images: Wikipedia, October 12th, 2016 and Himetop.wikidot, October 12th, 2016).



**Fig. 5.** Gilles de la Tourette (1857–1904) and his house at Rue de l'Université, Paris. (Extracted from Google Images: Wikimedia Commons, October 12th, 2016. House's picture taken by one of the authors, Olivier Walusinski).

according to his own studies, Pithiatism [10,11]. Joseph Babinski lived together with his family in the Boulevard Montparnasse, after that in the rue Bonaparte and finally in 170-bis Boulevard Haussmann, Paris VIII, together with his brother, Henri Babinski, both unmarried (Fig. 4). [10,11]. Henri Babinski was a civil engineer and wrote a very famous book entitled “Gastronomie

*Pratique*”, under the pen name of Ali-Bab [10,11]. During a special Sunday lunch at the Babinski’s house, Pierre Marie was invited, but his behaviour was considered disastrous by Henri Babinski. Marie added water to his glass of a very famous vintage wine, and Henri commented with Joseph Babinski “*he will not be invited again*” [10].

## 5. Georges Gilles de la Tourette at Rue de l'université

Georges Gilles de la Tourette (1857–1904) (Fig. 5) is a name worldwide known due to the disease that carries his namesake, Tourette's syndrome, which he described as “*Etude sur une affection nerveuse caractérisée par de l' incoordination motrice accompagnée d'écholalie et de coprolalie*” [1,2,12,13]. (Fig. 5) Professor Charcot – who Gilles de la Tourette not only admired as his mentor, but even worshipped as a medical God – proposed naming this neurological condition as “*Maladie de Gilles de la Tourette*” [1,12]. Gilles de la Tourette acted as Charcot's “*Chef de Clinique*” and went to published several papers on neurological diseases, besides his own syndrome, including studies about hysteria [1,2,12,13]. Gilles de la Tourette moved quite a bit from one address to another, living in several streets and arrondissement of Paris, including 36 Rue Bonaparte, Paris VI (1878); 43 Rue Monge, Paris V (1879); 14 Rue de Beaune, Paris VI (1886); and 39 Rue de l'Université, Paris VII (1893) (Fig. 5) [12].

## 6. Conclusion

In the late nineteenth century, Paris was the reference centre of Neurology in the world, and Professor Charcot was the most celebrate neurologist and professor of Neurology, with an outstanding output pouring out of his headquarters at the Salpêtrière Hospital [1–4]. The urban and social development of Paris was one of the factors that brought Charcot closer to his influencers and his students. At that time, Charcot and his most triumvirate of favourite pupils – Pierre Marie, Joseph Babinski and Gilles de la Tourette – lived in different streets of Paris, predominantly in the districts (“*Arrondissements*”) known as Paris VII and VIII (Fig. 1) [1–12]. In this historical review we are remembering and visiting, as a “*Flaneur*

*Neurologique in Paris*”, the addresses of the houses of these famous and outstanding Parisian neurologists from the late XIX century.

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## References

- [1] Goetz CG, Bonduelle M, Gelfand T. Charcot: Constructing Neurology. New York: Oxford Univ Press; 1995. p. 149–51.
- [2] Guillain GJ-M. Charcot; his life-his work. New York: Paul B. Hoeber; 1959. p. 3–66.
- [3] Teive HA, Almeida SM, Arruda WO, Sá DS, Werneck LC. Charcot and Brazil. Arq Neuropsiquiatr 2001;59:295–9.
- [4] Bonduelle M. The intimate Charcot. Rev Neurol (Paris) 1994;150:524–8.
- [5] Ponge R, Machado NH. As transformações urbanísticas de Paris no século XIX: análise e reflexões. Revista XIX: Artes e técnicas em transformação 2014;1:69–81.
- [6] Loyer F. Paris XIXe siècle: l'immeuble et la rue. Paris: Hazan; 1987. p. 44–62.
- [7] Combeau Y. Histoire de Paris. Paris: PUF; 2003. p. 62.
- [8] Paciaroni M, Bogousslavsky J. Jules Joseph Dejerine versus Pierre Marie. In: Bogousslavsky J (Ed). Following Charcot: A forgotten history of Neurology and Psychiatry. Front Neurol Neurosci. 29 (2011) 162–169.
- [9] Almeida GM, Germiniani FMB, Teive HAG. The seminal role played by Pierre Marie in Neurology and Internal Medicine. Arq Neuropsiquiatr 2015;73:887–9.
- [10] Poirier J, Philippon J. Renewing the fire: Joseph Babinski. In: Bogousslavsky J (ed). Following Charcot: A forgotten history of Neurology and Psychiatry. Front Neurol Neurosci. 29 (2011) 91–104.
- [11] Philippon J, Joseph Poirier J, Babinski. A biography. New York: Oxford University Press; 2009. p. 3–21. 328.
- [12] Walusinski O. Keeping the fire burning: Georges Gilles de la Tourette, Paul Richer, Charles Féré, and Alfred Binet. In: Bogousslavsky J (Ed). Following Charcot: A forgotten history of Neurology and Psychiatry. Front Neurol Neurosci 29 (2011) 71–90.
- [13] Lees AJ. Georges Gilles de la Tourette. The man and his times. Rev Neurol (Paris) 1986;142:808–16.