



Evolutionary history of hepatitis C virus genotype 5a in France, a multicenter ANRS study

Submitted by Emmanuel Lemoine on Fri, 07/18/2014 - 09:41

Titre	Evolutionary history of hepatitis C virus genotype 5a in France, a multicenter ANRS study
Type de publication	Article de revue
Auteur	Henquell, Cécile [1], Guglielmini, Julien [2], Verbeeck, Jannick [3], Mahul, Antoine [4], Thibault, Vincent [5], Lebray, Pascal [6], Laperche, Syria [7], Trimoulet, Pascale [8], Foucher, Juliette [9], Le Guillou-Guillemette, Hélène [10], Fouchard-Hubert, Isabelle [11], Abravanel, Florence [12], Métivier, Sophie [13], Gaudy-Graffin, Catherine [14], d'Altéroche, Louis [15], Rosenberg, Arielle R [16], Podevin, Philippe [17], Plantier, Jean-Christophe [18], Riachi, Ghassan [19], Saoudin, Hénia [20], Coppere, Henry [21], André, Elisabeth [22], Gournay, Jérôme [23], Feray, Cyrille [24], Vallet, Sophie [25], Nousbaum, Jean-Baptiste [26], Baazia, Yazid [27], Roulot, Dominique [28], Alain, Sophie [29], Loustaud-Ratti, Véronique [30], Schvoerer, Evelyne [31], Habersetzer, François [32], Pérez-Serra, Rafael-Juan [33], Gourari, Samir [34], Mirand, Audrey [35], Odent-Malaure, Hélène [36], Garraud, Olivier [37], Izopet, Jacques [38], Bommelaer, Gilles [39], Peigue-Lafeuille, Hélène [40], Van Ranst, Marc [41], Abergel, Armand [42], Bailly, Jean-Luc [43]
Editeur	Elsevier
Type	Article scientifique dans une revue à comité de lecture
Année	2011
Langue	Anglais
Date	2011/03
Numéro	2
Pagination	496 - 503
Volume	11
Titre de la revue	Infection, Genetics and Evolution
ISSN	1567-1348
Mots-clés	Evolutionary history [44], HCV genotype 5a [45], Molecular dating [46], Transmission routes [47]

Résumé en
anglais

The epidemic history of HCV genotype 5a is poorly documented in France, where its prevalence is very low, except in a small central area, where it accounts for 14.2% of chronic hepatitis C cases. A Bayesian coalescent phylogenetic investigation based on the E1 envelope gene and a non-structural genomic segment (NS3/4) was carried out to trace the origin of this epidemic using a large sample of genotype 5a isolates collected throughout France. The dates of documented transmissions by blood transfusion were used to calibrate five nodes in the phylogeny. The results of the E1 gene analysis showed that the best-fitting population dynamic model was the expansion growth model under a relaxed molecular clock. The rate of nucleotide substitutions and time to the most recent common ancestors (tMRCA) of genotype 5a isolates were estimated. The divergence of all the French HCV genotype 5a strains included in this study was dated to 1939 [95% HPD: 1921–1956], and the tMRCA of isolates from central France was dated to 1954 [1942–1967], which is in agreement with epidemiological data. NS3/4 analysis provided similar estimates with strongly overlapping HPD values. Phylodynamic analyses give a plausible reconstruction of the evolutionary history of HCV genotype 5a in France, suggesting the concomitant roles of transfusion, iatrogenic route and intra-familial transmission in viral diffusion.

URL de la
notice

<http://okina.univ-angers.fr/publications/ua3533> [48]

DOI

10.1016/j.meegid.2010.12.015 [49]

Lien vers le
document

<http://dx.doi.org/10.1016/j.meegid.2010.12.015> [49]

Liens

- [1] [http://okina.univ-angers.fr/publications?f\[author\]=5228](http://okina.univ-angers.fr/publications?f[author]=5228)
- [2] [http://okina.univ-angers.fr/publications?f\[author\]=5229](http://okina.univ-angers.fr/publications?f[author]=5229)
- [3] [http://okina.univ-angers.fr/publications?f\[author\]=5230](http://okina.univ-angers.fr/publications?f[author]=5230)
- [4] [http://okina.univ-angers.fr/publications?f\[author\]=5231](http://okina.univ-angers.fr/publications?f[author]=5231)
- [5] [http://okina.univ-angers.fr/publications?f\[author\]=4956](http://okina.univ-angers.fr/publications?f[author]=4956)
- [6] [http://okina.univ-angers.fr/publications?f\[author\]=5232](http://okina.univ-angers.fr/publications?f[author]=5232)
- [7] [http://okina.univ-angers.fr/publications?f\[author\]=5146](http://okina.univ-angers.fr/publications?f[author]=5146)
- [8] [http://okina.univ-angers.fr/publications?f\[author\]=5233](http://okina.univ-angers.fr/publications?f[author]=5233)
- [9] [http://okina.univ-angers.fr/publications?f\[author\]=5017](http://okina.univ-angers.fr/publications?f[author]=5017)
- [10] <http://okina.univ-angers.fr/heguillemette/publications>
- [11] [http://okina.univ-angers.fr/publications?f\[author\]=21979](http://okina.univ-angers.fr/publications?f[author]=21979)
- [12] [http://okina.univ-angers.fr/publications?f\[author\]=5676](http://okina.univ-angers.fr/publications?f[author]=5676)
- [13] [http://okina.univ-angers.fr/publications?f\[author\]=5236](http://okina.univ-angers.fr/publications?f[author]=5236)
- [14] [http://okina.univ-angers.fr/publications?f\[author\]=5308](http://okina.univ-angers.fr/publications?f[author]=5308)
- [15] [http://okina.univ-angers.fr/publications?f\[author\]=22787](http://okina.univ-angers.fr/publications?f[author]=22787)
- [16] [http://okina.univ-angers.fr/publications?f\[author\]=5238](http://okina.univ-angers.fr/publications?f[author]=5238)
- [17] [http://okina.univ-angers.fr/publications?f\[author\]=5239](http://okina.univ-angers.fr/publications?f[author]=5239)
- [18] [http://okina.univ-angers.fr/publications?f\[author\]=5240](http://okina.univ-angers.fr/publications?f[author]=5240)
- [19] [http://okina.univ-angers.fr/publications?f\[author\]=5241](http://okina.univ-angers.fr/publications?f[author]=5241)
- [20] [http://okina.univ-angers.fr/publications?f\[author\]=5242](http://okina.univ-angers.fr/publications?f[author]=5242)
- [21] [http://okina.univ-angers.fr/publications?f\[author\]=5347](http://okina.univ-angers.fr/publications?f[author]=5347)
- [22] [http://okina.univ-angers.fr/publications?f\[author\]=5244](http://okina.univ-angers.fr/publications?f[author]=5244)
- [23] [http://okina.univ-angers.fr/publications?f\[author\]=5245](http://okina.univ-angers.fr/publications?f[author]=5245)
- [24] [http://okina.univ-angers.fr/publications?f\[author\]=5246](http://okina.univ-angers.fr/publications?f[author]=5246)
- [25] [http://okina.univ-angers.fr/publications?f\[author\]=5247](http://okina.univ-angers.fr/publications?f[author]=5247)
- [26] [http://okina.univ-angers.fr/publications?f\[author\]=5248](http://okina.univ-angers.fr/publications?f[author]=5248)
- [27] [http://okina.univ-angers.fr/publications?f\[author\]=5249](http://okina.univ-angers.fr/publications?f[author]=5249)

- [28] [http://okina.univ-angers.fr/publications?f\[author\]=5250](http://okina.univ-angers.fr/publications?f[author]=5250)
- [29] [http://okina.univ-angers.fr/publications?f\[author\]=5225](http://okina.univ-angers.fr/publications?f[author]=5225)
- [30] [http://okina.univ-angers.fr/publications?f\[author\]=5251](http://okina.univ-angers.fr/publications?f[author]=5251)
- [31] [http://okina.univ-angers.fr/publications?f\[author\]=5252](http://okina.univ-angers.fr/publications?f[author]=5252)
- [32] [http://okina.univ-angers.fr/publications?f\[author\]=5253](http://okina.univ-angers.fr/publications?f[author]=5253)
- [33] [http://okina.univ-angers.fr/publications?f\[author\]=5254](http://okina.univ-angers.fr/publications?f[author]=5254)
- [34] [http://okina.univ-angers.fr/publications?f\[author\]=5255](http://okina.univ-angers.fr/publications?f[author]=5255)
- [35] [http://okina.univ-angers.fr/publications?f\[author\]=5256](http://okina.univ-angers.fr/publications?f[author]=5256)
- [36] [http://okina.univ-angers.fr/publications?f\[author\]=5257](http://okina.univ-angers.fr/publications?f[author]=5257)
- [37] [http://okina.univ-angers.fr/publications?f\[author\]=5258](http://okina.univ-angers.fr/publications?f[author]=5258)
- [38] [http://okina.univ-angers.fr/publications?f\[author\]=5259](http://okina.univ-angers.fr/publications?f[author]=5259)
- [39] [http://okina.univ-angers.fr/publications?f\[author\]=5260](http://okina.univ-angers.fr/publications?f[author]=5260)
- [40] [http://okina.univ-angers.fr/publications?f\[author\]=5261](http://okina.univ-angers.fr/publications?f[author]=5261)
- [41] [http://okina.univ-angers.fr/publications?f\[author\]=5262](http://okina.univ-angers.fr/publications?f[author]=5262)
- [42] [http://okina.univ-angers.fr/publications?f\[author\]=5263](http://okina.univ-angers.fr/publications?f[author]=5263)
- [43] [http://okina.univ-angers.fr/publications?f\[author\]=5264](http://okina.univ-angers.fr/publications?f[author]=5264)
- [44] [http://okina.univ-angers.fr/publications?f\[keyword\]=7669](http://okina.univ-angers.fr/publications?f[keyword]=7669)
- [45] [http://okina.univ-angers.fr/publications?f\[keyword\]=7670](http://okina.univ-angers.fr/publications?f[keyword]=7670)
- [46] [http://okina.univ-angers.fr/publications?f\[keyword\]=7671](http://okina.univ-angers.fr/publications?f[keyword]=7671)
- [47] [http://okina.univ-angers.fr/publications?f\[keyword\]=7672](http://okina.univ-angers.fr/publications?f[keyword]=7672)
- [48] <http://okina.univ-angers.fr/publications/ua3533>
- [49] <http://dx.doi.org/10.1016/j.meegid.2010.12.015>

Publié sur *Okina* (<http://okina.univ-angers.fr>)