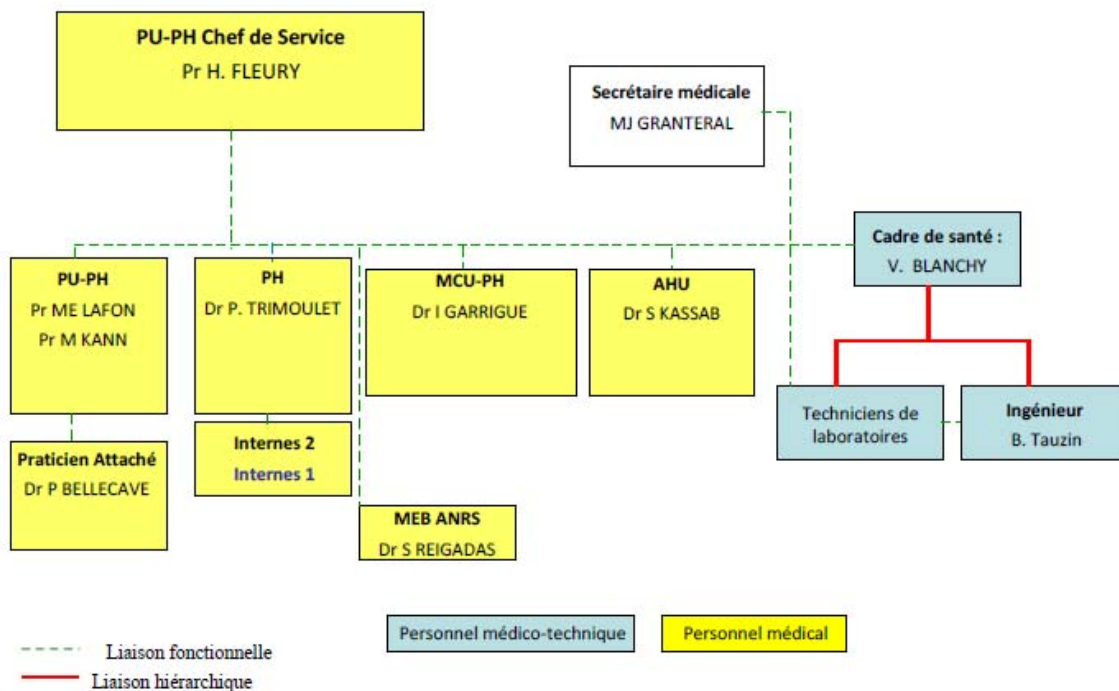


Virology Laboratory

1- Presentation :

➤ Organization :

- Organization chart :



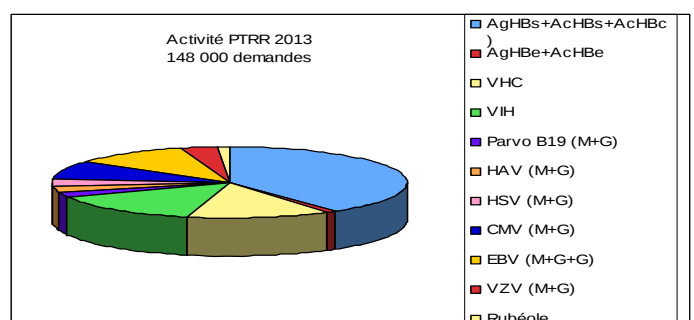
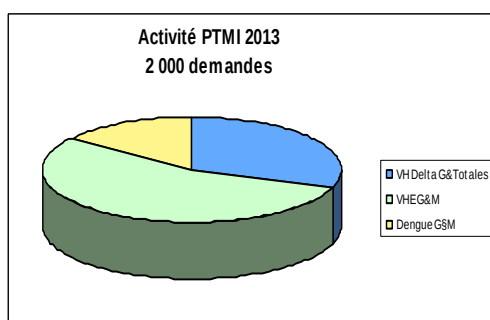
- Technical platforms :

The Virology Lab activity is distributed over three technical platforms: the technical platform for rapid response (PTRR), the technical platform for microbiology (PTMI) and the technical platform for molecular biology (PTBM).

➤ The Virology Lab activity in figures (activity for 2013) :

150,000 viral antibodies performed for 98.7% on PTRR (148,000) and 70,000 molecular biology acts.

- Viral antibodies:



Viral antibodies (150,000/year)

PTRR



PTMI



Gestionnaire de µplaques
Eti-Max Diasorin



gestion manuelle
(urgence)

* Retrovirus and hepatitis:

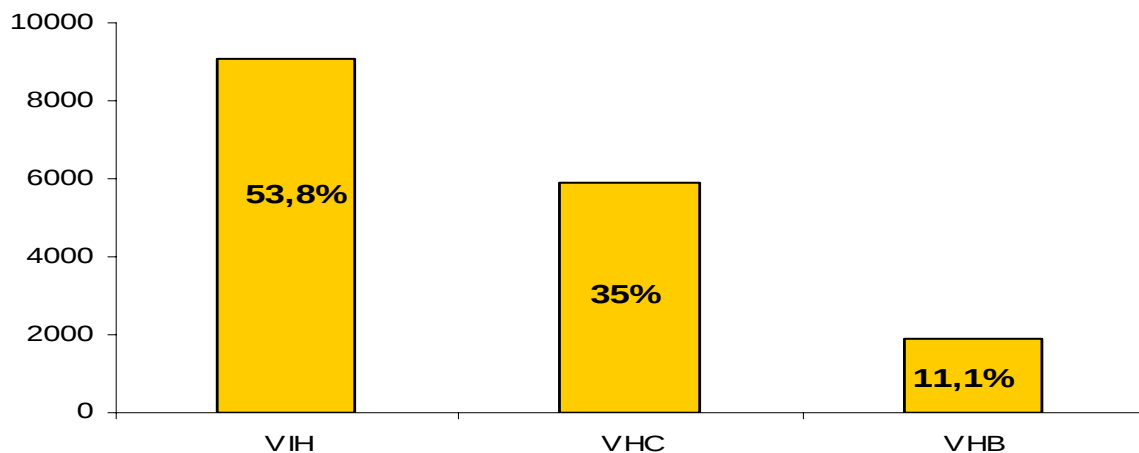
DXi Beckman

Vidas Biomérieux

XL Diasorin

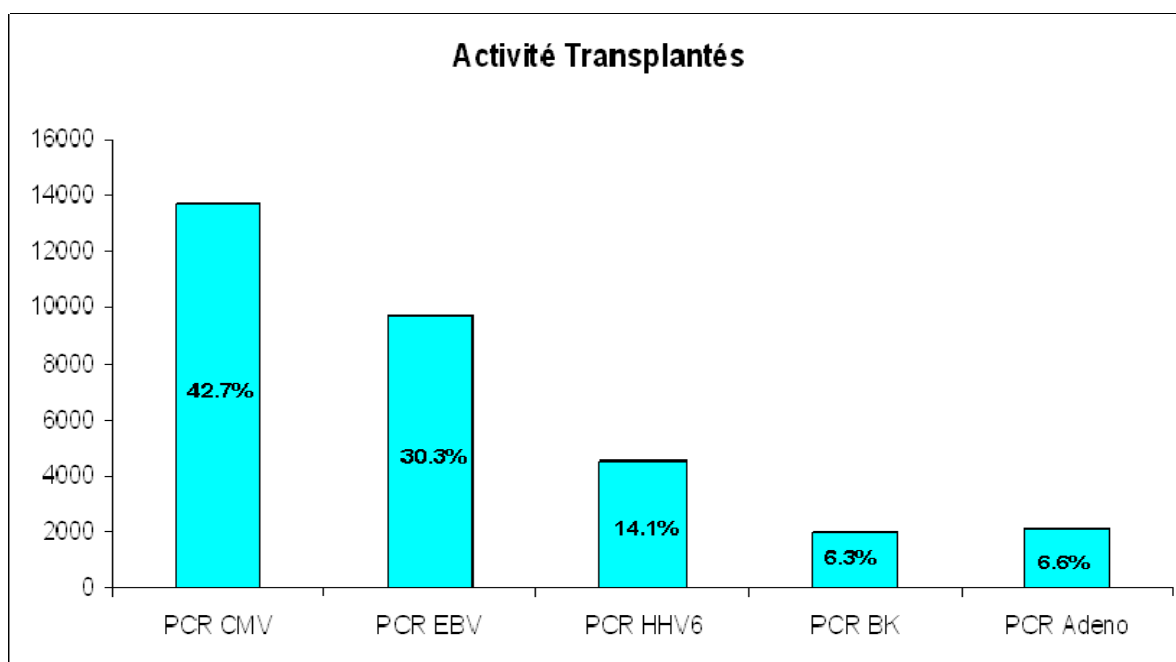
In 2013, HIV, HCV, and HBV viral load activities were respectively 9095, 5923, and 1879 acts.

Charges virales



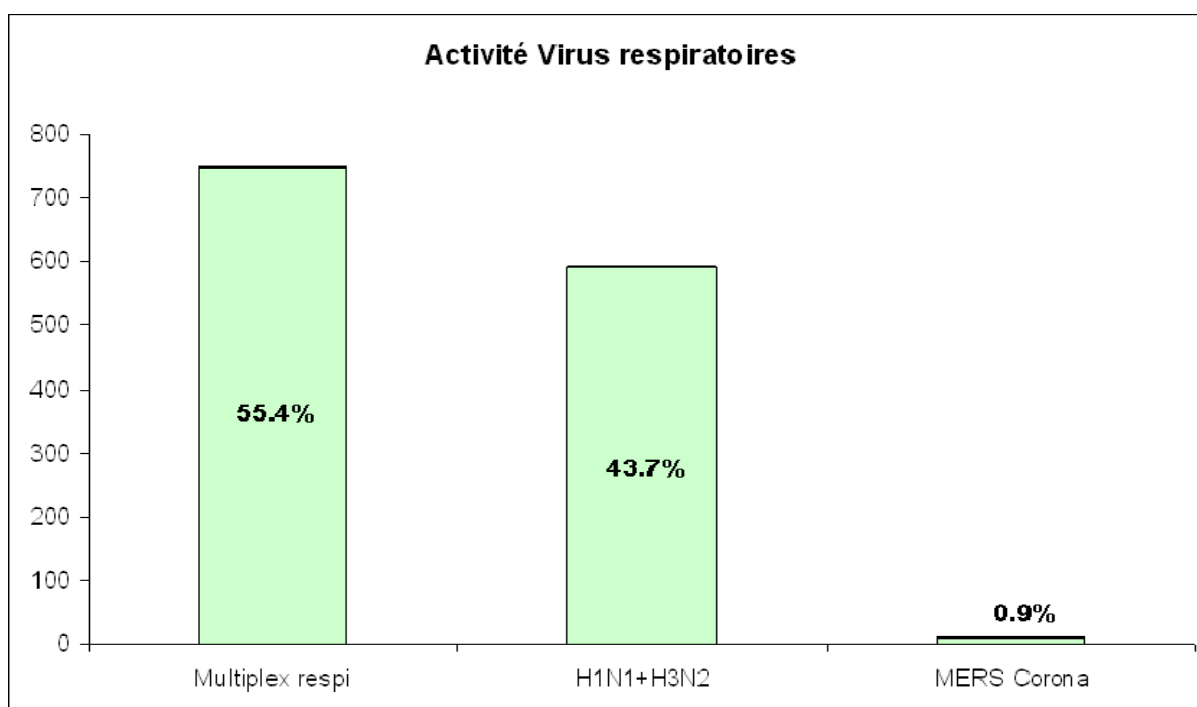
*** Transplantation :**

The overall activity for CMV, EBV, HHV6, BK virus and Adenovirus involved in infections in transplanted patients accounts for 28,067 acts.

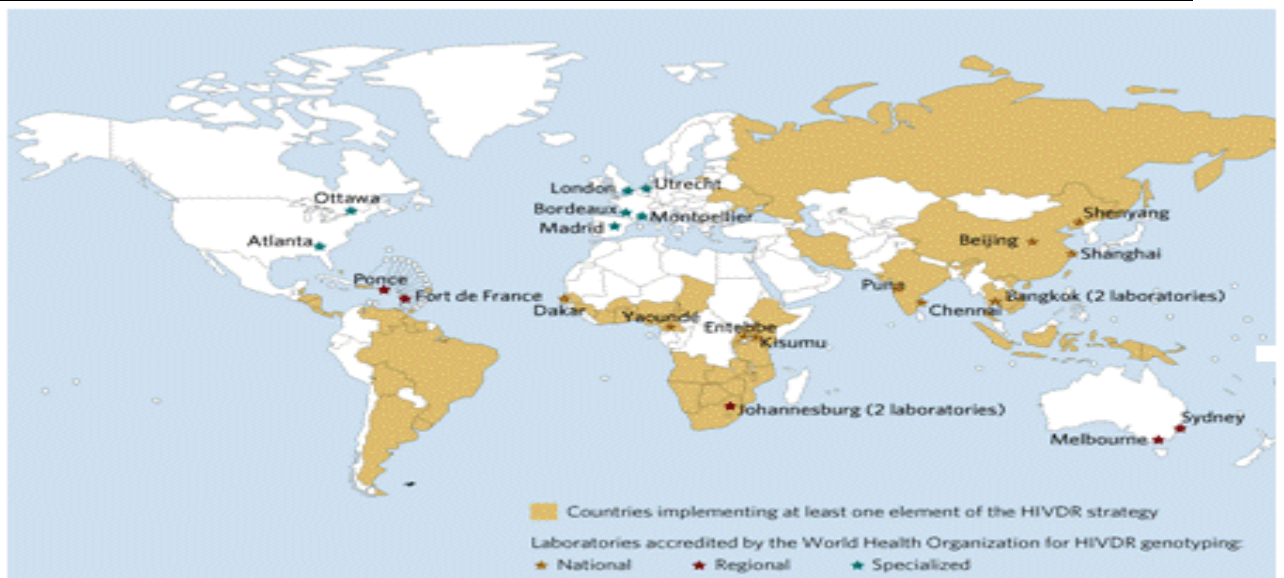
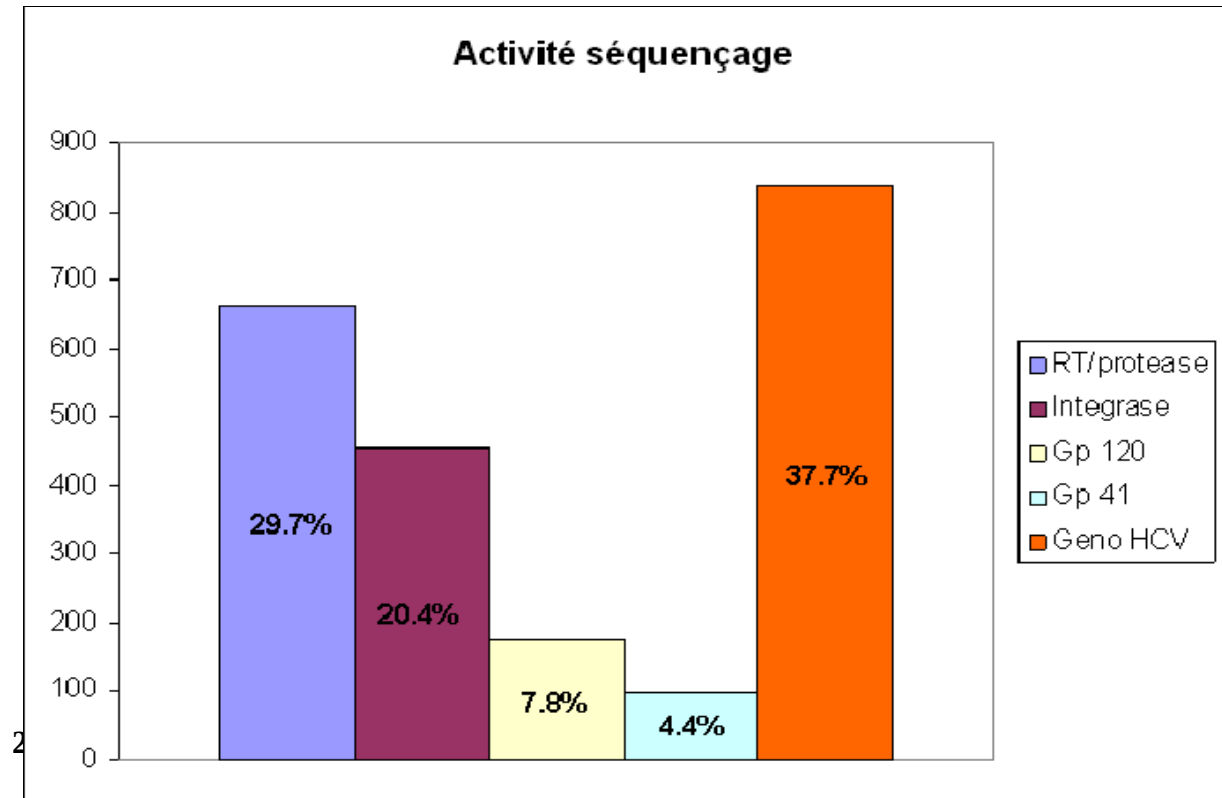


*** Respiratory viruses :**

The overall activity for respiratory viruses accounts for 1,351 acts.



1,390 acts of HIV sequencing per year (662 RT/protease, 455 integrase, 175 Gp 120, 98 Gp 41) and 840 acts for HCV genotyping.



Accredited laboratories



Relationships of the Bordeaux virus laboratory with groups from foreign countries

References (South countries)

1. Menu E, Truong TX, Lafon ME, Nguyen TH, Muller-Trutwin MC, Nguyen TT, Deslandres A, Chaouat G, Duong QT, Ha BK, Fleury HJ, Barre-Sinoussi F.
HIV type 1 Thai subtype E is predominant in South Vietnam.
AIDS Res Hum Retroviruses. 1996 May 1;12(7):629-33.
2. Nguyen TH, Masquelier B, Pham VH, Nguyen TV, Lafon ME, Truong TX, Nguyen HC, Barre-Sinoussi F, Fleury HJ.
Further characterization of HIV-1 isolates from Ho Chi Minh City, Vietnam.
J Acquir Immune Defic Syndr Hum Retrovirol. 1999 Jan 1;20(1):93-5.
3. Menu E, Reynes JM, Muller-Trutwin MC, Guillemot L, Versmisse P, Chiron M, An S, Trouplin V, Charneau P, Fleury H, Barre-Sinoussi F, Sainte Marie FF.
Predominance of CCR5-dependent HIV-1 subtype E isolates in Cambodia.
J Acquir Immune Defic Syndr Hum Retrovirol. 1999 Apr 15;20(5):481-7.
4. Couturier E, Damond F, Roques P, Fleury H, Barin F, Brunet JB, Brun-Vezinet F, Simon F.
HIV-1 diversity in France, 1996-1998. The AC 11 laboratory network.
AIDS. 2000 Feb 18;14(3):289-96.
5. Caumont A, Lan NT, Uyen NT, Hung PV, Schvoerer E, Urriza MS, Roques P, Schrive MH, Lien TT, Lafon ME, Dormont D, Barre-Sinoussi F, Fleury HJ.
Sequence analysis of env C2/V3, gag p17/p24, and pol protease regions of 25 HIV type 1 isolates from Ho Chi Minh City, Vietnam.
AIDS Res Hum Retroviruses. 2001 Sep 1;17(13):1285-91.
6. Moynet D, Pouliquen JF, Londos-Gagliardi D, Buigues RP, Moreau JF, Bedjabaga I, Georges MC, Talarmin A, Joubert M, Fleury H, Vincendeau P, Guillemain B.



High variability of HTLV-I in a remote population of Gabon as compared to that of a similar population of French Guiana.

Virus Genes. 2001 Dec;23(3):257-61.

7. Toni T, Masquelier B, Bonard D, Faure M, Huet C, Caumont A, Roques P, Dabis F, Salamon R, Fleury H; Primo-CI/PAC-CI Study Group.

Primary HIV-1 drug resistance in Abidjan (Cote d'Ivoire): a genotypic and phenotypic study.

AIDS. 2002 Feb 15;16(3):488-91.

8. Fleury H, Recordon-Pinson P, Caumont A, Faure M, Roques P, Plantier JC, Couturier E, Dormont D, Masquelier B, Simon F; Agence Nationale de Recherche sur le SIDA AC11 Laboratory Network.

HIV type 1 diversity in France, 1999-2001: molecular characterization of non-B HIV type 1 subtypes and potential impact on susceptibility to antiretroviral drugs.

AIDS Res Hum Retroviruses. 2003 Jan 1;19(1):41-7.

9. Begaud E, Feindirongai G, Versmisse P, Ipero J, Leal J, Germani Y, Morvan J, Fleury H, Muller-Trutwin M, Barre-Sinoussi F, Pancino G.

Broad spectrum of coreceptor usage and rapid disease progression in HIV-1-infected individuals from Central African Republic.

AIDS Res Hum Retroviruses. 2003 Jul;19(7):551-6

10. Toni TD, Recordon-Pinson P, Minga A, Ekouevi D, Bonard D, Bequet L, Huet C, Chenal H, Rouet F, Dabis F, Lafon ME, Salamon R, Masquelier B, Fleury HJ.

Presence of key drug resistance mutations in isolates from untreated patients of Abidjan, Cote d'Ivoire: ANRS 1257 study.

AIDS Res Hum Retroviruses. 2003 Aug;19(8):713-7.

11. Lan NT, Recordon-Pinson P, Hung PV, Uyen NT, Lien TT, Tien HT, Garrigue I, Schrive MH, Pellegrin I, Lafon ME, Aboulker JP, Barre-Sinoussi F, Fleury HJ.

HIV type 1 isolates from 200 untreated individuals in Ho Chi Minh City (Vietnam): ANRS 1257 Study. Large predominance of CRF01_AE and presence of major resistance mutations to antiretroviral drugs.

AIDS Res Hum Retroviruses. 2003 Oct;19(10):925-8.

12. Deshpande A, Recordon-Pinson P, Deshmukh R, Faure M, Jauvin V, Garrigue I, Lafon ME, Fleury HJ.

Molecular characterization of HIV type 1 isolates from untreated patients of Mumbai (Bombay), India, and detection of rare resistance mutations.

AIDS Res Hum Retroviruses. 2004 Sep;20(9):1032-5.

13. Capdepon S, Londos-Gagliardi D, Joubert M, Correze P, Lafon ME, Guillemain B, Fleury HJ.

New insights in HTLV-I phylogeny by sequencing and analyzing the entire envelope gene.

AIDS Res Hum Retroviruses. 2005 Jan;21(1):28-42.

14. Lazaro E, Theodorou I, Legrand E, Recordon-Pinson P, Boucher S, Capoulade C, Lan TH, Hung PV, Debre P, Fleury H.

Sequences of clustered epitopes in Gag and Nef potentially presented by predominant class I human leukocyte antigen (HLA) alleles A and B expressed by human immunodeficiency virus type 1 (HIV-1)-infected patients in Vietnam.

AIDS Res Hum Retroviruses. 2005 Jun;21(6):586-91.

15. Inwoley A, Recordon-Pinson P, Dupuis M, Gaston J, Genete M, Minga A, Letourneur F, Rouet F, Choppin J, Fleury H, Guillet JG, Andrieu M; ANRS 1220 PRIMO-CI Study Group. Cross-clade conservation of HIV type 1 Nefimmunodominant regions recognized by CD8+ T cells of HIV type 1 CRF02_AG-infected Ivorian (West Africa). *AIDS Res Hum Retroviruses*. 2005 Jul;21(7):620-8.
16. Toni T, Adje-Toure C, Vidal N, Minga A, Huet C, Borger MY, Recordon-Pinson P, Masquelier B, Nolan M, Nkengasong J, Fleury HJ, Delaporte E, Peeters M. Presence of CRF09_cpx and complex CRF02_AG/CRF09_cpx recombinant HIV type 1 strains in Cote d'Ivoire, West Africa. *AIDS Res Hum Retroviruses*. 2005 Jul;21(7):667-72.
17. Toni TD, Masquelier B, Lazaro E, Dore-Mbami M, Ba-Gomis FO, Tea-Diop Y, Kouakou K, Diby J, Sia E, Soppi S, Essien S, Schrive MH, Pinson P, Chenal H, Fleury HJ. Characterization of nevirapine (NVP) resistance mutations and HIV type 1 subtype in women from Abidjan (Cote d'Ivoire) after NVP single-dose prophylaxis of HIV type 1 mother-to-child transmission. *AIDS Res Hum Retroviruses*. 2005 Dec;21(12):1031-4.
18. Ly N, Recordon-Pinson P, Phoung V, Srey C, Kruiy LS, Koum K, Chhum V, Glaziou P, Fleury HJ, Reynes JM. Characterization of mutations in HIV type 1 isolates from 144 Cambodian recently infected patients and pregnant women naive to antiretroviral drugs. *AIDS Res Hum Retroviruses*. 2005 Nov;21(11):971-6.
19. Fleury HJ, Toni T, Lan NT, Hung PV, Deshpande A, Recordon-Pinson P, Boucher S, Lazaro E, Jauvin V, Lavignolle-Aurillac V, Lebel-Binay S, Cheret A, Masquelier B. Susceptibility to antiretroviral drugs of CRF01_AE, CRF02_AG, and subtype C viruses from untreated patients of Africa and Asia: comparative genotypic and phenotypic data. *AIDS Res Hum Retroviruses*. 2006 Apr;22(4):357-66.
20. Bouzeghoub S, Jauvin V, Recordon-Pinson P, Garrigue I, Amrane A, Belabbes el-H, Fleury HJ. High diversity of HIV type 1 in Algeria. *AIDS Res Hum Retroviruses*. 2006 Apr;22(4):367-72.
21. Vessiere A, Nerrienet E, Kfutwah A, Menu E, Tejiokem M, Pinson-Recordon P, Barre-Sinoussi F, Fleury H, Ayouba A. HIV-1 pol gene polymorphism and antiretroviral resistance mutations in drug-naïve pregnant women in Yaounde, Cameroon. *J Acquir Immune Defic Syndr*. 2006 Jun;42(2):256-8.
22. Marechal V, Jauvin V, Selekon B, Leal J, Pelembi P, Fikouma V, Gabrie P, SalvaHeredeibona L, Goumba C, Serdouma, Ayouba A, Fleury H. Increasing HIV-1 polymorphic diversity but no resistance to antiretroviral drugs in untreated patients from RCA : a 2005 study. *AIDS Res Hum Retroviruses*. 2006 Oct;22(10):1036-44.
23. Ly N, Phoung V, Min DC, Srey C, Kruiy LS, Koum K, Chhum V, Glaziou P, Fleury HJ, Reynes JM. Reverse transcriptase mutations in Cambodian CRF01_AE isolates after antiretroviral prophylaxis against HIV Type 1 perinatal transmission. *AIDS Res Hum Retroviruses*. 2007 Dec;23(12):1563-8.



24. Deshpande A, Jauvin V, Magnin N, Pinson P, Faure M, Masquelier B, Lavignolle-Aurillac V and Fleury HJ.
Resistance mutations in subtype C HIV-1 isolates from India patients of Mumbai receiving NRTIs plus NNRTIs and experiencing a treatment failure.
AIDS Res Hum Retroviruses, 2007Feb;23(2):335-40
25. Bouchard M, Masquelier B, Moreno M, Deibis L, Echeverria de Perez, Fleury H, Castro E
HIV-1 drug resistance among naive patients from Venezuela.
AIDS Res Hum Retroviruses, 2007Mar;23(3):482-85
26. Toni T, Masquelier B, Minga A, Anglaret X, Danel C, Coulibaly A, Chenal H, Dabis F, Salamon R, Fleury HJ; Primo-CI ANRS 1220 Study Group.
HIV-1 antiretroviral drug resistance in recently infected patients in Abidjan, Côte d'Ivoire: A 4-year survey, 2002-2006.
AIDS Res Hum Retroviruses. 2007 Sep;23(9):1155-60.
27. Soundararajan L, Karunaianandham R, Jauvin V, Schrive MH, Ramachandran R, Narayanan PR, Fleury HJ, Swaminathan S.
Characterization of HIV-1 isolates from antiretroviral drug-naïve children in southern India.
AIDS Res Hum Retroviruses. 2007 Sep;23(9):1119-26.
28. Samiei S, Soheilli, Fleury HJ
A novel pattern of evolution of HIV-1 subtypes and CRF in Iran
Conference on Retroviruses and Opportunistic Infections (CROI) 2008, Boston, USA, Abstract 522
29. Bertagnolio S, Derdelinckx I, Parker M, Fitzgibbon J, Fleury H, Peeters M, Schuurman R, Pillay D, Morris L, Tanuri A, Gershy-Damet GM, Nkengasong J, Gilks CF, Sutherland D, Sandstrom P.
World Health Organization/HIVResNet Drug Resistance Laboratory Strategy.
AntivirTher. 2008;13Suppl 2
30. Bouzeghoub S, Jauvin V, Pinson P, Schrive MH, Jeannot AC, Amrane A, Masquelier B, Belabbes el H, Fleury HJ. First observation of HIV type 1 drug resistance mutations in Algeria.
AIDS Res Hum Retroviruses. 2008 Nov;24(11):1467-73.
31. Soheilli ZS, Ataiee Z, Tootian S, Zadsar M, Amini S, Abadi K, Jauvin V, Pinson P, Fleury HJ, Samiei S
Presence of HIV-1 CRF35_AD in Iran
AIDS Res Hum Retroviruses. 2009 Jan;25(1):123-4.
32. Bennett DE, Camacho RJ, Otelea D, Kuritzkes DR, Fleury H, Kiuchi M, Heneine W, Kantor R, Jordan MR, Schapiro JM, Vandamme AM, Sandstrom P, Boucher CA, van de Vijver D, Rhee SY, Liu TF, Pillay D, Shafer RW. Drug resistance mutations for surveillance of transmitted HIV-1 drug-resistance: 2009 update.
PLoS One. 2009;4(3):e4724. .
33. Deshpande A, Jauvin V, Pinson P, Jeannot AC, Fleury HJ. Phylogenetic analysis of HIV-1 reverse transcriptase sequences from 382 patients recruited in JJ Hospital of Mumbai, India, between 2002 and 2008.



AIDS Res Hum Retroviruses. 2009 Jun;25(6):633-5.

34. Castillo J, Comegna M, Quijada W, Jauvin V, Pinson P, Masquelier B, Fleury H, Castro E. Surveillance of HIV Type 1 Drug Resistance among Naïve Patients from Venezuela. *AIDS Res Hum Retroviruses*. 2009 Dec;25(12):1329-33.

35. Deshpande A, Jeannot AC, Schrive MH, Wittkop L, Pinson P, Fleury HJ. Analysis of RT sequences of subtype C HIV-type 1 isolates from Indian patients at failure of a first-line treatment according to clinical and/or immunological WHO

guidelines. *AIDS Res Hum Retroviruses*. 2010 Mar;26(3):343-50

36. Moussa S, Pinson P, Pelembe P, Gody JC, Mbitikon O, Fikouma V, Mbay P, Fleury HJ. First data on HIV-1 resistance mutations to antiretroviral drugs in Central African Republic. *AIDS Res Hum Retroviruses*. 2010 Nov;26(11):1247-8.

37. El Annaz H, Recordon-Pinson P, Baba N, Sedrati O, Mrani S, Fleury H. Presence of drug resistance mutations among drug-naïve patients in Morocco.

AIDS Res Hum Retroviruses. 2011a Aug;27(8):917-20.

38. Deshpande A, Karki S, Recordon-Pinson P, Fleury HJ. Drug resistance mutations in HIV type 1 isolates from naïve patients eligible for first line antiretroviral therapy in JJ Hospital, Mumbai, India.

AIDS Res Hum Retroviruses. 2011 Dec;27(12):1345-7.

39. El Annaz H, Recordon-Pinson P, Tagajdid R, Doblali T, Belefquih B, Oumakhir S, Sedrati O, Mrani S, Fleury H. Drug Resistance Mutations in HIV Type 1 Isolates from Patients Failing Antiretroviral Therapy in Morocco.

AIDS Res Hum Retroviruses. 2011b Nov 23.

40. Lazaro E, Tram LT, Bellecave P, Guidicelli GL, Anies G, Thu HH, Debelleix MP, Vray M, Recordon-Pinson P, Taupin JL, Lien TT, Fleury H. Molecular characterization of HIV-1 CRF01_AE in Mekong Delta, Vietnam, and impact of T-cell epitope mutations on HLA recognition (ANRS 12159).

PLoS One. 2011;6(10):e26244.

41. Hemelaar et al. Global trends in molecular epidemiology of HIV-1 during 2000-2007.

AIDS. 2011 Mar 13;25(5):679-89

42. Javaugue FC, Recordon-Pinson P, Decoin M, Masquelier B, Cazanave C, Neau D, Dupon M, Ragnaud JM, Fleury HJ. Molecular Characterization of Non-B HIV Type 1 Isolates from Patients of a Department of Infectious Diseases, University Hospital of Bordeaux, France, 1989-2009.

AIDS Res Hum Retroviruses. 2012 ;28:1124-30



43. Pircher M, Diafouka M, Papuchon J, Recordon-Pinson P, NsondeMahambou D, Akolbout M, Simon B, Fleury H. Molecular characterization of HIV-1 in Brazzaville, Republic of Congo, and first data on resistance to antiretroviral drugs
AIDS 2012a, Washington, USA

44 Castro E, Recordon-Pinson P, Cavassini M, Fleury H. Multiclass primary antiretroviral drug resistance in a patient presenting HIV-1/2 dual infection.

Antivir Ther. 2012;17(6):1079-83.

45 Anquetil D, Deshpande A, Zongo D, Le Bihan L, Pinson PR, Fleury H. Susceptibility to Etravirine of HIV Type 1 Subtype C Isolates from Nevirapine/Efavirenz-Experienced Patients: Comparative Interpretation of ANRS and STANFORD Algorithms.

AIDS Res Hum Retroviruses. 2012;28(12):1793-7.

46 Parkin N, de Mendoza C, Schuurman R, Jennings C, Bremer J, Jordan MR, Bertagnolio S; WHO DBS Genotyping Working Group. Evaluation of in-house genotyping assay performance using dried blood spot specimens in the Global World Health Organization laboratory network.

Clin Infect Dis. 2012 May;54Suppl 4:S273-9.

47 Pircher M, Diafouka M, Papuchon J, Recordon-Pinson P, Mahambou DN, Akolbout M, Simon B, Fleury H. Molecular Characterization of HIV Type 1 in Brazzaville, Republic of Congo, and First Data on Resistance to Antiretroviral Drugs.

AIDS Res Hum Retroviruses. 2012b;28:1798-802.

48 Recordon-Pinson P, Papuchon J, Reigadas S, Deshpande A, Fleury H. K65R in subtype C HIV-1 isolates from patients failing on a first-line regimen including d4T or AZT: comparison of Sanger and UDP sequencing data.

PLoS One. 2012;7(5):e36549.

49 Ibrahim KY, Recordon-Pinson P, Malvy D, Fleury H, Segurado AC. Intermittent HIV-1 viremia (blips) and virological failure in a cohort of people living with HIV from São Paulo, Brazil.

AIDS Patient Care STDS. 2012 Sep;26(9):512-5.

50 Tang MW, Rhee SY, Bertagnolio S, Ford N, Holmes S, Sigaloff KC, Hamers RL, de Wit TF, Fleury HJ, Kanki PJ, Ruxrungtham K, Hawkins CA, Wallis CL, Stevens W, van Zyl GU, Manosuthi W, Hosseinipour MC, Ngo-Giang-Huong N, Belec L, Peeters M, Aghokeng A, Bunupuradah T, Burda S, Cane P, Cappelli G, Charpentier C, Dagnra AY, Deshpande AK, El-Katib Z, Eshleman SH, Fokam J, Gody JC, Katzenstein D, Koyalta DD, Kumwenda JJ, Lallemand M, Lynen L, Marconi VC, Margot NA, Moussa S, Ndung'u T, Nyambi PN, Orrell C, Schapiro JM, Schuurman R, Sirivichayakul S, Smith D, Zolfo M, Jordan MR, Shafer RW. Nucleoside reverse transcriptase inhibitor resistance mutations associated with first-line

stavudine-containing antiretroviral therapy: programmatic implications for countries phasing out stavudine.

J Infect Dis. 2013 Jun 15;207 Suppl 2:S70-7

3- General references (since 2010) (PubMed)

1. Field evaluation of dried blood spots for routine HIV-1 viral load and drug resistance monitoring in patients receiving antiretroviral therapy in Africa and Asia.

Monleau M, Aghokeng AF, Eymard-Duvernay S, Dagnra A, Kania D, Ngo-Giang-Huong N, Touré-Kane C, Truong LX, Chaix ML, Delaporte E, Ayouba A, Peeters M; ANRS 12235 Study Group.

J Clin Microbiol. 2014 Feb;52(2):578-86

2. Prevalence and evolution of low frequency HIV drug resistance mutations detected by ultra deep sequencing in patients experiencing first line antiretroviral therapy failure.

Vandenhende MA, Bellecave P, Recordon-Pinson P, Reigadas S, Bidet Y, Bruyand M, Bonnet F, Lazaro E, Neau D, **Fleury H**, Dabis F, Morlat P, Masquelier B.

PLoS One. 2014 Jan 27;9(1):e86771

3. Non-AIDS defining cancers in the D:A:D Study--time trends and predictors of survival: a cohort study.

Worm SW, Bower M, Reiss P, Bonnet F, Law M, Fätkenheuer G, d'Arminio Monforte A, Abrams DI, Grulich A, Fontas E, Kirk O, Furrer H, De Wit S, Phillips A, Lundgren JD, Sabin CA; D:A:D Study Group.

BMC Infect Dis. 2013 Oct 9;13:471

4. Extraordinary heterogeneity of virological outcomes in patients receiving highly antiretroviral therapy and monitored with the World Health Organization public health approach in sub-saharan Africa and southeast Asia.

Aghokeng AF, Monleau M, Eymard-Duvernay S, Dagnra A, Kania D, Ngo-Giang-Huong N, Toni TD, Touré-Kane C, Truong LX, Delaporte E, Chaix ML, Peeters M, Ayouba A; ANRS 12186 Study Group.

Clin Infect Dis. 2014 Jan;58(1):99-109.

5. Detection of low-frequency HIV type 1 reverse transcriptase drug resistance mutations by ultradeep sequencing in naive HIV type 1-infected individuals.

Bellecave P, Recordon-Pinson P, Papuchon J, Vandenhende MA, Reigadas S, Tauzin B, **Fleury H**.

AIDS Res Hum Retroviruses. 2014 Feb;30(2):170-3.

6. Fatal case of enterovirus 71 infection and rituximab therapy, france, 2012.

Kassab S, Saghi T, Boyer A, Lafon ME, Gruson D, Lina B, **Fleury H**, Schuffenecker I.

Emerg Infect Dis. 2013 Aug;19(8):1345-7.

7. Resistance mutations and CTL epitopes in archived HIV-1 DNA of patients on antiviral treatment: toward a new concept of vaccine.

Papuchon J, Pinson P, Lazaro E, Reigadas S, Guidicelli G, Taupin JL, Neau D, **Fleury H**; Provir/Latitude 45 project.

PLoS One. 2013 Jul 9;8(7):e69029.

8. Associations between immune depression and cardiovascular events in HIV infection. Sabin CA, Ryom L, De Wit S, Mocroft A, Phillips AN, Worm SW, Weber R, D'Arminio Monforte A, Reiss P, Kamara D, El-Sadr W, Pradier C, Dabis F, Law M, Lundgren J; D:A:D Study Group.
AIDS. 2013 Nov 13;27(17):2735-48. doi: 10.1097/01.aids.

9. National sentinel surveillance of transmitted drug resistance in antiretroviral-naïve chronically HIV-infected patients in France over a decade: 2001-2011. Descamps D, Assoumou L, Chaix ML, Chaillon A, Pakianather S, de Rougemont A, Storto A, Dos Santos G, Krivine A, Delaugerre C, Montes B, Izopet J, Charpentier C, Wirten M, Maillard A, Morand-Joubert L, Pallier C, Plantier JC, Guinard J, Tamalet C, Cottalorda J, Marcelin AG, Desbois D, Henquell C, Calvez V, Brun-Vézinet F, Masquelier B, Costagliola D; ANRS AC11 Resistance Study Group.
J Antimicrob Chemother. 2013 Nov;68(11):2626-31

10. Role of traditional risk factors and antiretroviral drugs in the incidence of chronic kidney disease, ANRS CO3 Aquitaine cohort, France, 2004-2012. Morlat P, Vivot A, Vandenhende MA, Dauchy FA, Asselineau J, Déti E, Gerard Y, Lazaro E, Duffau P, Neau D, Bonnet F, Chêne G; Groupe D'épidémiologie Clinique du Sida en Aquitaine (Gecsa).
PLoS One. 2013 Jun 12;8(6):e66223.

11. Dynamic and rapid changes in viral quasispecies by UDPS in chronic hepatitis C patients receiving telaprevir-based therapy. Trimoulet P, Pinson P, Papuchon J, Foucher J, Vergniol J, Chermak F, Wittkop L, Castaing N, Merrouche W, Reigadas S, Molimard M, Kann M, **Fleury H**, de Ledinghen V.
Antivir Ther. 2013;18(5):723-7.

12. Nucleoside reverse transcriptase inhibitor resistance mutations associated with first-line stavudine-containing antiretroviral therapy: programmatic implications for countries phasing out stavudine. Tang MW, Rhee SY, Bertagnolio S, Ford N, Holmes S, Sigaloff KC, Hamers RL, de Wit TF, **Fleury HJ**, Kanki PJ, Ruxrungtham K, Hawkins CA, Wallis CL, Stevens W, van Zyl GU, Manosuthi W, Hosseinipour MC, Ngo-Giang-Huong N, Belec L, Peeters M, Aghokeng A, Bunupuradah T, Burda S, Cane P, Cappelli G, Charpentier C, Dagnra AY, Deshpande AK, El-Katib Z, Eshleman SH, Fokam J, Gody JC, Katzenstein D, Koyalta DD, Kumwenda JJ, Lallemand M, Lynen L, Marconi VC, Margot NA, Moussa S, Ndung'u T, Nyambi PN, Orrell C, Schapiro JM, Schuurman R, Sirivichayakul S, Smith D, Zolfo M, Jordan MR, Shafer RW.
J Infect Dis. 2013 Jun 15;207 Suppl 2:S70-7.

13. Dried cervical spots for human papillomaviruses identification. Charbonneau V, Garrigue I, Jaquet A, Horo A, Minga A, Recordon-Pinson P, Dabis F, **Fleury H**.
J Med Virol. 2013 Jul;85(7):1222-8.

14. Activation of GCN2 upon HIV-1 infection and inhibition of translation. Cosnefroy O, Jaspart A, Calmels C, Parissi V, **Fleury H**, Ventura M, Reigadas S, Andréola ML.
Cell Mol Life Sci. 2013 Jul;70(13):2411-21.

15. Prevalence of HIV-1 drug resistance in treated patients with viral load >50 copies/mL in 2009: a French nationwide study.

Assoumou L, Descamps D, Yerly S, Dos Santos G, Marcelin AG, Delaugerre C, Morand-Joubert L, Ruffault A, Izopet J, Plantier JC, Pakianather S, Montes B, Chaix ML, Wiriden M, Costagliola D, Masquelier B; ANRS AC11 Resistance Group.
J Antimicrob Chemother. 2013 Jun;68(6):1400-5.

16. Association between antiretroviral exposure and renal impairment among HIV-positive persons with normal baseline renal function: the D:A:D study.

Ryom L, Mocroft A, Kirk O, Worm SW, Kamara DA, Reiss P, Ross M, Fux CA, Morlat P, Moranne O, Smith C, Lundgren JD; D:A:D Study Group.
J Infect Dis. 2013 May 1;207(9):1359-69.

17. Chronic viral hepatitis is associated with low bone mineral density in HIV-infected patients, ANRS CO 3 Aquitaine Cohort.

Lawson-Ayayi S, Cazanave C, Kpozehouen A, Barthe N, Mehse N, Hessamfar M, Dupon M, Dabis F, Neau D; Groupe Epidémiologie Clinique du SIDA en Aquitaine (GECSA).
J Acquir Immune Defic Syndr. 2013 Apr 1;62(4):430-5.

18. HIV-1 dynamics and coreceptor usage in Maraviroc-treated patients with ongoing replication.

Recordon-Pinson P, Raymond S, Bellecave P, Marcelin AG, Soulie C, Descamps D, Calvez V, Harrigan PR, **Fleury H**, Izopet J, Masquelier B; S AC11 Resistance Study Group.
Antimicrob Agents Chemother. 2013 Feb;57(2):930-5.

19. Effect of cytomegalovirus-induced immune response, self antigen-induced immune response, and microbial translocation on chronic immune activation in successfully treated HIV type 1-infected patients: the ANRS CO3 Aquitaine Cohort.

Wittkop L, Bitard J, Lazaro E, Neau D, Bonnet F, Mercie P, Dupon M, Hessamfar M, Ventura M, Malvy D, Dabis F, Pellegrin JL, Moreau JF, Thiébaud R, Pellegrin I; Groupe d'Epidémiologie Clinique du SIDA en Aquitaine.
J Infect Dis. 2013 Feb 15;207(4):622-7.

20. HIV-1 integrase variability and relationship with drug resistance in antiretroviral-naïve and -experienced patients with different HIV-1 subtypes.

Reigadas S, Marcelin AG, Houssaini A, Yerly S, Descamps D, Plantier JC, Ruffault A, Amiel C, Trabaud MA, Flandre P, **Fleury H**, Masquelier B; ANRS AC11 Resistance Study Group.
J Antimicrob Chemother. 2013 Apr;68(4):969-72

21. Heterogeneity in outcomes of treated HIV-positive patients in Europe and North America: relation with patient and cohort characteristics.

May MT, Hogg RS, Justice AC, Shepherd BE, Costagliola D, Ledergerber B, Thiébaud R, Gill MJ, Kirk O, van Sighem A, Saag MS, Navarro G, Sobrino-Vegas P, Lampe F, Ingle S, Guest JL, Crane HM, D'Arminio Monforte A, Vehreschild JJ, Sterne JA; Antiretroviral Therapy Cohort Collaboration (ART-CC).
Int J Epidemiol. 2012 Dec;41(6):1807-20.

22. Cognitive disorders in HIV-infected patients: are they HIV-related?

Bonnet F, Amieva H, Marquant F, Bernard C, Bruyand M, Dauchy FA, Mercié P, Greib C, Richert L, Neau D, Catheline G, Dehail P, Dabis F, Morlat P, Dartigues JF, Chêne G; S CO3 Aquitaine Cohort.
AIDS. 2013 Jan 28;27(3):391-400

23. Predicting the short-term risk of diabetes in HIV-positive patients: the Data Collection on Adverse Events of Anti-HIV Drugs (D:A:D) study.

Petoumenos K, Worm SW, Fontas E, Weber R, De Wit S, Bruyand M, Reiss P, El-Sadr W, Monforte AD, Friis-Møller N, Lundgren JD, Law MG; D:A:D Study Group.
J Int AIDS Soc. 2012 Oct 10;15(2):17426

24. Intermittent HIV-1 viremia (blips) and virological failure in a cohort of people living with HIV from São Paulo, Brazil.

Ibrahim KY, Recordon-Pinson P, Malvy D, **Fleury H**, Segurado AC.
AIDS Patient Care STDS. 2012 Sep;26(9):512-5

25. Cervical human papillomavirus and HIV infection in women of child-bearing age in Abidjan, Côte d'Ivoire, 2010.

Jaquet A, Horo A, Charbonneau V, Ekouevi DK, Roncin L, Toure B, Coffie P, Minga A, Sasco AJ, Garrigue I, **Fleury H**, Dabis F; IeDEA West Africa collaboration.
Br J Cancer. 2012 Jul 24;107(3):556-63

26. Molecular characterization of HIV type 1 in Brazzaville, Republic of Congo, and first data on resistance to antiretroviral drugs.

Pircher M, Diafouka M, Papuchon J, Recordon-Pinson P, Mahambou DN, Akolbout M, Simon B, **Fleury H**.
AIDS Res Hum Retroviruses. 2012 Dec;28(12):1798-802

27. Evaluation of in-house genotyping assay performance using dried blood spot specimens in the Global World Health Organization laboratory network.

Parkin N, de Mendoza C, Schuurman R, Jennings C, Bremer J, Jordan MR, Bertagnolio S; WHO DBS Genotyping Working Group.
Clin Infect Dis. 2012 May;54 Suppl 4:S273-9

28. K65R in subtype C HIV-1 isolates from patients failing on a first-line regimen including d4T or AZT: comparison of Sanger and UDP sequencing data.

Recordon-Pinson P, Papuchon J, Reigadas S, Deshpande A, **Fleury H**.
PLoS One. 2012;7(5):e36549

29. Incidence, medical and socio-behavioural predictors of psychiatric events in an 11-year follow-up of HIV-infected patients on antiretroviral therapy.

Protopopescu C, Raffi F, Brunet-François C, Salmon D, Verdon R, Reboud P, Carrieri MP, Leport C, Spire B, Michel L; APROCO-COPILOTE (ANRS CO8) Study Group.
Antivir Ther. 2012;17(6):1079-83

30. Susceptibility to etravirine of HIV type 1 subtype C isolates from nevirapine/efavirenz-experienced patients: comparative interpretation of ANRS and STANFORD algorithms.

Anquetil D, Deshpande A, Zongo D, Le Bihan L, Pinson PR, Fleury HJ.
AIDS Res Hum Retroviruses. 2012 Dec;28(12):1793-7

31. Multiclass primary antiretroviral drug resistance in a patient presenting HIV-1/2 dual infection.

Castro E, Recordon-Pinson P, Cavassini M, **Fleury H**.
Antivir Ther. 2012;17(3):593-4

32. Hepatitis C virus RNA quantitation in a nationwide French cohort of patients co-infected with HIV and HCV: should the same test be applied to all samples?
Trimoulet P, Merchadou L, Winnock M, Loko MA, **Fleury H**, Salmon D, Dabis F, Neau D; ANRS CO 13 HEPAVIH Study Group.
J Virol Methods. 2012 Apr;181(1):131-3

33. Drug resistance mutations of HIV type 1 non-B viruses to integrase inhibitors in treatment-naïve patients from sub-saharan countries and discordant interpretations.
Monleau M, Aghokeng AF, Nkano BA, Chaix ML, Peeters M; AC11/AC12 ANRS Working Group.
AIDS Res Hum Retroviruses. 2012 Sep;28(9):1157-60.

34. Association between IgM anti-herpes simplex virus and plasma amyloid-beta levels.
Féart C, Helmer C, **Fleury H**, Béjot Y, Ritchie K, Amouyel P, Schraen-Maschke S, Buée L, Lambert JC, Letenneur L, Dartigues JF.
PLoS One. 2011;6(12):e29480. doi: 10.1371/journal.pone.0029480.

35. Molecular characterization of non-B HIV type 1 isolates from patients of a department of infectious diseases, University Hospital of Bordeaux, France, 1989-2009.
Javaugue FC, Recordon-Pinson P, Decoin M, Masquelier B, Cazanave C, Neau D, Dupon M, Ragnaud JM, Fleury HJ.
AIDS Res Hum Retroviruses. 2012 Sep;28(9):1124-30

36. Necrotic ulcerated lesion in a young boy caused by cowpox virus infection.
Favier AL, Flusin O, Lepreux S, **Fleury H**, Labrèze C, Georges A, Crance JM, Boralevi F.
Case Rep Dermatol. 2011 Sep;3(3):186-94

37. Ten-year diabetes incidence in 1046 HIV-infected patients started on a combination antiretroviral treatment.
Capeau J, Bouteloup V, Katlama C, Bastard JP, Guiyedi V, Salmon-Ceron D, Protopopescu C, Leport C, Raffi F, Chêne G; ANRS CO8 APROCO-COPILOTE Cohort Study Group.
AIDS. 2012 Jan 28;26(3):303-14

38. Molecular characterization of HIV-1 CRF01_AE in Mekong Delta, Vietnam, and impact of T-cell epitope mutations on HLA recognition (ANRS 12159).
Lazaro E, Tram LT, Bellecave P, Guidicelli GL, Anies G, Thu HH, Debelleix MP, Vray M, Recordon-Pinson P, Taupin JL, Lien TT, **Fleury H**.
PLoS One. 2011;6(10):e26244

39. Stimulation of the human RAD51 nucleofilament restricts HIV-1 integration in vitro and in infected cells.
Cosnefroy O, Tocco A, Lesbats P, Thierry S, Calmels C, Wiktorowicz T, Reigadas S, Kwon Y, De Cian A, Desfarges S, Bonot P, San Filippo J, Litvak S, Cam EL, Rethwilm A, **Fleury H**, Connell PP, Sung P, Delelis O, Andréola ML, Parissi V.
J Virol. 2012 Jan;86(1):513-26

40. Satisfaction with care in HIV-infected patients treated with long-term follow-up antiretroviral therapy: the role of social vulnerability.
Préau M, Protopopescu C, Raffi F, Rey D, Chêne G, Marcellin F, Perronne C, Ragnaud JM, Leport C, Spire B; Anrs Co8 Aproco-Copilote Study Group.
AIDS Care. 2012;24(4):434-43

41. Drug resistance mutations in HIV type 1 isolates from patients failing antiretroviral therapy in Morocco.
El Annaz H, Recordon-Pinson P, Tagajdid R, Doblali T, Belefquih B, Oumakhir S, Sedrati O, Mrani S, **Fleury H**.
AIDS Res Hum Retroviruses. 2012 Aug;28(8):944-8

42. Role of hepatitis B virus genetic barrier in drug-resistance and immune-escape development.
Svicher V, Cento V, Salpini R, Mercurio F, Fraune M, Beggel B, Han Y, Gori C, Wittkop L, Bertoli A, Micheli V, Gubertini G, Longo R, Romano S, Visca M, Gallinaro V, Marino N, Mazzotta F, De Sanctis GM, **Fleury H**, Trimoulet P, Angelico M, Cappiello G, Zhang XX, Verheyen J, Ceccherini-Silberstein F, Perno CF.
Dig Liver Dis. 2011 Dec;43(12):975-83

43. Improved V3 genotyping with duplicate PCR amplification for determining HIV-1 tropism.
Raymond S, Recordon-Pinson P, Saliou A, Delobel P, Nicot F, Descamps D, Marcelin AG, Flandre P, Calvez V, Masquelier B, Izopet J; ANRS AC11 Resistance Study Group.
J Antimicrob Chemother. 2011 Sep;66(9):1972-5

44. Structure-analysis of the HIV-1 integrase Y143C/R raltegravir resistance mutation in association with the secondary mutation T97A.
Reigadas S, Masquelier B, Calmels C, Laguerre M, Lazaro E, Vandenhende M, Neau D, **Fleury H**, Andréola ML.
Antimicrob Agents Chemother. 2011 Jul;55(7):3187-94

45. Cellular HIV-1 DNA quantification and short-term and long-term response to antiretroviral therapy.
Masquelier B, Taieb A, Reigadas S, Marchou B, Cheneau C, Spire B, Charpentier C, Leport C, Raffi F, Chêne G, Descamps D; APROCO-COPILOTE study group.
J Antimicrob Chemother. 2011 Jul;66(7):1582-9

46. Concordance between two phenotypic assays and ultradeep pyrosequencing for determining HIV-1 tropism.
Saliou A, Delobel P, Dubois M, Nicot F, Raymond S, Calvez V, Masquelier B, Izopet J; ANRS AC11 Resistance Study Group.
Antimicrob Agents Chemother. 2011 Jun;55(6):2831-6

47. Drug resistance mutations in HIV type 1 isolates from naive patients eligible for first line antiretroviral therapy in JJ Hospital, Mumbai, India.
Deshpande A, Karki S, Recordon-Pinson P, Fleury HJ.
AIDS Res Hum Retroviruses. 2011 Dec;27(12):1345-7

48. Hepatitis C virus (HCV) protease variability and anti-HCV protease inhibitor resistance in HIV/HCV-coinfected patients.
Trimoulet P, Belzunce C, Faure M, Wittkop L, Reigadas S, Dupon M, Ragnaud JM, **Fleury H**, Neau D.
HIV Med. 2011 Sep;12(8):506-9

49. [Influenza A(H1N1)v virus infection in infants less than 6 months of age in southwestern France].
Bailhache M, Sarlangue J, Castella C, Richer O, **Fleury H**, Koeck JL.

Arch Pediatr. 2011 Apr;18(4):383-9

50. Global trends in molecular epidemiology of HIV-1 during 2000-2007.
Hemelaar J, Gouws E, Ghys PD, Osmanov S; WHO-UNAIDS Network for HIV Isolation and Characterisation.
AIDS. 2011 Mar 13;25(5):679-89

51. Pandemic influenza A(H1N1) 2009: molecular characterisation and duration of viral shedding in intensive care patients in Bordeaux, south-west France, May 2009 to January 2010.
Malato L, Llavador V, Marmier E, Youssef J, Balick Weber C, Rozé H, Bessede E, **Fleury H.**
Euro Surveill. 2011 Jan 27;16(4). pii: 19776.

52. CMV plasma DNAemia and risk of cancer among HIV-infected patients: a case-control study nested in the ANRS CO3 Aquitaine Cohort, France, 2002-2007.
Bruyand M, Vandenhende MA, Marcel G, Lazaro E, Lafon ME, Dupon M, Dabis F, Geffard S, **Fleury H**, Faure-Della Corte M, Bonnet F, Thiebaut R, Garrigue I.
J Clin Virol. 2011 Feb;50(2):177-80. doi: 10.1016/j.jcv.2010.10.021.

53. Presence of drug resistance mutations among drug-naïve patients in Morocco.
Annaz HE, Recordon-Pinson P, Baba N, Sedrati O, Mrani S, **Fleury H.**
AIDS Res Hum Retroviruses. 2011 Aug;27(8):917-20

54. First data on HIV-1 resistance mutations to antiretroviral drugs in Central African Republic.
Moussa S, Pinson P, Pelembi P, Gody JC, Mbitikon O, Fikouma V, Mbay P, Fleury HJ.
AIDS Res Hum Retroviruses. 2010 Nov;26(11):1247-8

55. [Persistent influenza virus infection in a patient treated with alemtuzumab].
Burrel S, Dilhuydy S, Bouabdallah K, Lafon ME, Milpied N, **Fleury H.**
Med Mal Infect. 2010 Nov;40(11):657-9

56. Predicting the risk of cardiovascular disease in HIV-infected patients: the data collection on adverse effects of anti-HIV drugs study.
Friis-Møller N, Thiébaut R, Reiss P, Weber R, Monforte AD, De Wit S, El-Sadr W, Fontas E, Worm S, Kirk O, Phillips A, Sabin CA, Lundgren JD, Law MG; DAD study group.
Eur J Cardiovasc Prev Rehabil. 2010 Oct;17(5):491-501

57. Evaluation of the genotypic prediction of HIV-1 coreceptor use versus a phenotypic assay and correlation with the virological response to maraviroc: the ANRS GenoTropism study.
Recordon-Pinson P, Soulié C, Flandre P, Descamps D, Lazrek M, Charpentier C, Montes B, Traub-Dietatz A, Cottalorda J, Schneider V, Morand-Joubert L, Tamalet C, Desbois D, Macé M, Ferré V, Vabret A, Ruffault A, Pallier C, Raymond S, Izopet J, Reynes J, Marcelin AG, Masquelier B; ANRS AC11 Resistance Study Group.
Antimicrob Agents Chemother. 2010 Aug;54(8):3335-40

58. The HIV-1 integrase mutations Y143C/R are an alternative pathway for resistance to Raltegravir and impact the enzyme functions.
Reigadas S, Anies G, Masquelier B, Calmels C, Stuyver LJ, Parissi V, **Fleury H**, Andreola ML.

PLoS One. 2010 Apr 26;5(4):e10311

59. HIV-1 resistance patterns to integrase inhibitors in antiretroviral-experienced patients with virological failure on raltegravir-containing regimens.

da Silva D, Van Wesenbeeck L, Breilh D, Reigadas S, Anies G, Van Baelen K, Morlat P, Neau D, Dupon M, Wittkop L, **Fleury H**, Masquelier B.

J Antimicrob Chemother. 2010 Jun;65(6):1262-9

60. Analysis of RT sequences of subtype C HIV-type 1 isolates from indian patients at failure of a first-line treatment according to clinical and/or immunological WHO guidelines.

Deshpande A, Jeannot AC, Schrive MH, Wittkop L, Pinson P, Fleury HJ.

AIDS Res Hum Retroviruses. 2010 Mar;26(3):343-50

61. Determinants of smoking cessation attempts among HIV-infected patients results from a hospital-based prospective cohort.

Encrenaz G, Bénard A, Rondeau V, Bonnet F, Lazaro E, Neau D, Dupon M, Dabis F, Mercié P, Chêne G; ANRS CO3 Aquitaine Study Group (Groupe d'Epidémiologie Clinique du Sida en Aquitaine).

Curr HIV Res. 2010 Apr;8(3):212-7.

62. Bacterial pneumonia among HIV-infected patients: decreased risk after tobacco smoking cessation. ANRS CO3 Aquitaine Cohort, 2000-2007.

Bénard A, Mercié P, Alioum A, Bonnet F, Lazaro E, Dupon M, Neau D, Dabis F, Chêne G; Groupe d'Epidémiologie Clinique du Sida en Aquitaine.

PLoS One. 2010 Jan 26;5(1):e8896

63. Evolution of 2-long terminal repeat (2-LTR) episomal HIV-1 DNA in raltegravir-treated patients and in in vitro infected cells.

Reigadas S, Andréola ML, Wittkop L, Cosnefroy O, Anies G, Recordon-Pinson P, Thiébaud R, Masquelier B, **Fleury H**.

J Antimicrob Chemother. 2010 Mar;65(3):434-7

64. Is long-term virological response related to CCR5 Delta32 deletion in HIV-1-infected patients started on highly active antiretroviral therapy?

Laurichesse JJ, Taieb A, Capoulade-Metay C, Katlama C, Villes V, Drobacheff-Thiebaud MC, Raffi F, Chêne G, Theodorou I, Leport C; ANRS C08 Aproco-Copilote Study Group.

HIV Med. 2010 Apr;11(4):239-44

65. Variability and recombination of clinical human cytomegalovirus strains from transplantation recipients.

Faure-Della Corte M, Samot J, Garrigue I, Magnin N, Reigadas S, Couzi L, Dromer C, Velly JF, Déchanet-Merville J, Fleury HJ, Lafon ME.

J Clin Virol. 2010 Feb;47(2):161-9

4- Pictures gallery:



PTRR



PTBM



PTBM Extraction



PTBM Amplification



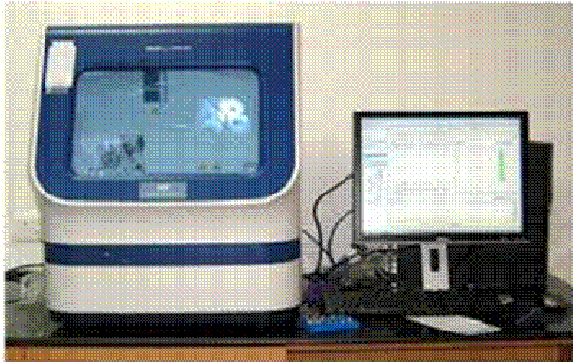
PTBM Real-time PCR



High-security (level 3) biological containment laboratory

Sequencing

- HCV for genotyping (NS5b)
- HIV for viral resistance (RT, Prot, Int, gp 120 (co receptor CCR5/CXCR4))



5- Lien avec le site Web de l'UMR 5234