



## PROPOSAL FOR COLLABORATION

| Title             | MULTIDICIPLINAR COLLABORATION PROJECT BETWEEN HOSPITALS IN THE BARCELONA REGION                                     |  |  |
|-------------------|---|--|--|
| Dates             | From 29 <sup>th</sup> March 2023 to 29 <sup>th</sup> of November 2023 –<br>Sessions last Wednesday every two months |  |  |
| Format            | On -line  |  |  |
| Language          | Castellano / Catalan  |  |  |
| Organizing Entity | Fundación FLS de lucha contra el sida y las enfermedades infecciosas  |  |  |
|                   | FLS-Science   |  |  |
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## **RATIONALE**

HIV-infected population is aging in those countries in which effective antiretroviral therapy is available. In fact, predictive models suggest that 70% of this population will be 50 years old or over in 2030 in EEUU1,2. Consequently, one of the main concerns of physicians during the last decade has been the management of agerelated comorbidities such as renal impairment, cardiovascular disease (CVD), neurocognitive impairment, cancers, osteoporosis etc. Adding to the complications associated with HIV infection, most of these age-related comorbidities manifest at a higher prevalence in people living with HIV (PLWH) than among uninfected subjects of similar age3-9.

The aging process induces a gradual deterioration of physiological functions, inducing a decrease in the reserve capacity of all organs and systems, and leading to a poor or inappropriate response to stressors10-12. This process, over time, encircles physical, psychological and social changes bringing to frailty and other geriatric syndromes13-15. Collaboration in all the related areas is essential to provide an improved management of the elder PLWH. By hosting interdisciplinary meetings in which professionals of different areas of expertise from the Barcelona area (Germans Trias i Pujol University Hospital and Hospital del Mar) expose their views and current research on the field, it is expected that fruitful projects and exchange of ideas will emerge.

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- 3. Pathai S, Bajillan H, Landay AL, High KP. Is HIV a model of accelerated or accentuated aging? J Gerontol A Biol Sci Med Sci. 2014; 69:833-42
- 4. Guaraldi G, Orlando G, Zona S, *et al.* Premature age-related comorbidities among HIV-infected persons compared with the general population. Clin Infect Dis. 2011; 53:1120-6.
- Schouten J, Wit FW, Stolte IG, et al; AGEhIV Cohort Study Group. Cross-sectional comparison of the prevalence of age-associated comorbidities and their risk factors between HIV-infected and uninfected individuals: the AGEhIV cohort study. Clin Infect Dis. 2014; 59:1787-97.
- 6. Cohort profile: The Pharmacokinetic and clinical Observations in PeoPle over fifty (POPPY) study Emmanouil Bagkeris Laura Burgess Patrick W Mallon Frank A Post Marta Boffito Memory Sachikonye Jane Anderson David Asboe Lucy Garvey Jaime Vera Ian Williams Margaret Johnson Daphne Babalis Davide De Francesco Alan Winston Caroline A Sabin *International Journal of Epidemiology*, dyy072, https://doi.org/10.1093/ije/dyy072.
- 7. C. M. Wyatt, J. A. Winston, C. D. Malvestutto et al. Chronic kidney disease in HIV infection: an urban epidemic. AIDS, vol. 21, no. 15, pp. 2101–2103, 2007.
- 8. M. D. John, M. Greene, N. A. Hessol et al. Geriatric assessments and association with VACS index among HIV-infected older adults in San Francisco. Journal of Acquired Immune Deficiency Syndromes, vol. 72, no. 5, pp. 534–541, 2016.
- 9. B. Hasse, B. Ledergerber, H. Furrer et al. Morbidity and aging in HIV-infected persons: the Swiss HIV cohort study. Clinical Infectious Diseases, vol. 53, no. 11, pp. 1130–1139, 2011.,





- 10. Blanco JR, Jarrín I, Vallejo M, et al. Definition of Advanced Age in HIV Infection: Looking for an Age Cut-Off. AIDS Research and Human Retroviruses 2012; 28:800-6
- 11. Negredo E, Massanella M, Puig J, Pérez-Alvarez N, Gallego-Escuredo JM, Villarroya J, Villarroya F, Moltó J, Santos JR, Clotet B, Blanco J. Nadir CD4 T cell count as predictor and high CD4 T cell intrinsic apoptosis as final mechanism of poor CD4 T cell recovery in virologically suppressed HIV-infected patients: clinical implications.
- 12. Moir S, Fauci AS. B cells in HIV infection and disease. Nat Rev Immunol 2009; 9:235–45.
- 13. D. A. Piggott, A. D. Muzaale, S. H. Mehta et al. Frailty, HIV Infection, and Mortality in an Aging Cohort of Injection Drug Users. PLoS ONE, 8, no. 1, Article ID e54910, 2013.
- 14. M. Greene, K. E. Covinsky, V. Valcour et al. Geriatric syndromes in older HIV-infected adults. Journal of Acquired Immune Deficiency Syndromes, 69, no. 2, pp. 161–167, 2015.
- 15. Flacker JM. What is a geriatric syndrome anyway? J Am Geriatr Soc. 2003; 51(4):574-6.

## **Background and Organization overview**

The Fundación FLS de lucha contra el sida, las enfermedades infecciosas y la promoción de la salud y la ciencia is a non-profit Infectious Disease organization based in Barcelona, since 1992 dedicated to Healthcare, Research and Education.

FLS is in the HIV Unit at the Germans Trias i Pujol University Hospital, a public hospital managed by the Institut Català de la Salut (Catalan Health Institute). Several of the activities carried out involve collaboration between FLS and the hospital's regular staff. Similarly, FLS works closely with the Institute for AIDS Research, IrsiCaixa, focused on basic research to understand the mechanisms of HIV infection and find new therapies. This collaborative work facilitates the transfer of knowledge between health professionals and clinical and basic researchers, a unique benchmark worldwide.

FLS is an HIV referral center and one of the most academic and clinically active clinics of its type in Spain. It currently has 110 staff including physicians and scientists working on COVID, HIV, the immune system and cancer, human papillomavirus, STI's, tropical neglected diseases, global health, and aging. It has approximately 50 ongoing clinical research studies and provides clinical care to approximately 4000 patients.

A dedicated research line focuses on the increasing older population, a consequence of greater survival. The research group led by Eugenia Negredo, and integrated by Diana Hernández Anna Bonjoch, Patricia Echeverría, Cora Loste, and a nurse team led by Jordi Puig Ana Martínez and Sandra González, has extensive experience in the study of complications associated with HIV and antiretroviral treatment. Specifically it works on the identification and resolution of adverse effects, complications associated with the virus and systemic inflammation. The team leads the cohort of HIV-infected patients ≥50 years (Over-50 cohort), through monitoring of premature pathologies associated with aging, and collaborates with national and international groups in different projects. The creation of this cohort (Cohort Over-50) aims to prevent comorbidities, treat them early, and improve the quality of life of these patients. It is also aiming to detect other problems associated with older patients, beyond comorbidities, such as social problems, frailty, sensory deficits, etc. Dr. Eugenia Negredo and her team collaborate with national and international groups in different projects and are in charge of multiple studies and events related to aging in the HIV-infected population.

The MAR Health Park is a large and complete services organization and one of the most dynamic hubs of healthcare knowledge, education and research in Barcelona. Hospital del Mar is the main healthcare facility at the institute, with a complete range of healthcare and tertiary services, and equipped with technologies that assure the most advanced practices are undertaken.

The collaboration between Dr. Negredo's team and Hospital del Mar as Invited Guests Speakers for a Collaboration program emerges after a previous training experience in April 2022, which reported positive outcomes. During these seminars, participants obtained a multidisciplinary viewpoint of the management of elder HIV patients in terms of frailty, geriatric syndromes, social and psychological aspects, and were able to discuss management strategies in difficult-to-treat elder patients with HIV infection. Since then, professional





relationships between the institutions have been solidified and regular meetings are expected to happen on a periodic basis.

## Scope and objectives of the program:

The objective of the Collaboration program is to provide a formal framework for a highly personalized educational activity for physicians/nurses in the management of elder HIV infected patients and its associated comorbidities. It is expected that the activities developed under this program will foster scientific exchange of high value and potential emerging collaboration projects. Furthermore, this program will improve both the clinical and teaching practice of the participants.

The program is also an opportunity to create an ongoing collaborative network between the trainees and the FLS experts' physicians and researchers.

After participating in this program, participants will be able to:

- Have multidisciplinary approach to the management of elder HIV patients such as: frailty, geriatric syndromes, social and psychological aspects.
- Learn how to implement a comprehensive patient's care program.
- Discuss management strategies in difficult-to-treat elder patients with HIV infection.
- Design and discuss innovative and collaborative clinical or epidemiological trials.

### **Program content and calendar**

The program is structured in 5 different sessions (10hrs) that cover expert talks, epidemiologic seminars, uncovered needs and all the aspects to be considered for building multicenter collaborations and set an ideas hub for innovative projects in the elder HIV-infected population, specifically in the particular patient populations of discussion by the experts.

Each session will be structured as follows:

| 15.30- 16.00 | State of knowledge of the patient populations for discussion |
|--------------|--|
| 16.00- 17.00 | Expert's project and/or invited guest speaker presentation   |
| 17.00- 17.30 | Discussion forum   |

#### State of knowledge of the patient populations for discussion:

Each session will touch upon relevant topics for the study population such as frailty, comorbidities, polypharmacy or geriatric syndromes.

## • Expert talk and/or invited guest speakers presentation:

It would cover talks from psychologists, social workers, nutritionists and nurses specialized in providing care to elder patients, in relation with the projects presented for grouped discussion. In each session, an expert and/ or guest speaker will introduce their current or prospective research lines related to the population of interest for the day. Aside from experts from Eugenia Negredo's team, experts from the Hospital del Mar will be invited guests for presentation of their research projects.

#### • Discussion forum:

Experts and participants will engage in discussions aimed at: i) identifying knowledge gaps; and at ii) generating scientific exchange around the mechanistical rationale of age-related comorbidities in elder PLWH, and ways to improve care in this patient population.





## Faculty and coordination of the course

To implement the program, a multi-disciplinary team of recognized experts will be in charge of the different curricula sessions which combine theoretical learning and discussion/workshop sessions.

All Faculty are from the Infectious Diseases Department and Fundación FLS, University Hospital Germans Trias i Pujol, Badalona, Barcelona. Spain.

Program Coordinator: Eugènia Negredo. MD, PhD.

#### Faculty:

- Diana Hernandez, Researcher
- Ana Martínez, Nurse
- Jordi Puig, Nurse
- Carla Estany, Nutricionist
- Carmina Rodríguez Fumaz, Psychologist

## **Target audience**

The program is designed for attendees that fulfill the following requirements: fully trained physicians with several years of medical practice specialized in infectious diseases and HIV who wish to gain insights in multilevel care of elder patients with HIV infections and create a framework for future collaborations and scientific exchange.

#### **Facilities and resources**

The sessions will be online bi-monthly (every 2 months) from 15.30 to 17.30 the last Wednesday of the month. The web-platformed is managed by FLS-Science and is accessible only through login and password credentials The program is online based. Participants will only need access to a computer with internet and desirably a webcam.

The Program Coordinator with the assistance of administrative staff will arrange the participation of the selected clinicians, the development of the materials, the logistics and organizational arrangements of the activities.

# **Sponsorship options**

| SPONSORSHIP OPTIONS                        | Amount | Gold         | Silver   | Bronze  |
|--|--------|--------------|----------|---------|
| Logo in the downloadable program of the    | 1500€  |              |          |         |
| training sessions hosted in the website    |        | ✓            | ✓        | ✓       |
| Clickable logo in the organization website | 1500€  |              |          |         |
| linked to the sponsor site                 |        | $\checkmark$ | ✓        |         |
| Sponsoring acknowledgments in all          | 1000€  | /            |          |         |
| sessions an materials                      |        | <b>V</b>     |          |         |
| Logo in the newsletters and confirmation   | 500€   | ,            |          |         |
| emails to attendees                        |        | <b>√</b>     | <b>√</b> |         |
| Total Amount                               |        | 4.000€       | 3.000 €  | 1.000 € |