

DAY 1

Keynote Forum



Infectious Diseases and STD-AIDS

April 26-27, 2018 Rome, Italy

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"PROTECTING YOU, PROTECTING US" DEMONSTRATION: HOW TO PREVENT EPIDEMICS AND PANDEMICS - AN INTERACTIVE SESSION

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Infections of the past thirty years have started in one place and in one family. They are often highly contagious before the onset of symptoms, and difficult to stop spreading. Emerging infections are spread due to interlocking medical-epidemiological and political reason. The governments have no strategies in place to prevent pandemics but expect patients to use common sense on their own behalf and manage them at home. Until now, no one has come forward to help us develop strategies to educate people how to identify and prevent the spread of infection to their families and communities. Nobody plans for an actual crisis partly because it is too scary and hence paralyzing to think about. Most health professionals say they are not trained, paid and assume its someone else's job, except that it has turned out to be nobody's job. This situation is not static. While we sit paralyzed, superbugs are evolving and emerging infections are spreading, all over the world before we even know it exists. Scientists are making rapid progress to but even a much more rapid response must still rely on patients coming forward to say they have a symptom. We know patients with serious symptoms often avoid seeking help from doctors because they do not want their fears confirmed. We can conquer this problem, using a simple tool that does not require the top-to-bottom reform of public health infrastructures. Our innovation "Dr MAYA", a mobile phone application monitoring system will identify clusters of infections and help prevent spreading emerging infections. Our tool is a boon for healthcare professionals, because this will not reduce epidemics but also protect them. Doctors can offer the best healthcare 24/7, 365 days and spend more time at home with family and friends. So how does it work in practice?

Biography

Author, doctor, inventor and publisher who worked in acute as staff and associate specialist in acute and intensive paediatric care in internationally respected hospitals in the UK. Special interest "Spreading Superbugs & Emerging Infections". In 2000, he was appointed to teach nurses to manage infection in pilot nurse-led practice. He raised concern in 2004, about wrong doings and antibiotic abuse and the quality of care offered using protocols by nurse prescribers and practitioners. To protect fellow human for un-ethical medical practice, he collected and compiled a list of common symptoms and developed a simple tool "Maya" to help patients differentiate "Well from Non-Well". His created "Dr Maya" using Internet and communication technology to reduce the cultural dependency, cost, medical errors, delay in diagnosis, treatment and antibiotic abuse. His mission is to reduce cross infections with treatment resistant infections by helping doctors initially identify infected individual and isolate them to protect healthcare workers and pandemics.

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HIV-1-MEDIATED INSERTIONAL ACTIVATION OF STAT5B AND BACH2 TRIGGER VIRAL RESERVOIR IN T REGULATORY CELLS

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It has been shown that HIV-1 insertions targeting BACH2 and STAT5B are enriched and persist for decades in hematopoietic cells from patients under Anti-Retroviral Therapy (ART), suggesting that insertional mutagenesis could provide a selective advantage to these cell clones. However, the mechanisms used and the physiological impact on the cells harboring these integrations are completely unknown.

In the hematopoietic cells of 30/87 patients under ART we identified chimeric mRNA containing viral HIV-1 sequences fused to the first protein-coding exon of STAT5B or BACH2. By performing droplet digital PCR, we found that these chimeric mRNAs were specifically enriched ($p < 0.001$) in T regulatory (Treg) cells in all patients tested ($N=9$). Forced expression of *STAT5B* and *BACH2* in Treg cells purified from healthy donors did not alter their phenotype and functions *in vitro* and significantly increased their proliferative capacity in competitive proliferation assays ($p < 0.0001$). Co-injection in immune-deficient mice of GFP-, BACH2- and STAT5B-transduced Treg cells with allogenic PBMCs prevented xenogeneic graft-versus-host disease in 75% of the animals and reduced the level of human chimerisms in the blood of mice receiving STAT5B-expressing Treg cells when compared to mice treated with GFP-expressing Treg cells ($p < 0.001$), suggesting for a superior activity of STAT5B-expressing cells in controlling the expansion of human PBMC.

These data provide evidences that HIV-1 takes advantage of insertional mutagenesis to favor its persistence in the host by infecting long-living and self-renewing cellular reservoir endowed with the ability to diminish the immune surveillance against infected cells.

New targeted therapies aimed at interfering with BACH2 and STAT5B pathways could be exploited to reduce cellular reservoirs and favor the eradication of the infection in cART-treated patients.

Biography

Eugenio Montini obtained his Ph.D in the field of human molecular and medical genetics at the Telethon Institute of Genetics and Medicine (TIGEM, Milan, Italy) and later at the Oregon Health Science University (Portland, USA) as American Liver Foundation Amgen and HHF Postdoctoral Research Fellowship Awardee in the field of viral and non-viral mediated gene therapy. He is now Group Leader of the Vector Safety and Insertional mutagenesis Research Unit and Vector Integration Core and is a world leading expert in insertional mutagenesis and genotoxicity by HIV-1 and derived vectors (Montini et al., 2006 Nature Biotechnology; Ranzani et al., 2013 Nature Methods; Biffi, Montini et al., 2103 Science, Aiuti et al., 2013 Science; Cesana et al., 2017 Nature Communications).

He authored 60 publications in peer reviewed journals with 4611 citations and an H index of 31.

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THERAPEUTIC USE OF GUAZULMA ULMIFOLIA LAM EXTRACT FROM THE NORTHERN REGION OF BRAZIL

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This study aims to analyze the therapeutic use of Guazulma ulmifolia Lam extract as an AIDS treatment, describing the management of treatment performed in a clinical report. This work was a literature review. The case reported was of 35 years old Mozambican, diagnosed in 2008 with HIV virus, using Guazulma Ulmifolia extract for 30 days in March 2017, and has since received successive negative HIV test results. It was concluded that the efficacy of Guazulma has been increasingly proven for the treatment of AIDS, with the advantages being a natural remedy, without contraindications, and there is no ethical-moral impediment to be applied in infected population.

Key words: Guazulma Ulmifolia. HIV. Patient seropositive.



Biography

Paulo Antonio led the innovative discovery, in charge of the Scientific Project, which was funded with its own subsidies. This 2014, researchers from Brazil, announced this great final step in the battle against HIV virus. They managed to eliminate the virus that causes AIDS in human cells cultured in a laboratory, first in vitro, managing to eliminate HIV-1 from the human specimen in the laboratory and then in tests that have already been successful in humans. An arduous project of more than 10 years of struggle and research.

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