Launching a multidisciplinary European collaboration towards a cure for HIV: The EU2Cure Consortium

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ABSTRACT

We felt the urgency to launch the EU2Cure Consortium to support research and find a cure for the human immunodeficiency virus (HIV) infection through intensified collaboration within Europe. This consortium is open to stakeholders on cure in Europe from academia and the community to connect. The aim of this consortium is to intensify the research collaboration amongst European HIV cure groups and the community and facilitate interactions with other academic and community cure consortia, private parties, and policy makers. Our main aim is to create a European research agenda, data sharing, and development of best practice for clinical and translational science to achieve breakthroughs with clinically feasible HIV cure strategies. This consortium should also enable setting up collaborative studies accessible to a broader group of people living with HIV. Besides reservoir studies, we have identified three overlapping scientific interests in the consortium that provide a starting point for further research within a European network: developing "shock and kill" cure strategies, defining HIV cure biomarkers, and connecting cure cohorts. This strategy should aid stakeholders to sustain progress in HIV cure research regardless of coincidental global health or political crises.

Almost five decades into the human immunodeficiency virus (HIV) pandemic, a cure has still not been achieved. Recent overviews from the field indicate that HIV cure research should be conducted in more diverse settings and benefits from timely defining target product profiles.

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studies aimed at generating breakthroughs. Collaborative studies will be accessible to a broader and more diverse population and allow for the streamlining of studies between groups, thereby leading to a more efficient research strategy. This will also benefit the study participants who are willing to take part in these studies.

The EU2Cure Consortium builds upon a successful experience with earlier collaborative HIV research initiatives in Europe. It also adds a new perspective within Europe, which has not yet been covered by other successful European initiatives on therapeutic HIV vaccinations (EHV, https://ehv-a.eu/) or stem-cell transplantations (iCistem, https://www.icistem.org/). A live kick-off meeting on the 14th of June 2019 (Erasmus University Medical Center, Rotterdam, the Netherlands) and several virtual meetings during the global COVID-19 emergency have strengthened our purpose and aims. Here, we provide our vision for the near and more distant future of clinical and translational HIV cure research in Europe.

We see three major topics that will be our initial collaborative focus. This is based on the consortium members’ overlapping interests and expertise: developing “shock and kill” cure strategies, defining HIV cure biomarkers, and connecting cure cohorts. We presently only have limited options to restrict the HIV reservoir as its size can be significantly impacted by initiating antiretroviral therapy (ART) early in patients with acute HIV infection or by interventions aimed at decreasing an established reservoir, to a level allowing the interruption of ART. Reports on successful strategies are very limited and only reported in a few people who underwent allogeneic stem cell transplant (SCT) for hematologic malignancies, with matched donors harboring homzygous deletions in the genomic CCR5d32 region.6–8 Due to a high risk of complications and death, SCT is not a safe, feasible or realistic path to a cure for all patients. Alternatives to SCT to achieve viral control are scarce but subject to intense research globally and set as a priority within our consortium. Emerging from this vision, we see synergy in our efforts to develop new cure strategies.7–13 Step by step we and others have advanced the field by exploring new ways to disrupt HIV latency with drugs such as HDAC inhibitors romidepsin, panobinostat or vorinostat alone or in combination with immunomodulatory agents in studies such as in the RIVER or REDUC trials, or by using BAF inhibitors as in the LUNA trial.7,10,12 Pioneering interventional studies on “shock and kill” are still relatively small, often lack control groups, and have limited research material for analysis. Further unravelling of the composition of the latent HIV reservoir should also be a central research topic for hematologic malignancies, with matched donors harboring homzygous deletions in the genomic CCR5d32 region.14–16 Due to a high risk of complications and death, SCT is not a safe, feasible or realistic path to a cure for all patients. Alternatives to SCT to achieve viral control are scarce but subject to intense research globally and set as a priority within our consortium. Emerging from this vision, we see synergy in our efforts to develop new cure strategies.7–13 Step by step we and others have advanced the field by exploring new ways to disrupt HIV latency with drugs such as HDAC inhibitors romidepsin, panobinostat or vorinostat alone or in combination with immunomodulatory agents in studies such as in the RIVER or REDUC trials, or by using BAF inhibitors as in the LUNA trial.7,10,12 Pioneering interventional studies on “shock and kill” are still relatively small, often lack control groups, and have limited research material for analysis. Further unravelling of the composition of the latent HIV reservoir should also be a central research topic for hematologic malignancies, with matched donors harboring homzygous deletions in the genomic CCR5d32 region.

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and therefore remains a priority.

It is important to highlight that the current EU2Cure Consortium only represents a starting point. We would like to invite other European HIV cure research groups to consider contacting us in order to strengthen it. We also explicitly invite European patient community stakeholders on cure to connect with us to guarantee the meaningful and timely involvement of the HIV community and to help setting up ethical standards for HIV cure research. Our efforts as a joint European venture are ultimately driven by the need for a world without HIV in which all parties, including Europe, can in hindsight say that they have strongly contributed to this goal.

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Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have influenced the work reported in this paper.

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