



# The impact of evolutionary approaches in Public and Global Health Policies

**Frank Rühli<sup>1</sup>, Detlev Ganten<sup>2</sup>, Antoine Flahault<sup>3</sup>**

1) Institute of Evolutionary Medicine, University of Zurich, Winterthurerstr. 190, 8057 Zürich, Switzerland

[frank.ruehli@iem.uzh.ch](mailto:frank.ruehli@iem.uzh.ch)

2) World Health Summit Foundation GmbH c/o Charité – Universitätsmedizin  
Berlin Charitéplatz 1 10117 Berlin, Germany

3) Institute of Global Health, University of Geneva, Campus Biotech, Chemin des Mines 9, CH-1202 Geneva, Switzerland



## Aim – SDGs and evolutionary perspectives

**The aim of this presentation is to show the impact of evolutionary perspectives on Public and Global Health - with a particular focus on the Sustainable Development Goals.**

The Sustainable Development Goals (SDGs) proposed by the United Nations (UN) are a path to ensuring a healthy life on Earth. To better understand the implications of the SDGs in relation to the future of medicine and human health and how to best achieve these goals, **we propose an approach inspired by the growing scientific understanding of the evolution of life and humankind**, which shapes the emerging field of evolutionary medicine. Perspectives from this field can provide insights into the trade-off nature of human patho-physiological conditions and the origins of fragility and illness. This holistic approach to understanding health and disease poses a promising opportunity for primary prevention of disease and a more effective implementation of the SDGs in general.



## Evolutionary Medicine: “*Why?*” not only “*How?*”

- Evolutionary medicine or Darwinian medicine investigates **human disease vulnerability and disease aetiologies** (genetics, behaviour, environment, pathogens etc.) from an evolutionary perspective





## Evolutionary Medicine and Global Health

- Only by considering evolutionary and historic perspectives, one is able to design effective and sustainable **global health policies** for the future (see e.g. SDG's)
- Evolutionary medicine can provide **a crucial holistic framework for health promotion** in order to increase the effectiveness of public health theory and programs
- A more **profound understanding of health and disease**, of the impact of environment shall lead to better prevention and treatments, change in lifestyle



## SDG 3 as an example

- We aim to point out some specific evolutionary aspects and constraints influencing human behavior and health with respect to the overall understanding and implementation of **SDG 3**, which aims to “*ensure healthy lives and promote well-being for all at all ages*”.
- Any sustainable long-term policy needs to overcome this unconscious **human reluctance against truly strategic preventive measures and policy goals beyond the immediate interest of survival of the individual**. The perilous hesitance against vaccination might be partially explained by this lack of non-egoistic, long-term thinking.
- **Based on evolutionary insights**, programs to improve public and global health would be well advised to focus on **proactive, deliberate actions triggered by more immediate positive incentives** rather than relying on humans acting by themselves on their long-term strategic cognition. This is also obvious in particular to actions targeting the current COVID-19 pandemic; see also: Henneberg and Rühli, *Evol Med Publ Health*, 2020.