Can Homo sapiens evolve into Homo spatius?

A 52-minute and 90-minute documentary proposal written by Cécile DUMAS and Jean-Christophe RIBOT, produced by Jérôme DUC MAUGÉ In collaboration with Look at Sciences

90' & 52'









SYNOPSIS

How far can the human body and mind adapt to a zero gravity environment over time? What are the effects of extraterrestrial travel on the astronauts and how can they be prevented or even reverted? Reflecting on over 60 years of medical sciences and engineering challenges, meet with 12 astronautss (Americans, Russians, Europeans, Chinese) specially interviewed in this film as they share their stories and the imprint it has left on them. Their testimonies combined with archives and present day lab testing sequences will highlight the progress made in Space medical sciences, reveal the latest breakthroughs and point to the remaining issues to be overcome to imagine the future of space conquest.

Producers and Broadcasters:

Cocotte Minute Productions/ France 5

Director: Jean-Christophe RIBOT

Author: Cécile DUMAS & Jean-Christophe RIBOT

DELIVERY FEBRUARY 2018



DIRECTOR'S NOTE

If, within thirty years or so, humans manage to reach the planets and moons of our solar system safe and sound, remaining in good physical and mental shape, it will be thanks to the many experiments carried out for decades by their predecessors—thanks to the doctors, scientists and engineers who passionately worked at making human survival in space possible.

Indeed, since the lunar journeys of the Apollo program, humans have only ventured as far as the lower orbits of the ISS, and the stake in the coming decades is to launch into exploration again, starting with the planet Mars as announced by former US President Barack Obama. Can the human system possibly sustain such journeying and, if so, how?

In order to answer that question, HOMO SPATIUS brings together the first-hand accounts of a dozen European, American, Russian and Chinese spacemen and spacewomen who tell of their experiences and feelings on their trips. They are filmed exclusively in studios against a white background. Those valuable personal accounts, rich with anecdotes and illustrated by images of the astronauts' preparations and journeys, are woven with discovery visits of the laboratories and medical centers at European, American, Canadian and Russian space agencies in order to understand the physical and psychological problems caused by lengthy stays in space and the solutions studied to overcome them.

PROTAGONISTS - ASTRONAUTS (partial list)

In Europe, we will meet Thomas Pesquet upon his return to Earth in 2017, as well as his colleagues on the European astronaut team, namely Tim Peake (returned June 2016), Alexander Gerst (who will command the ISS in 2018), and Samantha Cristoforetti (who spent 200 days in the ISS). We'll also interview American astronauts (such as the Kelly brothers), Russian cosmonauts (Gennady Padalka, Mikhaïl Kornienko...) as well as others from previous generations: Frank De Winne (currently Head of ESA's astronaut training center), Patrick Baudry, Claudie Haigneré, Jean-François Clervoy, Valeri Polyakov—just to mention a few names. China being now a major player in terms of space research, a Chinese spacewoman has also been approached.



PROTAGONISTS - RESEARCHERS (partial list)

Romain Charles: the French volunteer who took part in the Mars500 study (and now works for ESA) as well as his Italian-Columbian teammate Diego Urbina.

Guillemette Gauquelin-Koch: supervises research in as aerospace medicine at CNES (French space agency), in particular bedrest studies.

Brigitte Godard: a doctor at ESA's astronaut training center in Cologne, she closely monitors the health of astronauts on missions.

Victor Demaria-Pesce: Head of research at INSERM, scientific advisor at ESA, fighter plane pilot and medical doctor.

Philippe Arbeille: a cardiologist (at the hospital of Tours, France), he has study monitored the cardio-vascular functions of many astronauts involved in the March500.

Marc-Antoine Custaud: a researcher at Angers University, he works with CNES on the effects of the space environment on the vascular system.

Gary Beven: a psychiatric doctor at NASA, one of the first psychiatrists to be hired by NASA in the 1980s.

John Charles: Head of the NASA biomedical research program, he has been studying the adaptation of the human body to space since the 1980s.



PRODUCTION TEAM

DIRECTOR: Jean-Christophe Ribot

In the last ten years, Jean-Christophe has devoted himself entirely to directing documentary films, particularly in connection in the fields of education and science, for France Télévisions and ARTE. His science films include La Fabrique de la vache (Making cows), L'Aventure Rosetta, Les villes intelligentes (Smart Cities), Primates of the Caribbean as well as B4, a web documentary for France Télévisions.

CO-WRITER: Cécile Dumas

Cécile has explored all the fields of science for over twenty years of space exploration. She joined the Look at Sciences photo agency in 2013 to develop new documentary and reporting projects. This is how she started to collaborate on The Rosetta Adventure: To the Origins of Life by Jean-Christophe Ribot (52mn, ARTE, 2015) which received the High Schoolers Award for best documentary film and the Audience's Choice award at the Parisciences Festival in 2015.

PRODUCER: Jérôme Duc-Maugé

Jérôme founded cocottesminute productions in 2002 and produced over 60 documentary films for television and the web. With his team, he has reflected on how documentaries can question our society. A particularly demanding follow-through takes place very early at the writing stage in order to develop the strength of a story as a backbone to each of the societal topics. The company's editorial line is open to any subject concerning French and international societies or in the fields of history, science and culture, responding to the curiosity of the producers and directors we work with. Louis-David Delahaye joined cocottesminute as producer in 2016.

A SELECTION FROM THE CATALOGUE

Dieu, le Diable et le Rock'n'roll, directed by Nicolas Lévy-Beff, 52mn, ARTE Interpol, le nouvel ordre mondial, 90mn and 52mn, ARTE Permis de tuer ? dir. Agnès Pizzini, 52mn, France 2, Mères marseillaises, dir. Cécile Allégra, 52mn, France 2 Après la guerre, les restitutions, dir. Catherine Bernstein, 52mn, France 3 Tigran, dir. Adrien Rivollier, 52mn, Mezzo Le Rhône: la renaissance d'un fleuve, dir. Claude-Julie Pariso, 52mn, ARTE Allons enfants! dir. Sylvie Perrin, 52mn, France 3 – Public Sénat



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