

# EXO

## Multimedia show with live commentary at the Rio Tinto Alcan Planetarium

**Location:** Milky Way Theatre **Audience:** ages 7 and up

**Length:** 40 minutes (before the 30-minute *Exo* show, there will be a presentation on tonight's sky)

**Full dome experience**

### **EXO: Are We Alone?**

Humankind has always sought to understand the mysteries of the Universe and speculated about the possibility of extraterrestrial life. Today we know of thousands of exoplanets — planets located outside our Solar System — that offer valuable information about our own planet, its origins and life on Earth. We're on the cusp of making some fascinating discoveries. But how will they change our lives?

#### **Production**

Montréal Space for Life

#### **Executive Producer, Project Manager, Director and Photo Director**

Sébastien Gauthier

#### **Script**

Sébastien Gauthier and Loïc Quesnel

#### **Original score**

Martin Roy and Luc Sicard

#### **Sound Designer**

Benoît Dame

#### **Artistic Directors, Special Effects**

François Guinaudeau and Antonin Gaud

#### **Dome Master 360° Editor**

Marlène Poulin

#### **Production Co-ordinators**

Lou Sauvajon and Loïc Quesnel

#### **Educator-commentator team co-ordinator**

Étienne Laurence

#### **Special effects and post-production:**

Antonin Gaud, François Guinaudeau,  
Pierre-Alexis Tremblay, Patrick Goski,  
Arnaud Mariat, Bruno Colpron, Gwendal Creurer

#### **3D astronomical simulations**

Maxime Pivin Lapointe

#### **360° filming**

Nicolas Didtsch, Maxime Pivin Lapointe,  
Bruno Colpron, Sam Brooks, Olivier Grunewald

#### **Specialized filming**

Christian Sardet (CNRS), Noé Sardet and Sharif  
Mirshak (Parafilms), in collaboration with the  
Observatoire Océanologique de Villefranche-sur-  
Mer and the Tara Expeditions Foundation

#### **Scientific advisors**

Camille Lefebvre, Marie-Ève Naud and the team  
from the Université de Montréal Institut de  
recherche sur les exoplanètes (iREx)

#### **Philosophical advisors**

François Dion, Christophe Malaterre



### One question, different opinions and a multitude of things to think about

A year ago, some thirty experts gathered to discuss producing the fall show for the Rio Tinto Alcan Planetarium. It had to fit with the 2017 Montréal Space for Life theme of “celebrating the living world.”

This brainstorming session engendered a show that’s sure to spark discussion and debate and get people thinking about some big questions. For instance, how will it change our lives if we do find life outside our Solar System? If it’s possible to communicate with them, how will we do so? And what if we find out that there’s nothing out there? How will that affect us? All these questions, extending beyond the bounds of astronomy, are sure to inspire some philosophical musing for audience members.

In addition, once they’ve seen *Exo*, visitors will know how exoplanets are identified and how we go about determining whether they hold life. They’ll be better equipped to understand the complex scientific advances being made in this exciting field.

### Creating a connection between humans and other life forms

This “feel good movie” about life is intended to be celebratory, positive and exciting. The Rio Tinto Alcan Planetarium team hopes to get audiences interested not only in astronomy research, but also in creating connections between ourselves and the extraterrestrial life that may be out there in the Universe.

### Looking for extraterrestrial life... on Earth

What do Montréal, Hawaii and Ethiopia have in common? They all helped inspire the Rio Tinto Alcan Planetarium team, which went to some of these places to meet passionate researchers and film images of sophisticated infrastructures aimed at uncovering the secrets of the Universe. The team explored different places attesting to the incredible variety of life forms, and gathered images illustrating extreme conditions right here on Earth similar to the hostile environments on other planets. Audiences will be able to see these visuals projected in all their splendour on the Planetarium’s 360° dome.

As they travelled, the team was fortunate to meet a number of passionate researchers and to film at some strategic sites in the field of astronomy, including the Gemini North and Keck observatories on the Mauna Kea summit on the Big Island in Hawaii, and the Green Bank Telescope, the world’s largest fully steerable radio telescope, in West Virginia. The tremendous diversity of the different life forms on Earth was filmed at the Biodôme, Insectarium, Mount Royal Park, Parc Oméga, underwater and on land on the Big Island and at Dallol, a volcano in Ethiopia. Dallol’s extreme climate makes it a hostile environment with conditions similar to those on Earth when the first life forms appeared on our planet.