



REVEALING THE WORLD OF TOMORROW ... TODAY

NATIONAL GEOGRAPHIC CHANNEL  
ON REVOLUTIONARY NEW SERIES  
*BREAKTHROUGH*

Directors Ron Howard, Angela Bassett, Peter Berg, Paul Giamatti, Akiva Goldsman And Brett Ratner Capture Scientific Discovery As It Unfolds

Premieres Tuesday 17 November at 9.00pm on National Geographic Channel

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Executive produced by Ron Howard, Brian Grazer, Steve Michaels, Jonathan Koch and Mark Dowley, **Breakthrough** is a revolutionary new series about scientific explorers from leading universities and institutions and how their cutting-edge innovations and advancements will change our lives in the immediate future and beyond. The series intends to bring to life the stories, people and technology behind these breakthroughs, and show how they are changing our world.

Each hour-long episode is directed by a Hollywood visionary – Angela Bassett, Peter Berg, Paul Giamatti, Akiva Goldsman, Ron Howard and Brett Ratner.

**Breakthrough** explores the remarkable scientific discoveries in brain science, longevity, water, energy, pandemics and cyborg technology. Lifesaving, mind-boggling innovation is a part of everyday life, so we sometimes take it for granted. It happens in the blink of an eye – on battlefields and playgrounds, in

supercolliders and the International Space Station, in smart homes and smart cars. These are modern-day revolutions in how we live.

**Breakthrough** will explore the courage, imagination, passion and self-sacrifice of the scientists bringing these innovations to life.

Scientific breakthroughs covered in the series include:

**Fighting Pandemics (Directed by Peter Berg)**

**Tuesday 17 November at 9.00pm - Australian/NZ premiere**

Berg takes viewers into the dramatic, inspiring and sometimes heartbreaking world of pioneers scrambling to stop an outbreak and save the world from future plagues. The current Ebola outbreak is forcing medical science to evolve as quickly as the virus it is fighting, provoking breakthroughs that may give birth to a world virtually free of pathogens. From antibiotics and vaccines to computer programs that predict how viruses will spread, new lifesaving tools will be used to fight a wide range of viruses in the near future, including HIV, influenza, dengue fever, malaria and a host of other killer diseases. Follow **Dr. Maria Croyle**, who has developed a revolutionary way to introduce a vaccine into a common cold virus; and **Dr. Ian Crozier**, a World Health Organization (WHO) virologist who fought Ebola in Sierra Leone until he contracted the disease himself and spent 40 agonising days locked in an isolation ward at Emory University Hospital. Crozier recovered – only to find the virus was still multiplying in his eye.

**More Than Human (Directed by Paul Giamatti)**

**Tuesday 24 November at 9.00pm - Australian/NZ premiere**

Chances are you either are, or you know, a cyborg: a person who is aided or enhanced by embedded technology, such as artificial limbs or pacemakers. But advances in science are taking us beyond replacement parts and into a new realm that is changing the nature of the human body and the human mind. The fusion of biology and technology is making us better, stronger, faster and smarter. How we think, how we feel, how we experience the world: everything is changing. Now we are learning how to manipulate our genetic code and seize the keys to creation. But as the natural and man-made worlds merge, will we become more than human? Watch **Trish Aelker** at Lockheed Martin Exoskeleton Technologies build exoskeletons that give mere mortals super strength, and **Dr. Miguel Nicolelis**, a brain-machine interfaces expert whose work with the Walk Again Project is giving hope to people with traumatic spine injuries.

**Decoding the Brain (Directed by Brett Ratner)**

**Tuesday 1 December at 9.00pm - Australian/NZ premiere**

After millennia of speculation about what goes on inside the human brain, we now have the tools to explore its hidden reaches. These tools are leading to breakthroughs that may free thousands from comas and afflictions such as epilepsy and Alzheimer's disease. They are also shedding light on the mystery of consciousness and what makes us who we are. Meet leading researchers and scientists, such as **Dr. John Schenck**, who helped develop the MRI and was the first person to have his brain imaged by the machine in the early 1980s; and **Dr. Steve Ramirez**, who has found a way to change our memories and our feelings about those memories.

**The Age of Aging? (Directed by Ron Howard):**

**Tuesday 8 December at 9.00pm - Australian/NZ premiere**

In recent years, close study of the aging process has opened up new ways that could help us all live healthier for longer. Can we move beyond treating individual diseases and instead treat the aging process itself? Would a longer life necessarily be a better life? A loose-knit group of researchers believe the real breakthrough is extending our health span – the period of life spent free of disease. Hear from **Laura Deming**, who dropped out of M.I.T. and committed herself to finding and funding projects that can expand the human health span, and **Dr. Brian Kennedy**, whose work in the basic biology of aging has been crucial to the development of countless other researchers' work.

**Energy On The Edge (Directed by Akiva Goldsman)**

**Tuesday 15 December at 9.00pm - Australian/NZ premiere**

We are surrounded by clean, raw energy waiting to be tapped – energy that could eventually replace fossil fuels. Finding new ways to harness the energy around us takes a rare breed of scientist/engineer: men and women with a combination of technical skill, imagination and unwavering focus. This hour follows innovative alternative energy projects and the colourful people behind them, like engineer **Louis Michaud**, who is building a tornado machine to harness the energy it produces; and the team at the National Ignition Facility, who are trying to save the world through the power of controlled fusion.

**Water Apocalypse (Directed by Angela Bassett)**

**Tuesday 22 December at 9.00pm - Australian/NZ premiere**

California is on the brink of an apocalypse. The state faces a future of drought that will cost billions in lost farm revenue and thousands of jobs. The challenges facing the state are not unique: all over the world, governments are struggling with bigger populations and a diminishing supply of freshwater. Bassett focuses on inspiring stories of people working to change the world, such as **Sandra Postel**, who is trying to bring water back to the Colorado Delta, which became a dried-up husk after the Colorado River was diverted to feed the western United States; **Aaron Mandell**, whose solar-powered desalinisation project offers a way to conserve and reuse this precious resource; and Italian architect **Arturo Vittori**, whose quest to build a water-collecting tower in a remote village in Ethiopia dramatizes all the triumphs and challenges of innovation

Presented by National Geographic and GE, brands long dedicated to innovation, science and exploration, the series will air later this year on National Geographic Channel in 440 million homes in 171 countries and in 45 languages. Additional executive producers include Michael Rosenberg from Imagine Entertainment, Ryann Lauckner and Kurt Sayenga from Asylum Entertainment, Beth Comstock from GE, and Hamish Mykura from National Geographic Channels International.

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**About National Geographic Channels International**

National Geographic Channels International (NGCI) inspires viewers through its smart, innovative programming that questions what we know, how we view the world and what drives us forward. A business enterprise owned by National Geographic Ventures and FOX Entertainment Group, NGCI contributes to the National Geographic Society's commitment to exploration, conservation and education through its various channels: National Geographic Channel, National Geographic Channel HD, Nat Geo Wild, Nat Geo Wild HD, Nat Geo People and Nat Geo Mundo. Globally, National Geographic Channel (including NGC U.S., which is a joint venture of NGV and Fox Cable Networks Group) is available in more than 440 million homes in 171 countries and 45 languages. For more information, please visit [www.natgeotv.com](http://www.natgeotv.com).