



# THE INVISIBLE EXTINCTION

A MICROBE MEDIA PRODUCTION, A FILM BY **Sarah Schenck & Steven Lawrence**  
EDITOR & SENIOR PRODUCER **Russell Greene** CO-PRODUCER **Elijah Stevens** ORIGINAL SCORE BY **Hahn Rowe**  
PRODUCED & DIRECTED BY **Steven Lawrence & Sarah Schenck**

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## LOGLINE

Two globetrotting scientists race to save our microbiome—the germs in our bodies that keep us healthy—as a brave group of patients try experimental treatments, in the early days of a scientific revolution.

## SYNOPSIS

Our microbes are vanishing rapidly and life-threatening diseases are skyrocketing. But what makes these ‘good germs’ so important? They evolved alongside us for 200,000 years - and are collectively called our microbiome - they keep us healthy by regulating our immune systems and digesting our food. Over the last seventy years we’ve lost half of our microbial diversity at the same time we’ve seen stratospheric increases in deadly diseases like asthma, food allergies, obesity, and diabetes. Is the destruction of our microbiome making us sick?

Two globetrotting microbiologists, Gloria Dominguez-Bello and Marty Blaser, race to save our vanishing microbes before it’s too late. The Invisible Extinction joins them on this urgent quest from the USA to Venezuela, China, Israel, and Switzerland, showing us how the overuse of antibiotics, elective C-sections, and processed foods are driving the destruction of our inner ecology, which is happening even faster than climate change. At the same time, the film tells the stories of three patients, in the USA and China, who suffer from life-threatening diseases triggered by microbial loss and are trying experimental treatments that hold hope. As the Covid-19 pandemic hits, Marty pivots to focus on how our microbes may help protect us from the virus and future pandemics, while Gloria spearheads the creation of an international microbe vault to safeguard precious specimens.

# DIRECTORS' STATEMENTS



## SARAH SCHENCK

One in every thirteen children in the USA have food allergies, some of them deadly. Two of those kids are mine.

My youngest child nearly died when she was three. This was a shock because, as a baby, she ate everything; she had no allergies. Then she contracted strep throat twice in one year and took antibiotics both times. A few months later, after eating a pecan cookie, I watched her face go scarlet and her lips swell as her airways shut down. We got her to the ER in the nick of time.

The first thing I did when we got her home was to seek answers. The most compelling research was by Dr. Martin Blaser who tied the rise in food allergies to the loss of our ancient microbes, primarily from the overuse of antibiotics.

My life's mission is to translate scientific concepts into accessible stories for regular people – so I began shooting a film. I tracked down Dr. Blaser and found that he had a rare gift: he could convey complex scientific ideas in engagingly simple terms. His wife, Venezuelan microbiologist Maria Gloria Dominguez-Bello was equally brilliant and charismatic. I'd found the fulcrum of the film in this duo. Then I sought out a seasoned collaborator in documentarian Steven Lawrence.

I hope our film lets other families facing these challenges know that they aren't alone. "The Invisible Extinction" shines a light on the work of innovative researchers, and in an era in which humanity needs a better understanding of medical progress and shortcomings, it elevates scientific discourse for all of us.

## STEVEN LAWRENCE

In the 1990s I was given multiple rounds of antibiotics for what appeared to be a persistent parasitic infection I had picked up making films in Russia and Central Asia. As treatment progressed, instead of getting better I developed debilitating gut, allergy and autoimmune problems that made life painful for over a decade. I searched for answers, but back then no one knew that nuking the gut with antibiotics could derail the immune system. The word microbiome did not even exist.

So, when by chance I met Sarah at a dinner in 2014 and she told me she was working on a doc about the microbiome and looking for a partner, I said, "sign me up!" By then I knew what had happened to me was happening to tens of millions of others and I wanted to use my experience to help make the film a reality.

Of course, I didn't know I'd be at it for almost 7 years, but those of us who make indie docs understand that it's our passion for our subjects that make films like *The Invisible Extinction possible*. My late friend and collaborator Michael Apter always read T.S. Eliot's *4 Quartets* on the eve of each new project. The lines he liked to quote were, "For us there is only the trying. The rest is not our business." That says it all, not just about independent filmmakers but about scientists, whose work every day—to quote Gloria in our film—"brings us closer and closer to the answers."

# FILMMAKER BIOS



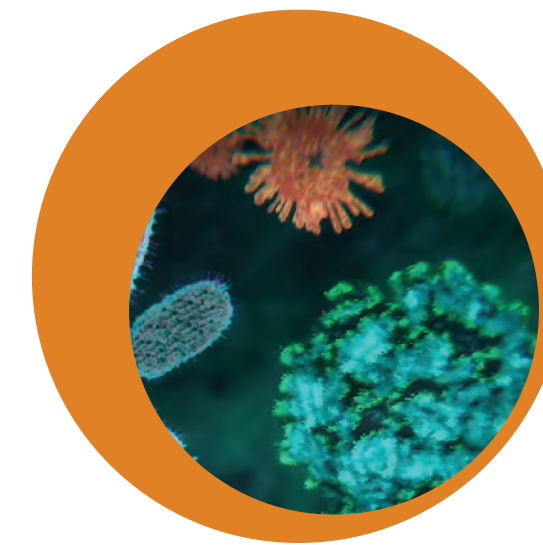
**STEVEN LAWRENCE**  
Director/Producer

Steve is a producer-director and media pioneer who has been making documentaries for over 30 years about artists, activists and everyday heroes - from underground Soviet rockers, to a Senegalese rapper fighting FGM, to cat rescuers in Brooklyn, and now scientists racing to save the human microbiome. As a producer his work includes three feature docs in collaboration with Michael Apter, including *The Long Way Home* and *Married In America*. He created the International Emmy-award winning series *Born In The USSR* producing the first film, *Age 7 In The USSR*. Among his many other producing credits are *The Furious Force Of Rhymes*, *Sarabah* (Movies That Matter Golden Butterfly award), and Heddy Honigmann's *100 UP*. His directing credits include *Tell Tchaikovsky The News: Rock In Russia* for MTV, the *Vis à Vis* series for PBS and *The Cat Rescuers*, winner of the 2018 Hamptons International Film Festival animal rights award. He lives in Brooklyn, NY with his wife, Helen Garrett.



**SARAH SCHENCK**  
Director/Producer

Sarah is a writer, director, and producer who is deeply passionate about using filmmaking to advance public health goals for diverse audiences. She makes shorts for nonprofit organizations including the Park Slope Food Coop, Planned Parenthood, Amnesty International, the NYC public schools, and the Supportive Housing Network, where she served as Chief Digital Officer. Sarah also leads a long-running meditation class for individuals with mental health challenges at St. Francis Friends of the Poor. While working as the NYC Comptroller's Senior Policy Advisor for Education, where she received a Commendation for Excellence in Public Service, she taught herself filmmaking. Sarah produced *Virgin*, starring Elisabeth Moss and Robin Wright for which she was nominated for an Independent Spirit Award for Best Feature Film Under \$500,000. Her feature comedy *Slippery Slope* won prizes at film festivals worldwide. For the PBS weekly news program "*Need to Know*," Sarah was director, producer, and correspondent for *Saving Carla*, an acclaimed episode that focused on childhood obesity.



**RUSSELL GREENE**  
Editor/Senior Producer

Russell is a film editor, director, writer and producer based in Brooklyn, NY where he lives with his wife and two children. His more than 20 edited films have appeared in top US and international festivals, aired on national television platforms and screened in theaters around the world. His collaborators have included directors Sam Pollard, Amy Berg, Fisher Stevens, Nina Rosenblum, Catherine Gund, Lonny Price, Anne Makepeace, Jim Solomon, Kim Snyder, Sophie Huber, Steven Lawrence and Sarah Schenck. Feature film credits include *Max Roach: The Drum Also Waltzes*, *The Automat*, *And We Go Green*, *Harold Prince: The Director's Life*, *Blue Note Records: Beyond The Notes*, *Tribal Justice*, *The Witness*, *Famous Nathan*, *Harry Dean Stanton: Partly Fiction*, *Ordinary Miracles* and *The Invisible Extinction*.

# FILMMAKER BIOS



## ELIJAH STEVENS

Co-Producer

Elijah is a documentary filmmaker based in Brooklyn, New York. His work explores migration, political geography & the Anthropocene. As a producer, Elijah has worked for companies such as VICE, Part2 Pictures, Show of Force, Actual Films, Isotope Films, and Cousins Company. He has associate produced the feature-length documentaries *Fire of Love*, *Sky and Ground*, *The Seer and the Unseen*, the Academy-shortlisted documentary short *Los Comandos*, and others. Elijah has associate produced short-form documentary films for The New York Times, as well as music videos and commercial content. He was a 2019-2020 fellow in the UnionDocs Collaborative Studio, where he co-directed the forthcoming film *15 Frames From Now*.



## HAHN ROWE

Original Score

Hahn is a composer, producer and multi-instrumentalist who has worked with Hugo Largo, David Byrne, Anohni (Antony and the Johnsons), Glenn Branca, Swans, R.E.M., Jim Thirwell (Foetus) and Yoko Ono, among many others. A recipient of three New York Dance and Performance Awards (AKA the Bessie), Hahn has a long history scoring music for dance and theater, working with Meg Stuart, Benoît Lachambre, Louise Lecavalier, Bebe Miller, John Jasperse, Simone Aughtertony, and Antonija Livingstone. He is active as a composer for film and television, creating scores for films such as *Clean*, *Shaven* by Lodge Kerrigan, *Spring Forward* and *The Cold Land*, by Tom Gilroy, *Married in America* by Michael APTED, *Sing Your Song* by Susanne Rostock and *The Cat Rescuers* by Rob Fruchtmann and Steven Lawrence.

# SCIENTIST BIOS

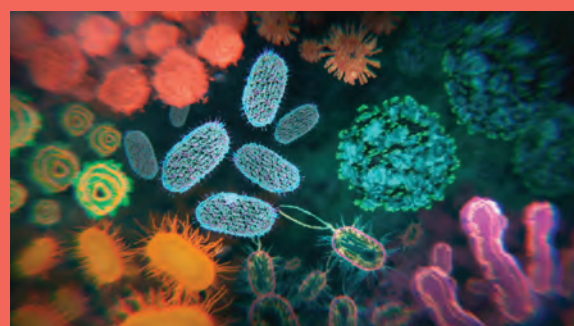
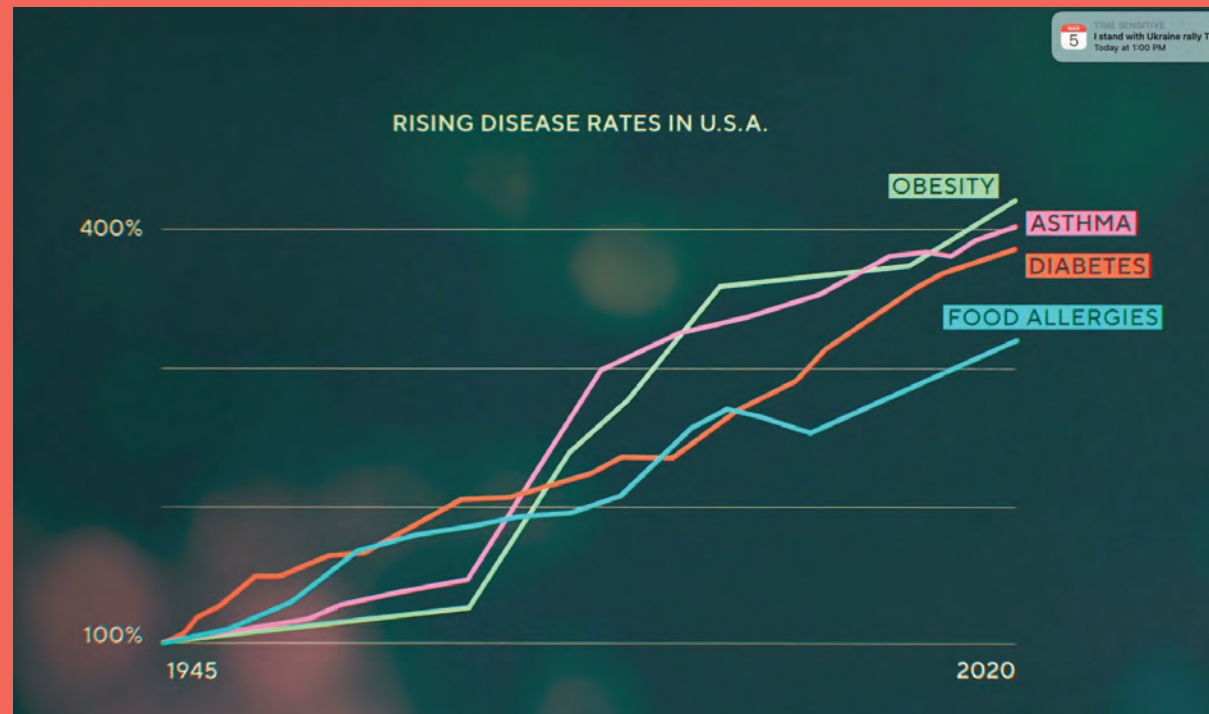
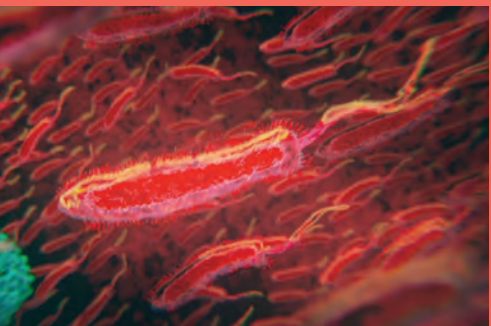


## MARIA GLORIA DOMINGUEZ-BELLO

Gloria is the Henry Rutgers Professor of Microbiome and Health at the Departments of Biochemistry and Microbiology, and of Anthropology at Rutgers University. She serves as the Director of the New Jersey Institute for Food Nutrition and Health (IFNH). Her research focuses on the microbiome and impacts exerted by urban practices, including practices that impair early life microbiota transmission and colonization such as C-sections. A Venezuelan-born, she has been working for 3 decades in the Amazon, where she studies changes on microbiomes across urbanization gradients. She has published extensively on symbiosis, impacts of modern practices on microbiomes, and strategies for restoration. Dr. Dominguez-Bello is a Fellow of the Infectious Disease Society of America (IDSA), and of the American Academy of Microbiology, and is member of the Editorial Board and reviewer at several scientific journals. She is a cofounder of the *Microbiota Vault*, a global initiative to preserve the diversity of the microbes relevant to human health.

## MARTIN J. BLASER

Marty holds the Henry Rutgers Chair of the Human Microbiome at Rutgers University, and serves as Director of the Center for Advanced Biotechnology and Medicine. Previously, he served as Chair of the Department of Medicine at New York University. A physician and microbiologist, Dr. Blaser has been studying the relationships we have with the human microbiome, the bacteria that live in us. Over the last 20 years, he has also been actively studying the relationship of the human microbiome with both health and important diseases including asthma, obesity, diabetes, and cancer. Dr. Blaser has been the advisor to many students, post-doctoral fellows, and faculty. He has served as President of the Infectious Diseases Society of America, Chair of the Board of Scientific Counselors of the National Cancer Institute, and Chair of the Advisory Board for Clinical Research of the NIH. He currently serves as Chair of the Presidential Advisory Council for Combatting Antibiotic Resistant Bacteria (PACCARB). He was elected to the National Academy of Medicine and the American Academy for Arts and Sciences. He has authored over 600 original scientific articles, holds 24 U.S. patents, and he also wrote *Missing Microbes*, a book targeted to general audiences, now translated into 20 languages.



# CREDITS

## A Microbe Media Production

**Produced & Directed by**  
Steven Lawrence & Sarah Schenck

**Editor & Senior Producer**  
Russell Greene

**Co-Producer**  
Elijah Stevens

**Original Score by**  
Hahn Rowe

**Executive Producers**  
Andrew Creighton  
Raja Dhir  
Thomas Campbell Jackson  
Ara Katz  
Gerry Ohrstrom  
Neil & Anna Rasmussen  
David Rees & Elisabeth Rees

**Co-Executive Producers**  
Mitchell Blutt  
Peter Emch  
Wea Ohrstrom Nichols

**Contributing Producer**  
Ted Barnett

Inspired by the work of Martin Blaser and Gloria Dominguez-Bello and by the book *“Missing Microbes”* by Martin J. Blaser, MD

**Featuring**  
(in order of appearance)

Maria Gloria Dominguez-Bello  
Martin Blaser  
The Villagers of Kanarakuni, Jitakwaña, & Surukuma  
Genia Blaser  
Theresa, Roger, Aryana Dalomba, & Tatyana Phillips  
Eran, Shira, Yoav, & Tamar Segal  
Eran, Hila, & Inbal Elinav  
Cameron, Brian, Libby, & Sophia Corcoran  
Talal Chatila  
Amy Thieringer  
Adriana Pericchi Dominguez  
Elizabeth Hohmann  
Elaine Yu  
Alicia Cole  
Lan Canhui  
You Xin, Lin Xhi Wei, & Liu Xintong (Tongtong)  
Zang Zining (Ningning), Li Li, Zang Hong Lun,  
& Zang Zi Tong  
Jia Shu Qin  
Manuel Fankhauser

# CREDITS

## **Line Producer**

Steven Lawrence

## **Cinematography**

Thorsten Thielow

Allie Humenuk

Craig Marsden

Axel Baumann

Tom Bergmann

P.H. O'Brien

Steven Lawrence

Ingrid Uribe

Stephen McCarthy

Martina Radwan

Peter Nicoll

Rob Fruchtman

Nikki Bramley

Maria Luisa Gambale

Margaret Sclafani

## **Additional Cinematography**

Joshua Atesh Litle

Stephen Matter

Matt Dickie

Phil Kiene

## **Assistant Camera**

Nancy Serna Guerrero

Stephen Matter

Laura Nespola

Matt Planer

Scott Ruderman

Lisa Vidal

Eric Walker

## **Sound Recording**

Richard Fleming

John O'Connor

Mario Cardenas

Mark Maloof

Nikola Chapelle

Len Schmitz

Steven Lawrence

Steve Bores

Drake Roy

## **Venezuelan Amazon**

### **Cinematography**

Oscar Noya Alarcon

## **ISRAEL**

Field Producer

Hagar Alroey

## **Cinematography**

Danor Glaser

Eyal Ben Yaish

## **Additional Cinematography**

Hagar Alroey

## **Sound Recording**

Misha Spektor

Oren Bein

## **Production Assistant /**

### **Driver**

Niv Mayo

## **Production Equipment**

### **Provided by**

AG Production Solutions

## **Weizmann Institute Coordination**

Dikla Kislev

Miri Klein

Gizel Maimon

## **BEIJING**

## **Field Producer / Director**

Yimin Zhuang

## **Cinematography**

Tian Li

## **Additional Cinematography**

Shen Mi

## **Assistant Camera**

Wang Hong Wei

## **Sound Recordists**

Qiao Xin

Zhang Nan

Li Shuo

## **Drivers**

Hao Da Xing

Liu Shi Fu

## **Beijing - Dr. You's Clinic**

## **Camera**

Martin Blaser

Maria Gloria Dominguez-Bello



# CREDITS

## SHENZHEN / SHANGHAI

### Field Producer / Director

Long Miaoyuan, Storyfarm Productions

### Line Producer (Shanghai)

Yann Ma

### Cinematography

Long Miaoyuan

### Second Camera

Wang Zhenquan

### Assistant Camera

Harry Fang

Additional Camera

Yann Ma

### Sound

Yang Yan (Shenzhen)

Kai Wang (Shanghai)

### Driver

Li Xixiang

## SWITZERLAND

### Cinematography

Adrian Stähli

### Sound Recordist

Dieter Meyer

### Location Coordinator

Manuel Fankhauser

### Additional Editing

Alex Ricciardi

### Assistant Editors

Eren Gulfidan

Daniel Sznajderman

### Editorial Consultant

Richard Hankin

### Additional Editorial Consultants

Sharon Wood

Doug Shultz

### Animation & Title Sequence

Blue Spill

Flame Artist - Anthony Brownmoore

Design Director - Joe Nowacki

Design Concept Director - Allison

Brownmoore

Creative Producer - Elliot Mander

### Artists

Kevin Smy

Linda Scerpella

Joseph Frascina

Miles Corless

### Production Assistants

Lucy Beavis

Daniel Fisher

### Post-Production Coordinators

Olivia Starr

James Edwards

### Additional Graphics

Nuncle

### Animation Development

Big Star

### Additional Motion Graphics

Simon Potter

### Colorist

Evan Anthony, CSI

### Post-Production Picture Services Provided by

Goldcrest Post Productions New York

### Post-Production Sound Services Provided by

BANG Audio Post

### Sound Editors & Re-recording Mixers

Paul Vitolinš & Nick Cipriano

### Sound Designer

Paul Vitolinš

### Additional Dialogue Recording

Gabriel Alon, Ullman Media - Ramat Hasharon

John Hetrick, Brainstorm Media - Dayton, OH

Rex Recker, Digital Arts - New York, NY

Kevin Ren, Magic Cloud Club - Beijing

### Archival Producer

Elijah Stevens

# CREDITS

## **Archival Consultant**

Lizzy McGlynn

## **Additional Archival Research**

Vanessa Maruskin

## **Post-Production Coordinator**

Maggie Piazza Carroll

## **Subtitles**

Marcus Taylor

## **Production Assistants**

Wendy Faunce  
Isabel Fernandez  
Ian Turley  
Yaxuan Wen  
Maya Zhang

## **Interns**

Assata Acey  
Anna Bullard-Werner  
Maddy French  
Riya Philip  
Grace Sue  
Xinyan Wang

## **Translators**

Michelle Dong  
Henna Ong  
Zhiying Zhen  
Ignacio Murga  
Nelson Rojas Caura  
Yaxuan Wen

## **Sizzle Reel Editing**

Matt Twomey, Picrow

## **Sizzle Reel Motion Graphics**

Momentist

## **Legal Counsel**

Bianca Grimshaw,  
Granderson Des Rochers LLP

## **Fair Use Legal Counsel**

Peter Jaszi

## **Production Insurance**

Momentous Insurance Brokerage,  
Winnie Wong & Andrew Moran

## **Accounting**

Sonia Morrison

## **Bookkeeping**

Alison Proctor

## **Archival Footage Courtesy of**

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Historic Films  
Huntley Film Archives  
ITN/Getty Films  
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Image Bank Film/Getty Films  
Screenocean/Reuters  
Shutterstock  
Simonkr/one80: Signature/Getty Films  
Sky News/Film Image Partner/  
Getty Films  
Thierry Berrod/SPL/Science Source  
Thomas Barwick/Image Bank Film/  
Getty Films  
Warren Faidley/Image Bank Film/  
Getty Films

## **Additional Archival Materials**

ABC  
ACOANA  
Al Jazeera  
Alicia Cole  
Alissa Eckert  
American Diabetes Association  
American Heart Association  
BBC  
British Library  
CBS  
CDC  
Christopher Corzett  
CNBC  
CNN  
Comedy Central  
Day Two  
FOX News  
Fitzwilliam Museum, Cambridge England  
FWU Institut für Film und Bild, Grünwald  
Genia Blaser  
Hulu  
Joana Carvahlo  
Lan Canhui  
Libby Corcoran

# CREDITS

Malachi Ward  
Maria Gloria Dominguez-Bello  
Marie-Lan Nguyen  
Martin Blaser  
Meredith Newlove  
Musée d'Orsay  
National Archives and Records Administration  
National Institute of Allergy and Infectious Diseases  
National Institute of Health  
National Library of Medicine  
Nature Magazine  
NBC  
Netflix  
OpenBiome  
Patient Safety Movement Foundation

Psychology Today  
Publico  
Science Magazine  
Science Translational Medicine  
Sony Pictures Classics  
Sublight Media  
The New York Times  
Theresa Dalomba  
United States Department of Agriculture  
University of North Carolina  
U.S. Dept. of Health & Human Services  
USA Today  
Wall Street Journal  
Warner Bros  
Wellcome Collection  
William Reed Business Media Ltd  
World Bank

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Neil & Anna Rasmussen Foundation  
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The Malka Fund  
The Veg Fund  
Jan T. Vilcek

## Additional Funders

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Eileen Donohue  
Victoria Feltman  
Peter Lawrence  
Kim Spencer  
Nicholas B. Zoullas

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## Distribution Advisory Services

ROCO Films

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Additional promotional clips available on request.

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