NOVA #4114 Program Credits Program Title: VACCINES – CALLING THE SHOTS

Written, Directed and Produced by SONYA PEMBERTON

Executive Producers MICHAEL ROSENFELD SONYA PEMBERTON

Director of Photography HARRY PANAGIOTIDIS

Editors WAYNE HYETT A.S.E. MARK ATKIN A.S.E.

Narrator SHARON WASHINGTON

Scientific Advisors JOSEPH BUXBAUM LAURI MARKOWITZ GLEN NOWAK WALTER ORENSTEIN

For Genepool Productions

Line Producers JOSEPHINE WRIGHT MALVINA MARTIN ROSLYN WALKER

Director of Production TONI MALONE

Associate Producer HARRY PANAGIOTIDIS

Associate Producer/2nd Unit Director FAYE WELBORN

Production Coordinator SALLY STOREY Sound Recordists MARTIN KEIR JOHNNY CAMILLO ANTON HERBERT PAUL RUSNAK

Researchers FLORIENNE LODER JAMES SHIRVILL MICHIKO SMITH

Field Coordinators EDWARD EBERWINE III COLLIN SMITH ASHLEY TINDALL

Archive Researcher NORA NIASARI Supported by SBS/Film Victoria Traineeship Program

Scientific Advisors (Australia) ROBERT BOOY JULIE LEASK

Script Advisors JENNY ROYLE ANDREW MASTERSON

Original Music PETER DASENT © 2014 Origin Music Publishing (APRA) Music recorded and mixed by ROBIN GIST

Sound Designer TRISTAN MEREDITH

Animation and Visual FX 21-19 Creative Director DOMENICO BARTOLO

Post Production Facility CITY POST Colorist DEE MCCLELLAND

Assistant Editors LIDIA COSTA LUCY PAPLINSKA

Online Editor BELINDA FITHIE

Production Accountant BRONWYN SPEZIALE

Business Affairs KATIE SHORTLAND

CJZ Executive Producer MICHAEL CORDELL

SBS Commissioning Editor JOHN GODFREY

For Tangled Bank Studios

Head of Television and Film MICHAEL ROSENFELD

Executive in Charge SEAN CARROLL

Director of Operations LORI BEANE

Senior Producers DAVID ELISCO ANNE TARRANT

Senior Researcher LAURA HELFT

Production Coordinator LORRI GARCIA-COTTRELL

Associate Producer BAILEY FRANKEL Post Production Supervisor ARJUN RAO

Assistant to the Executive Producer WILMA DAVIS

Transmedia/Marketing Lead ANNE ZEISER

Archive

Bentley Reference Library Bibliothèque de L'Académie Nationale de Médecine CDC/Mary Hilperthauser/Stafford Smith/Meredith Hickson/ Dr John Noble, Jr. CNN Critical Past December Media / Pemberton Films Eli Lilly EUFA Getty Images Julian Harneis L'Oreal Women in Science footage Directed by Alexandre Auvigne, Courtesy of Phénomène, France The Mutter Museum NBC Universal Staplegun Prelinger Archives

Additional footage from 'JABBED - love fear and vaccines' Developed with the assistance of Film Victoria ©2013 Genepool Productions, Screen Australia and SBS Corporation

Thank you to all those who participated in the making of this film.

Special Thanks

The Children's Hospital of Philadelphia The University of Oklahoma The University of California The University of Michigan The Oregon Health & Science University Doernbecher Children's Hospital The City of New York Mayor's Office of Media and Entertainment Grand Central Terminal Oklahoma Film & Music Office City of Philadelphia Greater Philadelphia Film Office Quality Health Center San Francisco Recreation and Park Department The London School of Hygiene and Tropical Medicine

For NOVA

NOVA SERIES GRAPHICS yU + co.

NOVA THEME MUSIC Walter Werzowa John Luker Musikvergnuegen, Inc.

ADDITIONAL NOVA THEME MUSIC Ray Loring Rob Morsberger

CLOSED CAPTIONING The Caption Center

POST PRODUCTION ONLINE EDITOR Spencer Gentry or Michael H. Amundson or Jim Ferguson

DIRECTOR OF PUBLIC RELATIONS Jennifer Welsh

PUBLICITY Eileen Campion Eddie Ward

SENIOR RESEARCHER Kate Becker

ASSOCIATE RESEARCHER Shraddha Chakradhar

NOVA ADMINISTRATOR Kristen Sommerhalter

PRODUCTION COORDINATOR Linda Callahan PARALEGAL Sarah Erlandson

TALENT RELATIONS Janice Flood

LEGAL COUNSEL Susan Rosen

DIGITAL MANAGING PRODUCER Kristine Allington

SENIOR DIGITAL EDITOR Tim De Chant

DIRECTOR OF DIGITAL MEDIA Lauren Aguirre

DEVELOPMENT ASSOCIATE Lisa Leombruni

UNIT MANAGER Ariam McCrary

POST PRODUCTION COORDINATOR Brittany Flynn

SUPERVISING PRODUCER Kevin Young

POST PRODUCTION EDITOR Rebecca Nieto

BROADCAST MANAGER Nathan Gunner

BUSINESS MANAGER Elizabeth Benjes

DEVELOPMENT PRODUCER David Condon

PROJECT DIRECTOR Pamela Rosenstein COORDINATING PRODUCER Laurie Cahalane

SENIOR SCIENCE EDITOR Evan Hadingham

SENIOR PRODUCERS Julia Cort Chris Schmidt

SENIOR SERIES PRODUCER Melanie Wallace

MANAGING DIRECTOR Alan Ritsko

SENIOR EXECUTIVE PRODUCER Paula S. Apsell

A NOVA Production by Tangled Bank Studios, LLC in association with Genepool Productions Pty. Ltd. for WGBH Boston.

© MMXIV Tangled Bank Studios, LLC All rights reserved

Tangled Bank Studios, LLC is a production company established and funded by the Howard Hughes Medical Institute

Additional Material © 2014 WGBH Educational Foundation All rights reserved

This program was produced by WGBH, which is solely responsible for its content