

Luna Productions presents



A Film by: Catherine Ryan and Gary Weimberg  
Run Time/Format: 57 minutes, HighDef video, 16x9, color  
Not rated. Recommended for ages 13 and up (for content understanding)  
World Premiere (film festivals) American Assoc. for the Advancement of Science, 2016  
World Premiere (broadcast) USA, PBS, Feb., 2017  
European Premiere (film festivals) Paris Science,, Oct, 2017  
Producer/Directors Catherine Ryan 510-526-9500 [catherine@lunaproductions.com](mailto:catherine@lunaproductions.com)  
Gary Weimberg 510-526-9500 [gary@lunaproductions.com](mailto:gary@lunaproductions.com)  
Narrator Mayim Bialik (actress, *Big Bang Theory*, *Blossom* & PhD scientist)  
Downloads Stills, poster <http://lunaproductions.com/press-mylab/>  
Website & trailer <http://lunaproductions.com/marian-diamond/>

## LOG LINE

Want a better brain? Meet Dr. Marian Diamond ... in a film about the brain, the passion of scientific discovery, the creation of modern neuroscience, Albert Einstein's brain tissue, women in science, and love ... all via the life and pioneering research of beloved professor and YouTube celebrity, Dr. Marian Diamond.

## DESCRIPTION of FILM

How can you not fall in love with a woman who carries around a preserved human brain inside a flowery hat box? Meet Dr. Marian Diamond, renowned professor and research scientist, and prepare to be smitten.

Catherine Ryan and Gary Weimberg's film follows this remarkable woman over the last 5 years of her career and introduces the viewer to both her many scientific accomplishments and the warm, funny, and thoroughly charming woman herself, who describes her 60+ years researching the human brain as "pure joy."

As one of the founders of modern neuroscience, it's no exaggeration to say that Dr. Diamond changed science, and society at large in dramatic ways through her research. Her groundbreaking work is all the more remarkable because it began during an era when so few women entered science at all. Shouted at from the back of the conference hall by noteworthy male academics as she presented her research, Dr. Diamond simply did the work and followed where her curiosity led her, bringing about a paradigm shift (or two) in the process. As she points out, in order to get to the answers that matter, you have to start by asking the right questions.

If her name isn't yet as familiar as that of Marie Curie, it should be. Dr. Diamond's work revealed previously unimagined brain capabilities. Brain plasticity (once controversial, now a foundation of neuroscience) was decisively demonstrated for the first time by her work, groundbreaking research that revised our understanding of the role of the environment in brain development. She published the first substantive scientific analysis of Albert Einstein's brain tissue, which fueled a world-wide wave of research re-evaluating the role of the glial cell. Her Anatomy Lectures have 1.7 million views on YouTube (and still climbing), which helped launch the revolution in on-line education and made her as 2<sup>nd</sup> most popular college professor in the world as of 2010.



Her scientific and academic career broke barriers for women in science and, much like the old adage about Ginger Rogers doing it all backwards and in heels, Dr. Diamond achieved every success with steely determination behind astonishing positivity, warmth, and magnetism. Watch this to learn about an amazing woman, a brilliant scientist, a fascinating branch of scientific research, and about the core element that fuels great achievement in all endeavors: love.

## REVIEWS:

- " ... utterly charming, inspiring documentary ..." Insider Magazine, California  
    "... delightful ..." *San Jose Mercury News*  
" ... utterly fascinating ..." *Georgia Straight*, Vancouver, Canada  
    "...a tweedy celebrity of cyberspace ..." *New York Times*

## QUOTES

"... a must see for every student, teacher, parent, community member, and higher education teacher prep program!"

*PEGGY BROOKINS, President, National Board for Professional Teaching Standards*

"Marian Diamond is to the brain like Julia Childs is to French cooking."

*MARILYN BANCEL, Exploratorium Science Museum*

"Reveals the soul of science through the remarkable life of Marian Diamond ..."

*R. DOUGLAS FIELDS, Neuroscientist and Author of "The Other Brain", and "Why We Snap"*

"Marian Diamond has made two major contributions to Neural Science that have stood the test of time. .... Bravo!"

*ERIC R. KANDEL M.D. Nobel Prize Winner*

## AWARDS

**Best** in Festival – Audience Award, RiverRun International Film Festival, Winston-Salem, NC

**Best** Feature Film in Festival – American Psychological Association film festival

**Best** Documentary – Indigo Moon film festival, Fayetteville, N.C.

Audience **Favorite** Award – Mill Valley Film Festival, CA

**Best** Documentary – High Falls Film Festival, NY

**Best** Documentary, Audience Award, Durango Film Festival, CA

## FILMAKER BIOS

Catherine Ryan and Gary Weimberg have spent the last three decades making documentaries that have been nominated for 5 Emmy Awards, won 2 Emmys, and short-listed for Academy Awards. Their documentaries have been broadcast on ABC, PBS, FOX, WB and around the world.

Their films with real and measurable effects on the world include; *Maria's Story*, PBS, which was cited as a crucial factor in ending the civil war in El Salvador. *The Double Life of Ernesto Gómez Gómez*, PBS, contributed directly to the presidential pardon and release of 12 Puerto Rican political prisoners after having served 19 years in prison.

Higher resolution copies of all the following articles available upon request

# The doctor who taught you how to love your brain

By David Wiegand



Photo Photo Courtesy Of Lora Productions

Marian Diamond gives Ingrid Prasad, 4, a look at a human brain.

I just did something great for my brain and you can do the same, when the documentary "My Love Affair With the Brain: The Life and Science of Dr. Marian Diamond" airs on KQED on Wednesday, March 22.

According to the UC Berkeley professor emerita, the five things that contribute to the continued development of the brain at any age are: diet, exercise, newness, challenge and love. You can check off three of those elements for the day by watching the film by Catherine Ryan and Gary Weinberg. No matter how smart you are, even about anatomy and neuroscience, you will find newness in the information about the miraculous human brain, how it works, and how it keeps on working no matter how old you are.

That's one of the fundamentals of modern



neuroscience, of which Diamond is one of the founders. You will also be challenged to consider your own brain, to consider how Diamond's favorite expression — "use it or lose it" — applies to your brain and your life. You will be challenged to consider what Diamond means when she says brain plasticity (its ability to keep developing by forming new connections between its cells) makes us "the masters of our own minds. We literally create our own masterpiece."

Before Diamond and her colleagues proved otherwise, the prevailing thought was that brains developed according to a genetically determined pattern, hit a high point and then essentially began to deteriorate. *Bashwa*: A brain can grow — i.e., learn — at any age, and you can teach an old dog new tricks.

Finally, you will experience the fifth element essential to a healthy brain: love, for the singular accomplishments of the now 90-year-old Diamond, who in 1953 was the first woman to earn a doctorate in anatomy from UC Berkeley, who saw her first brain when she was 15 years old, and who has taught, with singular enthusiasm and sheer love of subject and teaching, more than 60,000 students in a six-decade career. And that doesn't even include the 1.7 million people who have made her the second most popular teacher in the world via YouTube.

Narrated by actress Mayim Bialik, the film details in understandable terms how Diamond determined that brains do better in "enriched" environments than in impoverished ones, and, through studies of four pieces of the brain of Albert Einstein, found a previously undiscovered role for parts of the neurosystem known as glial cells. Diamond really has a love affair with the human brain, and through this joy-filled film, it's highly contagious.

**My Love Affair With the Brain:  
The Life and Science of Dr. Marian  
Diamond:** Documentary by Catherine  
Ryan and Gary Weinberg.  
8 p.m. Wednesday, March 22, on KQED.



**David Wiegand**  
Assistant Managing  
Editor and TV Critic

## My Love Affair with the Brain – utterly charming, inspiring documentary

"Take away the brain, you take away the person."

BY CLINTON STARK | 05.19.2016



Use it. Or lose it.

"Take away the brain, you take away the person."

That's one of Dr. Marian Diamond's most famous catch phrases and quotes. Surround yourself with "enriched" environments, and your brain will benefit. So much so that, as I learned watching the fascinating documentary *My Love Affair with the Brain: The Life and Science of Dr. Marian Diamond*, it can even physically expand. The term used to describe the phenomena: plasticity.

### WATCH:

#### Trailer for My Love Affair with the Brain



Many were at first skeptical of the neuroscientist and her findings even after years of extensive testing on lab rats. Impossible! The brain, they said, was set at birth. DNA defined its size and ability. It would grow, limited by its pre-defined characteristics, and then decline with age. The process was surely pre-ordained, and not influenced by our environment. Even confronted at conferences in the 1960s and 1970s Diamond would persist, and, eventually

prevail (see "Chemical and Anatomical Plasticity of Brain: Changes to brain through experience, demanded by learning theories, are found in experiments with rats", 1964). Turns out our brain is, in fact, malleable.

Plasticity was just one of many significant discoveries her research would uncover over a career that would span some six decades.

Another milestone: she was the first scientist to analyze the brain of Albert Einstein.

According to local filmmakers Catherine Ryan and Gary Weinberg, Marian Diamond only just retired, stepping down from her post at U.C. Berkeley in 2014, at the age of 87, after a storied career. Still energetic, witty, and as passionate about sharing her learnings and knowledge with others, [her lectures and YouTube videos](#) have become among the most popular in their field. Indeed, science can be entertaining.

One utterly charming scene in *My Love Affair with the Brain* occurs when Diamond presents the brain (which she carries around in a giant flowery hat box) to a young girl. She watches, fascinated, while the professor unveils an actual human brain.

### SCIENTIFIC HIGHLIGHTS of MARIAN DIAMOND's CAREER



ANATOMYCULTURE

- One of the founders of modern neuroscience. Her pioneering research preceded the very term "neuroscience".
- Enrichment and brain plasticity (how the brain changes due to experience and environment) are concepts we now take for granted, but they were a scientific battleground where Dr. Diamond decisively challenged the old view of the brain as fixed and unchangeable. She was the first to find actual evidence of plasticity in a brain, changing forever our understanding of the brain ... and ourselves.
- First to publish a study of Albert Einstein's brain – fueling yet another paradigm change, a renewed appreciation of glial cells, the 30% of the brain that, previously, was said to "do nothing."
- Her YouTube Anatomy lectures have nearly 2 million hits, making her the teacher of the 2nd most popular college course in the world, and inspiring the NY Times to call her "one of the tweedy celebrities of cyberspace."

## How can you not fall in love with a woman who carries around a preserved human brain inside a giant flowery hat box?

and proceeds to explain the frontal lobe. As viewers we are equally transfixed as the transfer of knowledge and learning process unfolds. Inspirational and magical – as is the girl's expression. Wonderful stuff.

While I can't write a full review, I can highly recommend you [seek it out at the Mill Valley Film Festival](#). There it will screen three times (Oct. 13, 14, 15). I hope many people see it. Marian Diamond shattered the glass ceiling in the field of science, but apparently never used the fact that she was swimming upstream in a male-dominated field as a crutch, or excuse.

That Marian Diamond is as enthusiastic and gregarious late into life perhaps reinforces her theory that the brain does benefit from five essential items: diet; exercise; challenge; newness; and love.

Pure joy.

CLINTON STARK | @CLINTONSTARK | WWW.CLINTONSTARK.COM

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#### CLINTON STARK

Clint has produced videos for Stark Insider since 2006. Recent projects include short *MORADO* shot in the Napa, mini-doc with *PENTAGON* in Napa, and art-doc *WINO'S WHAT I DO BEST* at the San Francisco Art Institute. He regularly writes about Canon DSLR and filmmaking. His Broadway shorts, such as *SHEEK UNMASKED*, have garnered acclaim. He's worked with DreamWorks, Disney on Ice, Cirque du Soleil, and "studied under" filmmaker Werner Herzog. Clint also writes about the San Francisco arts scene, Napa, Silicon Valley and gadgets. [More about Clint](#) [Bio](#) | [MSW](#) | [Gear List](#)

f t in p s v o



## New documentary offers a glimpse into the life of a neuroscience icon



### NEUROSCIENCE

**My Love Affair with the Brain**  
**The Life and Science of Dr. Marian Diamond**  
*Catherine Ryan and Gary Weimberg, directors*  
 Luna Productions.  
 Airing on PBS in March and April 2017; check local listings.

"Young lady, that brain cannot change!" a man shouted at Marian Diamond at the annual meeting of the American Association of Anatomists in 1964. Diamond, a Berkeley-trained anatomist and one of only a handful of female speakers, had just presented research demonstrating that environmental enrichment can alter the structure of the adult rat brain, a discovery that would establish her as a pioneer in the field of neural plasticity. Tracing the highlights of her groundbreaking 60-year career, *My Love Affair with the Brain* offers viewers a feel-good, firsthand account of the neuroscience icon's life and work.

10.1126/science.aam9387

[sciencemag.org](http://sciencemag.org) **SCIENCE**

PHOTO: DEE LUBEL, SAN FRANCISCO CHRONICLE

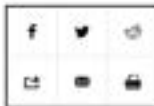
<https://blogs.scientificamerican.com/guest-blog/whats-the-best-way-to-talk-about-science/>  
March 1, 2017

SCIENTIFIC  
AMERICAN.

Guest Blog

## What's the Best Way to Talk about Science?

The importance of biography in the scientific narrative



Credit: Lurie Productions/Univis

by Gary Weimberg

For most of the last decade, I've been noticing the failure of contemporary science to tell its own story. While I'm not a scientist (although my father was), I am a seasoned, Emmy-award winning documentary film maker and telling stories is what I do. That has helped me to see an important problem with the narrative of contemporary science ... and a potential solution as well ...insights that emerged during the 6 years that my partner Catherine Ryan and I have been producing and directing our first science documentary, soon to be broadcast on PBS, "**My Love Affair with the Brain: The Life and Science of Dr. Marian Diamond.**"

The documentary is part biography, part scientific adventure story, and part inspirational tale about one of the founders of modern neuroscience, Dr. Marian C. Diamond, Professor Emeritus at University of California, Berkeley. It is no exaggeration to say that her research changed not

Article continues at this link:

<https://blogs.scientificamerican.com/guest-blog/whats-the-best-way-to-talk-about-science/>

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## Marian Diamond's love for the brain is infectious



UC Berkeley professor emerita Marian Diamond is the subject of a charming new documentary. (Courtesy Luna Productions)

By Leslie Katz on March 20, 2017 12:00 pm



It's hard to resist an octogenarian lady scientist who carries a human brain around in a hat box.

"My Love Affair with the Brain: The Life & Science of Dr. Marian Diamond," a new documentary airing this week on KQED Channel 9, tells the remarkable story of the retired University of California, Berkeley anatomy professor whose research broke ground, and whose lessons inspired thousands.

Describing their project as "part biography, part scientific adventure story and part inspirational tale," Berkeley filmmakers Catherine Ryan and Gary Weimberg (who made the movie over five years) call Diamond a "brain whisperer."

The entertaining documentary touches on her work in the 1960s, which revealed, for the first time, connections between rats' brain size and their environments (those in "enriched" settings, in cages with companions and toys were found to have larger cerebral cortexes than those who were deprived).

Further studies indicated that humans have control over their own brain function, with the charming Diamond, who is interviewed throughout the film, advising with cheer: "Use it or lose it." Other scenes cover her research on Einstein's brain — she was able to obtain sugar cube-size pieces of it — that found that the man who discovered the theory of relativity had more glial cells (support cells in neurons) than the average person.

Her fans include poor Cambodian orphans she helped by putting into practice what she learned about "enriched" environments; their achievements increased, having been provided a better diet as well as lessons in a positive setting.

Delightfully, the filmmakers even talk about love. In one sequence, Diamond discusses how love and nurturing aid the brain, as she pets a rat, and in other scenes, she and her husband Arne Scheibel, a retired UCLA professor of neurobiology and psychiatry, share thoughts about their romance and long-distance relationship.

In old-fashioned lectures, the impeccably coiffed Diamond uses chalk on a blackboard and engages students with charm and humor; these anatomy classes, on YouTube, have a following of more than 1 million viewers.

New York University professor of neural science and psychology Wendy Suzuki, another captivated follower, describes how "rock star" Diamond's class affected her own career, and how she has her own hat box holding a brain.

### REVIEW

**My Love Affair with the Brain: The Life & Science of Dr. Marian Diamond**

**Starring** Marian Diamond, Arne Scheibel

**Directed by** Catherine Ryan, Gary Weimberg

**Not rated**

**Running time** 1 hour, 5 minutes

**Note:** The film screens at 8 p.m. Wednesday, March 22 and 2 a.m. Thursday, March 23 on KQED 9.



# San Jose Mercury News

Entertainment > Movies

## UC Berkeley professor's sparkling career captured in 'Love Affair With the Brain'



Luna Productions

UC Berkeley professor Marian Diamond appears in a scene from "My Love Affair With the Brain."

By **RANDY MYERS, CORRESPONDENT** | Mercury News, Bay Area News Group  
PUBLISHED: November 14, 2016 at 10:00 am | UPDATED: November 14, 2016 at 10:17 am

If you couldn't make it to the Mill Valley Film Festival, you missed the delightful "My Love Affair With the Brain," a documentary from Catherine Ryan and Gary Weinsberg about the remarkable achievements of retired Cal professor Dr. Marian Diamond. But you're in luck. Oakland's New Parkway Theater will screen this entertaining documentary 7 p.m. Nov. 15. Tickets are \$10-\$12. A post-film discussion follows. For more information, visit [thenewparkway.com](http://thenewparkway.com).

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## MOVIES NOT TO MISS

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**MY LOVE AFFAIR  
WITH THE BRAIN:  
THE LIFE & SCIENCE OF  
DR. MARIAN DIAMOND**

**Playing:** 10 a.m. Friday,  
Gaslight Theatre; 6 p.m. Sat-  
urday, Gaslight Theatre

Dr. Marian Diamond carries a preserved brain around in a hat box to show to students. She's will utterly charm you with the joy she takes in science. Discover the mysteries of your own brain and the 90-year-old YouTube megastar who helped to found the field of neuroscience.

## "Scientific literacy is empowering"

Gary Weimberg talks about his documentary on neuroplasticity pioneer Marian Diamond and makes a plea for more science literacy



Marian Diamond. Image: Lata Productions

**Lorraine Annals** **Wentner**: *Why Love Affair with the Brain* is your first science documentary. Why did you decide to make a film about neurobiologist Marian Diamond?

**Gary Weimberg**: My partner Cathy (Catherine Ryan) and I had just completed a documentary on soldiers—when you're in the army, you learn anatomy for the purpose of killing effectively. We wanted to go the opposite direction and look at telling the story of human anatomy for a positive, life-affirming reason. We found Dr. Marian Diamond on YouTube, where her [integrative biology lectures](#) at the University of California at Berkeley have had millions of views. We called her up and asked if we could make a documentary about her and her research, and she said, "if it will advance the cause of science, okay!" And then we had the privilege to spend five years with this amazing woman.

**CSG**: Why is it important to learn about science?

**GW**: I think learning about science is empowering for people. The scientific method is a very reliable way for understanding the world around us. Through questioning, research, inference, collecting data, and analysis we come up with information we can trust and rely on. By comprehending and learning to use the scientific method, we can deepen our understanding of the world.

But all too often science as a topic tends to suffer because it's easy to make it boring. Even contemporary science, which is depicted via breakthroughs, new developments, and explorations of state-of-the-art science, becomes reduced to facts and figures, not much about people or personalities.

article continues here: <http://bold.expert/scientific-literacy-is-empowering/>

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February 27, 2016 at 1:00pm

Berkeley Art Museum and Pacific Film Archive



*My Love Affair  
with the Brain*  
THE LIFE & SCIENCE OF  
DR. MARIAN DIAMOND

**WEST COAST SNEAK PREVIEW**  
February 27, 2016  
© New BAMPFA



Please come to this free special sneak preview screening and program in celebration of Dr. Diamond and her pioneering contributions to modern neuroscience.

Presented by BAMPFA, the Helen Wills Neuroscience Institute, Lawrence Hall of Science, Department of Psychology, Division of Biological Sciences, Integrative Biology, Molecular and Cell Biology, Center for Research and Education on Aging, Cal Alum and Luna Productions.

**My Love Affair with the Brain** is a soon-to-be-on PBS documentary about the brain, the passion of scientific discovery, the creation of modern neuroscience, Albert Einstein, women in science, and love – all via the life and research of beloved professor and YouTube celebrity, Dr. Marian Diamond.

Marian Diamond's research demonstrated the impact of enrichment – a powerful new understanding of the brain that has literally changed the world, from how we think about ourselves to how we raise our children. Dr. Diamond demonstrated anatomically, for the first time, what we now call plasticity and in so doing, shattered the old paradigm of understanding the brain as static and unchangeable.

Directed and Produced by Catherine Ryan and Gary Weimberg of Luna Productions. Join us for a special pre-release screening at the new [BAMPFA!](#)

**Seating is limited. Please arrive early to guarantee seating.**

For more information: contact: Catherine Ryan [Catherine@Lunaproductions.com](mailto:Catherine@Lunaproductions.com)

## Berkeley honors Marian Diamond, who radically changed how we think about the brain

[berkeleyside.com/2017/03/14/berkeley-honors-marian-diamond-radically-changed-think-brain/](http://berkeleyside.com/2017/03/14/berkeley-honors-marian-diamond-radically-changed-think-brain/)

Kate Darby Rauch

March 14, 2017, 2 p.m.



Marian Diamond, a retired UC Berkeley professor of integrated biology, advanced our understanding of the brain. Photo: Luna Productions

When Marian Diamond was growing up in Southern California, she got her first glimpse of a real brain at Los Angeles County Hospital with her dad, a physician. She was 15. Looking back now, at age 90, Diamond, a Berkeley resident, points to that moment as the start of something profound — a curiosity, wonderment, drive.

“It just blew my mind, the fact that a cell could create an idea,” Diamond said in a recent interview, reflecting on her first encounter with that sinewy purple-tinged mass.

She didn’t know that this was the start of a distinguished legacy that would stretch for decades, touching millions. But today, she’d be one of the first to scientifically equate that adolescent thrill with her life’s work.

Because she helped prove a link.

Brains, we now know, thanks in large part to research by Diamond, thrive on challenge, newness, discovery. With this enrichment, brain cells are stimulated and grow.

This week, Diamond, a [UC Berkeley emeritus professor of integrative biology](#) and the first woman to earn a PhD in anatomy at Cal, is being honored by the Berkeley City Council, which is designating March 14 as Marian Diamond Day.

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page 1 of 4, “Berkeley honors Marian Diamond” continued here  
: <http://www.berkeleyside.com/2017/03/14/berkeley-honors-marian-diamond-radically-changed-think-brain/>



**FILM BUFFS REJOICE**  
Are you ready for some independent films? 1c



**Woman injured after running head-on into sheriff's vehicle** 3A

**Durangoans in Italy for worlds** 1B

# THE Durango HERALD

## Durango Film kicks off Wednesday night



"My Love Affair with the Brain: The Life and Science of Dr. Marian Diamond"

## A week at the MOVIES

BY KATE CHICKUNDO-CARILL  
STAFF WRITER

**D**urango Film: An Independent Film Festival is in its 12th year of bringing cool movies, panels and filmmakers to Durango, and this year is no different. Running from Wednesday through March 5, the film fest offers an eclectic mix of features, documentaries and shorts.

The movies will kick off Wednesday night with the festival's First Movie Night. No passes are required, and entry to the shows at the Gaslight Theatre are first come, first served. Here are some movies you don't want to miss:

### My Love Affair with the Brain:

#### The Life and Science of Dr. Marian Diamond

How can you not fall in love with a woman who carries a preserved human brain inside a fiery hot box? As one of the founders of modern neuroscience, it's no exaggeration to say that Dr. Marian Diamond has changed science in dramatic ways over the course of her career. Her groundbreaking work is all the more remarkable because it began in an era when so few women entered science at all.

61 min. Showing with "Heart to Fly" 10 a.m. March 3, Gaslight 2, and 4 p.m. March 4, Gaslight 2.



"Road Bay"



"June Falling Down"



"Shoot Last Night"



"Wakiba"

### If you go

**WHAT:** Durango Film: An Independent Film Festival

**WHEN:** March 3-5

**WHERE:** Various venues around Durango, including Arroyo City Theatre, Gaslight Theatre and Durango Stadium 6

**MORE INFORMATION:** For more information and a complete schedule of movies, panels, events and ticketing, visit <http://durangofilm.org>.

### INSIDE

#### Road Bay

**QUEST:** As 19-year-old Bennett Wallace navigates early society, late adolescence and the evolution of his gender identity, his mother makes her own transformation from resistance to acceptance of her trans son. Along the way, both mother and son find support in their communities, reminding us that families are not only given, but chosen.

22 min. Showing with "Heart" and "The Love" 9:30 a.m. through Gaslight 1, and 2:30 p.m. March 4, Gaslight 1.

[BIT]

## THE PROFESSOR WHO STUDIED EINSTEIN'S BRAIN

» A talk with Luna Productions about Dr. Marian Diamond and 'My Love Affair with the Brain'

**BRAINS:** Specifically, Albert Einstein's. For 26 years, Einstein's preserved brain was waiting for someone to study it, then - bazinga! - Dr. Marian Diamond made it happen. That ain't all she's done, either.

Diamond is a 90-year-old scientist and YouTube sensation who has worked in neuroanatomy for 60 years. She's the subject of the documentary "My Love Affair with the Brain: The Life and Science of Dr. Marian Diamond," which is playing at the Durango Independent Film Festival on Friday at 10 a.m. and Saturday at 6 p.m. at the Gaslight Theatre, 102 E. Fifth St.

*DGO* chatted with Catherine Ryan and Gary Weimberg of Luna Productions about who the heck Dr. Marian Diamond is and why they made a movie about her.

### Who is Dr. Marian Diamond?

**Gary Weimberg:** Two major things: she's a pioneering researcher and she's a truly beloved professor. The fact I always mention is that her YouTube anatomy lectures have 1.7 million hits, which makes her the fifth most popular college professor in the world.

In terms of hard science, we could call her one of the founders of neuroscience. Her breakthroughs in what we call brain plasticity are one of the pillars of neuroscience.

### Brain plasticity?

**Weimberg:** It's the fact that our brains are not totally determined by our genetics at birth. What we do, how we think, and the environment we are in - whether we are stimulated or not stimulated - has huge effects on our brain. Marian Diamond says that the brain is similar to any other muscle, you use it or lose it. What's amazing about this is that people didn't used to believe that. We were prisoners of our own genetics. She is the first person to ever have hard evidence that decisively demonstrated that the brain can change based on what you do.

### Dish more dirt on Dr. Diamond.

**Weimberg:** She is the first person ever to publish a study on Einstein's brain. When I say that, there is a "Yeah, duh" factor. Like of course! If you are a brain scientist, of course you would want to study Einstein's brain. But the fact of the matter is that that happened 26 years after his death. No one else had thought to do that before Marian Diamond. It seems obvious, but this is one of her gifts as a scientist. She has the gift of asking the right question that yields an important answer.

### How did Luna Productions come to create a Marian Diamond documentary?

**Catherine Ryan:** We had finished another long-term, in-depth documentary that was about war. It was called "Soldiers of Conscience." It was in film festivals and

it did very well, but it was a grueling experience to spend five years inside the heads of soldiers and really understanding their lives. Documentaries so often portray the harshness of life. I needed to find something that was not so harsh and maybe even something that was elevating. Not silly, but good news. When I came across Marian Diamond and her anatomy lectures, I was mesmerized and I was not a scientist. I do not come from a science background. The fact that she could turn me on to being interested in hearing the minutia of anatomy, I thought, "I gotta at least meet this woman."

### What kind of questions did Dr. Marian Diamond ask?

**Ryan:** Part of what is so interesting is that Marian Diamond was always looking and asking questions that would result in people having a more enhanced possibility for life. She didn't do any work on pathology. Which is interesting. Most people who study anatomy and who are in neuroscience study disease. It's very important work, but it's so interesting that her questions weren't about disease. They were questions like, "Can our brain still grow when we are over 90 years old?" and "Are there differences between male and female brains?" and "What might those differences mean?" Questions about potential.

### What do you think the impact of the film is?

**Weimberg:** If you are empowered to understand your own brain, you're more of who you are. You are better able to deal with the world. You are so much improved in the quality of your life. We call it the Marian Diamond effect. You watch her for an hour and you really



» Dr. Marian Diamond

Courtesy of Luna Productions

can have your whole life changed for the better.

There's also an educational level. Marian is retired from teaching, but if this film can continue her teaching to tens of thousands more students, that's good for society. Marian has, more or less, created a significant part of a generation of doctors and scientists through her 60 years of teaching. That's an incredible achievement that I would hope, in some way, could go on forever.

### Documenting Marian Diamond means preserved brains laying around.

#### What's it like being around brains?

**Weimberg:** What you don't know is how stinky that brain in the hat box is. If you think it is gross visually, wait till you smell it. WHOOO - people leave the room! It's the formaldehyde.

Check out "My Love Affair with the Brain: The Life and Science of Dr. Marian Diamond" and other rad movies at the Durango Independent Film Festival. More info at <http://durangofilm.org>.

This interview has been edited and condensed for space and clarity.

Editor's note: *DGO* is an official sponsor of the 2017 Durango Independent Film Festival.

— **Patty Tompleton**  
*DGO Staff Writer*

MOVIE REVIEWS »

## DOXA 2016 review: My Love Affair with the Brain (USA)

by Lucy Lau on April 27th, 2016 at 4:36 PM



Dr. Marian Diamond keeps a preserved human brain in a delicate hatbox, eagerly uncovering the spongy organ for anyone who shows even the faintest of interest. And it is utterly fascinating.

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**NOW**

A revolutionary figure in modern neuroscience, Diamond is a rock star as seen through the lens of filmmakers Catherine Ryan and Gary Weimberg. Her groundbreaking studies are chronicled with care, offering a thoroughly inspiring crash-course in human anatomy that many academics still take for granted today.

But even more captivating than the research is the woman herself: a subject of undying curiosity, charm, and an infectious zeal—even in the face of rampant sexism—which makes the answer to her question, “Don’t you just love the brain?” —*ahem*—a no-brainer.



**SHOWTIMES** May 8, 6:30pm [The Cinematheque](#)





## Video

### New documentary focuses on neuroscience trailblazer Marian Diamond

JANUARY 11, 2016 | Author: AAAS MemberCentral/Becky Chris Spitzer



A woman places a colorful hatbox on a table and puts on rubber gloves. She carefully reaches inside and removes an unexpected object that she calls the "most magnificent structure on this earth—a human brain."

The woman is **Marian Diamond**, professor emerita at the University of California Berkeley, and the hatbox is typical of the way she mixes science with everyday life to engage people and spark interest in anatomy. A new documentary, *My Love Affair With The Brain*, tells the story of her remarkable career, which helped set the foundation for modern neuroscience, and which touched students across the globe.

Diamond's research began with an investigation into the relationship between brain structure and an individual's surroundings. She developed techniques that allowed precise measurements of changes in anatomy, and compared the brains of rats in enriched environments — cages filled with stimulating activities and rat social networks — to those in non-enriched environments. Her team's research showed that happy, active rats had 6% more brain material.

Anatomists had long thought that brain structure was static, so Diamond's finding was both revolutionary and controversial. Subsequent studies confirmed the result and expanded it to humans. Brain plasticity is now a central component of neuroscience.

In follow-up work, Diamond found that five specific areas contribute to a "better brain": good diet, exercise, solving challenging problems, fearless and learning, and love. Ignore these, and degradation of the brain's structure becomes a risk, Diamond says that when it comes to brain health, it's true: "Use it or lose it."

Diamond's pioneering efforts were not just in the research itself, but also in her role as a woman in the early days of neuroscience. She was the first woman awarded a Ph.D. in anatomy from Berkeley. In one episode in the film, she describes how a male colleague put her name in parentheses in the author line on a draft of a paper — not to diminish her work — simply because he was unsure if he needed to do something different for a female co-author. After a conversation with Diamond, he removed the parentheses and their productive collaboration continued.

Diamond has also become well known for her teaching. She developed an undergraduate anatomy course that became so popular among undergraduates that more than 60,000 students have taken it on campus — enough to fill Berkeley's Memorial Stadium. She achieved international science rock star status following the posting of her lecture series to YouTube in 2007. The lectures have reached more than 2 million people, and she regularly receives correspondence from fans worldwide.

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MemberCentral was given a sneak peek of the film and spoke with the filmmakers Catherine Ryan and Gary Weinberg of Luna Productions. The pair has been working on the documentary for five years.

Ryan says she had been looking for stories related to Berkeley, and initially discovered Diamond through the YouTube lectures. "I'm not a person who comes from science at all," she says. "Marian's passion for what she loves, what she's researched, and how she delivers it to other people was so powerful that I was just immediately engaged."

Even at age 85, Diamond "walks the walk" according to Ryan, and actively seeks new experiences to keep her brain active. Weinberg says that made her easy to work with. "If I would propose something to Marian that she had never done before, her default answer was, 'I haven't done that before, so yes, let's do it.' How marvelous," he says.

As part of the project, Ryan and Weinberg have also released a series of short web episodes — an experimental approach for them — aimed at engaging the audience that knows Diamond through YouTube. The range of responses they've received shows the breadth of people whose lives she has touched.

"It's been fascinating to start to take the measure of this community of people who love Marian or whose lives she has influenced," Weinberg says.

Ryan explains, "As people find out about this film, they've gotten in touch with us — former students, people who are doctors and researchers in the field — who talk about what an incredible role model she is."

This is Luna Productions' first foray into creating a film about science, but it is not likely to be the last. Weinberg says that science is fertile ground for meaningful storytelling.

"It's been a pleasure to blend the scientific with the personal, so that you come away knowing that scientists are people too, and have passions and ideas about how to make the world a better place," he says. "Our goal was to make a film that would be a powerful tool to encourage scientific literacy and spreading this role model for women and girls in STEM. I want anything we do as a film to serve a larger purpose."



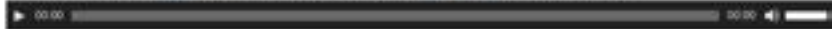
The film will be shown at the 2016 AAAS Annual Meeting in Washington, D.C. on Sunday, February 14 from 6:30 p.m. to 8:30 p.m. EST in the Diplomat Ballroom of the **Omni Shoreham Hotel**. [Register Here](#). Contact [rgass@aaas.org](mailto:rgass@aaas.org) for more details.



### Tune in to PBS for "My Love Affair with the Brain"

Estimote: 27, 2017 Leave a comment

To listen to this episode, [download](#) the mp3 directly, find us on [iTunes](#), or use the player below



Lab Out Loud's guest this week is Gary Weimberg, co-director of the PBS documentary "My Love Affair With The Brain: The Life and Science of Dr. Marian Diamond." Produced and released in collaboration with AAAS and Scientific American, and narrated by *The Big Bang Theory*'s Mayim Bialik, this upcoming documentary showcases the life and work of engaging professor, inquisitive learner and YouTube sensation Dr. Marian Diamond. Gary joins us to discuss the film, reveal how Dr. Diamond's work challenged assumptions in science and society, and share his beliefs in telling human



Lab Out Loud is a podcast, hosted by two science teachers, that discusses science news and science education by interviewing leading scientists, researchers, science writers and other important figures in the field.  
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Support for Lab Out Loud is provided by the National Science Teachers Association.



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