MONTEREY BAY AQUARIUM®

“The Jellies Experience”
Exhibit Press Kit

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NEWS RELEASE **FOR IMMEDIATE RELEASE**

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'THE JELLIES EXPERIENCE' SET TO IMMERSE VISITORS IN A WORLD OF MIND-BENDING BEAUTY

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New exhibition blends live exhibits of graceful drifters, unusual interactive activities

The magical world of jellies – graceful, dancing drifters that pulse and glow, flash colorful lights and often pack a powerful sting – comes alive in all its psychedelic glory at the Monterey Bay Aquarium when "The Jellies Experience" opens on March 31.

It's the newest special exhibition from an aquarium that pioneered the display of these delicate ocean animals, and will feature 16 species from around the world: from crystalline comb jellies that pulse like living rainbows to improbable flower-hat jellies with magenta and chartreuse highlights on transparent, pin-striped bodies; from elegant Japanese sea nettles to upside-down jellies; from a room that immerses visitors in a living moon jelly swarm, to exhibits of fluorescent jellies and Day-Glo corals.

As visitors encounter these amazing jellies, they'll plunge into a sensory extravaganza of experiences that highlight the intriguing lives of these unlikely animals – their graceful movements, beautiful symmetry, deceptive fragility and surprising survival skills.

Through those experiences, the aquarium hopes to inspire a deeper connection among visitors to protecting the ocean that supports jellies and so many other living creatures.

"When people can see for themselves the beauty and diversity of ocean life, they come away with a deeper appreciation for the importance of a healthy ocean to our own survival," said aquarium Executive Director Julie Packard. "I hope this new jellies exhibit will continue to inspire our visitors to see the connection and get involved as stewards of our ocean planet."

"The Jellies Experience" immerses visitors in a world of animals that have no heads, hearts, brains, bones or true eyes yet have survived for hundreds of millions of years and rank among the ocean's major predators.

It will bring visitors face-to face with species new to the aquarium, including elegant jellies, and past favorites like blubber jellies, Mediterranean jellies and crystal jellies. There will be occasional appearances by stunningly beautiful animals like the spotted comb jelly – found seasonally in Monterey Bay, exhibited only rarely, and only at the Monterey Bay
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Aquarium – and the potential for other new species, including thimble jellies (with golden gonads), Indonesian sea nettles, hairy jellies and crown jellies.

Each of the six exhibit galleries in "The Jellies Experience" engages visitors in ways that connect them with the many dimensions of jellies' lives.

In the "Ocean Dance" gallery, people will get a trio of "virtual" jellies to pulse with the rhythm that propels jellies in the water. In the "Radiant Nature" gallery, visitors can become part of a kaleidoscopic image – their bodies as symmetrical as the jellies around them.

Fiber-optic chandeliers create an environment where visitors can get a sense for how jellies sting and eat their prey in the "Delicate Danger" gallery. They'll learn about the many varieties of jellies found in the ocean in "Jelly Fantastic" – and can create electronic jellies of their own before launching them into a virtual aquarium populated with other people's creations.

The "Jellies Explosion" gallery features cylinders of moon jellies and mirrored walls to create the feeling of swimming through a massive jelly swarm – a condition occurring more frequently around the world in recent years, perhaps the result of global changes in the ocean. In the final gallery, "Light Show," people experience fluorescent, bioluminescent and iridescent jellies and corals – and will be able to trigger light shows by simulated jellies with the wave of an arm, or by passing through a walk-through comb jelly sculpture flashing with LED lights.

"Part of the challenge is creating hands-on experiences that complement the beauty of the incredible living animals in the exhibits," said Exhibit Designer Koen Liem. "The animals are the real stars, and the interactive elements help tell their story in ways our visitors have never seen before. The psychedelic theme is a new approach for us, and one that really fits the subject matter."

Monterey Bay Aquarium first introduced visitors to the beauty of jellies in 1992 with "Planet of the Jellies," a special exhibition that remains one of the most popular in aquarium history. Exhibit design innovations and new husbandry techniques developed for the exhibit launched the jellies exhibit boom in the United States. They also provided the basis for the aquarium's award-winning permanent jellies exhibits that opened in 1996 as part of the Open Sea wing, and for the award-winning special exhibition "Jellies: Living Art" that opened in April 2002.

"People have an endless fascination with jellies," said Exhibit Developer Eileen Campbell. "I think they'll really enjoy this jellies experience. It'll be both fantastic and enlightening."

"The Jellies Experience" is included with aquarium admission – $34.95 adult; $29.95 senior (over 65) and student (full-time college, with I.D.); $19.95 children and the disabled; under 3 free (**2012 prices; subject to change**).

The aquarium is located on historic Cannery Row in Monterey and is open daily except Christmas Day. Hours of operation vary by season. Daily schedules are available online at www.montereybayaquarium.org or by calling (831) 648-4800.

More information on aquarium exhibits and programs is available online at www.montereybayaquarium.org or by calling (831) 648-4800. Advance tickets can be purchased online or toll-free by phone from the aquarium at (866) 963-9645. Seasonal specials, details about special events and programs, family activities and live web cams can all be found online at www.montereybayaquarium.org.

The mission of the Monterey Bay Aquarium is to inspire conservation of the oceans.

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Editors: Please contact Public Relations for images or video footage of animals featured in "The Jellies Experience."

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"The Jellies Experience"
Exhibit Facts

What:	A $3.5 million special exhibition that takes visitors into the magical world of jellies – graceful, dancing drifters that pulse and glow, flash colorful lights and often pack a powerful sting – in the blend of compelling live exhibits and engaging interactive experiences that are the hallmark of exhibits at the Monterey Bay Aquarium. "The Jellies Experience" opens on March 31, 2012.
Where:	Monterey Bay Aquarium, 886 Cannery Row, Monterey, California.
When:	March 31, 2012 through September 2014; seasonal hours - 10 a.m. to 6 p.m. daily (closed December 25); 9:30 a.m. to 6 p.m. during major holiday periods and summer months; extended summer weekend hours on Saturdays and Sundays, from 9:30 a.m. to 8 p.m. (Fourth of July through Labor Day)
The exhibit:	A 7,000-square-foot exhibition with exhibits featuring 16 species of jellies and corals. The exhibition tells the story of delicate ocean drifters and the adaptations that have allowed these simple ocean animals to thrive for hundreds of millions of years. Each of the six exhibit galleries immerses visitors in a different dimension of jellies' lives, by combining live displays with immersive experiences and hands-on activities created by the aquarium's award-winning team of exhibit designers and developers.
What's unique:	Includes species never before exhibited at the aquarium that pioneered the display of jellyfish in the United States, including elegant jellies, as well as visitor favorites like comb jellies, flower hat jellies and blubber jellies; plus occasional display of beautiful but uncommon species like the spotted comb jelly. Offers psychedelic-themed interactive experiences: Visitors can, with a wave of their arm, spark fluorescent displays of jellies and corals; create a digital jellyfish and launch it into a virtual ocean with creations made by other visitors; prompt digital jellies to "dance" with them; become part of a kaleidoscopic image – their bodies as symmetrical as the jellies around them; and pass through a room with mirrored walls and cylinders of jellies that creates the experience of being amid a jelly swarm.
Admission:	Included with Aquarium admission: $32.95 adult; $29.95 senior (over 65) and student (13–17 or with college ID); $19.95 child (3–12) and disabled (**2012 rates**). Children under 3 are admitted free. Group rates are available with advance booking for parties of 20 or more.
Parking/ Shuttle service:	Parking in Cannery Row parking garage three blocks away. (Passenger drop-off in front of Aquarium.) Free MST trolley service links the Aquarium with downtown Monterey, Pacific Grove and waterfront destinations daily during peak summer season (Memorial Day to Labor Day).
Information/ Advance tickets:	General information is available at www.montereybayaquarium.org or (831) 648-4800. Advance tickets are available online at www.montereybayaquarium.org or by calling (866) 963-9645. There is no service charge to print tickets at home or to pick them up on arrival. There is a small fee to receive tickets by mail. Local hotels also sell two-day tickets (at one-day prices) to their guests.

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“The Jellies Experience”

Gallery Tour and Species Highlights

“The Jellies Experience” is a sensory extravaganza of live exhibits and interactive experiences that highlight the intriguing lives of these unlikely animals – their graceful movements, beautiful symmetry, deceptive fragility and surprising survival skills. It brings visitors face-to face with species new to the Monterey Bay Aquarium, including elegant jellies, and past favorites like blubber jellies, flower hat jellies, upside-down jellies, crystal jellies and sea nettles.

Ocean Dance Gallery

Jellies dance through the water with grace and beauty, pulsing and drifting with the currents. Each species moves to its own rhythm, depending on its size and shape. Visitors explore the locomotion of jellies in this gallery, and can make virtual giant jellies pulse and swim in an interactive display.

Japanese sea nettle
Chrysaora pacifica
This classic jelly sports some distinguishing characteristics – 16 brownish-orange stripes on its bell, eight stomach pouches and tentacles that can stretch 10 feet or more. Those extra-long tentacles not only provide greater protection from predators, but also increase its ability to hunt prey across longer distances. It is native to the Pacific Ocean off Japan.

Radiant Nature Gallery

Jellies’ simple, symmetrical bodies form entrancing designs and make them exceptionally successful at sea. In this gallery visitors explore why radial symmetry makes jellies effective. An interactive exhibit transforms live video of visitors into symmetrical kaleidoscopic images.

Upside-down jelly
Cassiopea sp.
In its infancy this jelly flips upside down and settles on the bottom with others of its kind; you rarely see this jelly alone. It has eight thick oral arms (or mouth arms) instead of tentacles, but both function the same. It hosts symbiotic algae, zooxanthellae, which give it a brownish tint and produce food by photosynthesis. Its habitat is shallow lagoons and mangrove forests – both threatened ecosystems – in the Indo-Pacific, the Caribbean and Hawaii.

Spotted jelly
Mastigias papua
This species is also known as a “lagoon jelly” because it lives in bays, harbors and lagoons in the South Pacific. It travels upward during the day to absorb sunlight, then back down again at night. It also hosts symbiotic algae, zooxanthellae, living within its tissue. Its high, rounded bell can grow to about six inches in diameter and is covered with white spots. It also has four frilly “mouth arms” and longer, club-shaped structures hanging beneath whose purpose is unknown. Some of the larger spotted jellies actually have small fishes living with them. The fishes use the inside of the jelly’s bell as protection from larger predators until they mature.

Delicate Danger Gallery

Jellies' delicate tentacles may appear fragile, but they cast a deadly net for both food and foe. The slightest contact triggers a scary sting that's painful to humans, too. Visitors to this gallery can read "stinging stories" in an oversized comic book illustrated in the "underground" style popular in the late 1960s and early 1970s.

Atlantic sea nettle
Chrysaora quinquecirrha
Another classic jelly, this species is widely found in tepid waters along the coasts of the western north Atlantic. Its bell can grow to about 10 inches in diameter, but its many trailing tentacles – typically 40 in an adult – can reach an amazing 150 inches long. Most of these jellies are semi-transparent, in colors ranging from opaque white to light brown; some also have small white dots and reddish-brown stripes.

Jelly Fantastic Gallery

Jellies flaunt a variety of shapes, sizes, colors and patterns that vary with the lives they lead. In this gallery visitors visually sample a wide variety of jellies through incredible images, models and several live exhibits. They can then design their own jelly on one of five touch screen stations before sending it to join other visitor creations in a virtual ocean.

Flower hat jelly
Olindias formosa
This gorgeous jelly is found only in waters off Japan at certain times of the year. Brilliant, multi-colored tentacles drop down from its translucent, pinstriped bell. The tips of these tentacles are fluorescent, acting as tiny lures to entice prey. Other tentacles trailing under its bell quickly coil and uncoil when capturing prey. This small jelly (up to about six inches in diameter) is often seen resting on the seafloor.

Cross jelly
Mitrocoma cellularia
This jelly is commonly seen in Monterey Bay during spring and summer, sometimes in large numbers. It lives in Pacific nearshore waters from Alaska south to central California. It is transparent except for four white canals on its bell that form an obvious "X" pattern. The lip of the bell, which can grow to just under four inches wide, is rimmed with hundreds of fine white tentacles and is bioluminescent. Studies suggest that cross jellies can "smell" food by sensing chemicals in the water that indicate prey. This might be why cross jellies are often seen in large groups around concentrations of prey.

Umbrella jelly
Eutonina indicans
This inconspicuous jelly – with a transparent bell and relatively small size (1.5 inches maximum) – is easily overlooked. Four radial canals, each with attached gonads, form a distinctive pattern on its bell, which is lined with about 200 short, fine tentacles. Its mouth has four frilly lips that hang below the bell on a conical stem, which swings to capture a meal. This jelly prefers very cold water, and although relatively uncommon in Monterey Bay, it sometimes occurs in dense swarms just off Washington's San Juan Islands and Canada's Vancouver Island.

Deep-sea jelly
Ptychogena sp.
This transparent jelly is visible mostly by broad white gonads that stretch across the top of its bell in an elongated cross pattern. Up to 500 very fine but crimped tentacles sprout from small nodules that line the bell margin, and trail downward like spider silk in search of prey. It inhabits waters between the Bering Sea and southern California. Sharp-eyed

boaters occasionally see this deepwater jelly at the surface, although its natural habitat is between 164 feet to over 3,800 feet below the surface.

Blubber jelly
Catostylus mosaicus
Also known as the blue jelly, this species is most commonly found in coastal lagoons off eastern Australia, often in large swarms. Its color ranges from white to a brilliant blue to a deep burgundy. Its bell, which can grow up to 18 inches in diameter, pulses in staccato-like bursts. Instead of tentacles, this jelly has eight lacy oral arms that each contain several small mouths.

Minus its tentacles, and dried and salted, the blubber jelly is considered a delicacy in Asian markets, and is the main ingredient in a "rubber-band salad."

Jellies Explosion! Gallery

All jellies go through different stages in their unusual, and highly adaptable, lifestyles**.** Jellies sometime appear in large groups, also known as a swarm or smack, due to a mysterious stage in their lifecycle. These large groups may also be prompted by effects of our changing climate. This gallery takes visitors through a space-age swarm of living moon jellies created by transporter-like exhibits and mirrored walls.

Moon jelly
Aurelia sp.
This jelly is named after its moon-like bell, which can grow up to 15 inches in diameter and is usually a translucent milky white, although it may be tinted pink or lavender. Instead of long, trailing tentacles, these jellies have a short, fine fringe that helps funnel food – trapped by mucus on the bell – into its mouth and four clearly visible stomach pouches. Moon jellies are common in Monterey Bay and along the California coast, and in waters off the East Coast, Europe, Japan and in the Gulf of Mexico.

Moon jelly polyps and ephyrae (baby jellies) went into orbit aboard the space shuttle *Columbia* in May 1991. They were part of a study on the effects of weightlessness on development of internal organs in juvenile jellies.

Light Show Gallery

Some jellies glow like nature's original black-light posters, while others diffract white light into all the colors of the rainbow. Exhibits in this gallery interpret three different types of "lights" in jellies – fluorescence, bioluminescence and diffraction. Live exhibits include both jellies and corals. Visitors to this gallery can walk through a model of a shimmering comb jelly, and discover bioluminescent plankton and jellies in a virtual underwater habitat.

Elegant jelly
Tima sp.
Appropriately named, this tiny, attractive jelly is a relative of the umbrella jelly. Four long, frilled oral lobes arc nicely under its translucent bell above long, trailing tentacles. It is found in relatively deep waters (200 to 300 feet) from the Arctic to Cape Hatteras, usually close to shore. Biologists know little else about this jelly except that it feeds on plankton. In *The Jellies Experience* dark blue lights above this exhibit makes this jelly glow fluorescent green.

Candy cane coral
Caulastrea furcata
This colorful species has circular brownish-green polyps with neon-green centers that glow under dark blue lights. Hard ridges of tissue inside the polyps, called septa, give it a striped appearance resembling a peppermint. This low-growing coral is native to tropical

reefs in the Indo-West Pacific, where it has been found in colonies up to 16 feet long. It is a hardy and relatively peaceful resident, sending out tentacles at night to capture prey.

Plate coral
Fungia sp.
Fungia, or plate corals, consist of one large (up to a foot) polyp and usually a single mouth. This Indo-Pacific species is one of the most colorful corals around. Found in shades of purple, green and red, some with markings of blue, pink, orange, yellow or brown, it is even more stunning when seen under blue light. This solitary, free-standing coral can actually move – up to a foot a day – by asymmetrically inflating and deflating its tissues and "walk" through this peristaltic-like movement. It can be aggressive toward other corals and use its mucous net as a weapon, which contains strong toxins that cause necrosis.

Button polyps
Zoanthus sp.
This attractive coral comes in a variety of colors including green, pink, brown and orange, and glows brightly under special lights. Like a field of tiny flowers, button polyps are often seen along shorelines, growing on stones and coral rubble, as well as beneath sea grasses in shallow tide pools. While each polyp is only about a half-inch in diameter, individual colonies can reach about 6 inches wide. Several colonies together may form a dense carpet covering areas of several square feet. Some species of these innocently-named corals will sting neighboring corals with a deadly toxin in its mucus.

Brain Coral
Trachyphyllia sp.
This distinctive coral looks like a brain, but may also be found in a flattened, folded or figure-eight shape. Usually colored green with bits of red, under blue lighting it glows green and orange. It has a hard skeleton covered with fleshy tissues that expand and makes it look much larger than its actual size. It has stinging tentacles and will use them on unwelcome neighbors if it has the chance. This coral is common in the Indo-Pacific where it is typically found attached to shells or other dead corals.

Warty Comb Jelly
Mnemiopsis leidyi
This little spaceship of a jelly is actually a ctenophore, or comb jelly. Eight ciliated comb rows along its transparent, lobed body diffract white light and make it look as if it were powered by rainbows. It may also produce bright-green luminescent flashes when disturbed. It has several feeding tentacles and preys on other jellies (even its own kind), and fish eggs and larvae. A small jelly, it grows to about 5 inches long and about an inch in diameter. The warty comb jelly, originally native to the western Atlantic Ocean, is hermaphroditic and can reproduce all by itself.

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"The Jellies Experience"
Fun Facts

- Jellies have been on Earth for over 650 million years—before sharks and even dinosaurs. Scientists have found impressions of jellies embedded in stone millions of years old. So many were found from the Ediacaran Era (570 million years ago) that it's referred to as the "Age of Jellyfish."

- Jellies have no head, heart, brain, bones, cartilage, or real eyes. Yet they're among the major predators in the ocean, the largest habitat on Earth. Their tentacles carry stinging cells that are among the most complicated found anywhere in the animal kingdom.

- A group of jellies is called a swarm or a smack.

- Where there's a *Will*, there's a way. The aquarium's jelly collection got a shout out in the 1999 feature film "Seven Pounds" featuring Will Smith. Smith's character had an intriguing encounter with a box jelly while visiting the Monterey Bay Aquarium as a child. In reality the aquarium does not currently display box jellies.

- A colony of polyps—part of the jelly life cycle—can create thousands of baby jellies in just a few days.

- Jellies belong to the phylum, or group of animals, known as Cnidaria (ny-daria), which means "stinging thread." Scientists call the adult form of jellies "medusae" after the mythological Medusa, a dangerous snake-haired woman whose horrifying looks paralyzed humans on sight, changing them into stone.

- Using a fluorescent protein from the crystal jelly (*Aequorea victoria*), French scientists in 2000 created a rabbit named Alba that glowed green under ultraviolet light. The scientists modified the gene to double its glowing properties.

- Fluorescent jelly genes have also been used to tag certain genes or proteins. When the protein is active, scientists can detect its fluorescence under a black light. Scientists use this process to gauge the effectiveness of potential drugs on the body without using surgery.

- Jellies emit three different types of "lights" – fluorescence, bioluminescence and diffraction. Fluorescence occurs when blue wavelengths excite fluorescent pigments in certain species, causing them to give off light energy.

- 90% of deep-sea marine life is estimated to produce bioluminescence in one form or another. Most marine light emission falls in the blue and green light spectrum, the colors that transmit through seawater most easily. An interactive wall in the "Light Show" gallery teaches visitors about this production and emission of light by living organisms.

- Diffraction on display: Comb jellies have eight rows of tiny comb-like plates they beat to move themselves through water. As they swim, the comb rows diffract light to produce a shimmering, rainbow effect.

- Jellies are 95 percent water. Humans are 65 percent water.

- A jelly swarm and a jelly bloom are two different things. A swarm occurs when strong winds or currents bring large groups of jellies together. Swarms of by-the-wind sailors (*Velella velella*) are sometimes so large and closely packed that they've been mistaken for oil spills. A bloom is the result of increased reproductive activity, possibly caused by plankton blooms that could indicate an ecosystem out of balance.

- Some jellies migrate long distances in search of food. Some travel up to 3,600 feet a day, which is the equivalent of a person walking 33 miles.

- A jelly can grow or shrink according to the available food supply. If the cupboard is bare, jellies can "de-grow," shrinking in size so they need less food. They can re-grow again when food is more plentiful.

- Jellies are a main food source for sea turtles and ocean sunfish, and they're also eaten by sea birds and many other fishes. Unfortunately, so are inedible jelly look-alikes—plastic bags and other plastic trash. Thousands of jelly eaters die each year when they swallow indigestible wads of plastic.

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