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Reviewer Acknowledgments

Cover Legend: The First Manned Flight, Paris, November 21, 1783, colored engraving, artist unidentified. The brothers Montgolfier, Joseph-Michel (1740–1810) and Jacques-Étienne (1745–1799), invented the hot air balloon, based on their theory that smoke contained a special gas with a special property called levity. This was no laughing matter. The Montgolfiers’ theory led to the first manned flight in history. A year-long series of trial balloons preceded the event: a makeshift envelope of sackcloth and paper held together by 2000 buttons was hoisted in Annonay (the brothers’ home town) on June 4, 1783; a repeat performance on June 11 in Paris; the introduction of the first living creatures to a flight at Versailles on August 19 in the presence of King Louis XVI and Queen Marie Antoinette. Louis had proposed using two criminals for the flight but was overruled by the Montgolfiers who substituted a sheep, a duck and a rooster. Finally, on November 21 at the Château de Muette on the outskirts of Paris, the first untethered manned flight took place, carrying Jean-François Pilâtre de Rozier, a physicist, and the Marquis d’Arlandes, an army officer. This event is the subject of our cover illustration. The balloon, 75 feet tall-50 feet in diameter, was enveloped in taffeta coated with varnish, created by the famous wallpaper firm of Jean-Baptiste Révillon. It is decorated with Fleur-de-lis, signs of the Zodiac, golden suns with the face of Louis XVI interlaced with the royal monogram, red and blue drapery and gilded eagles at the base. The flight created a national sensation but was soon superceded by the first female flight in history. A year-to-the-day of the first trial balloon, June 4, 1784, Elizabeth Thible made aeronautical history. She flew with a co-pilot, Monsieur Fleurant, in a hot air balloon christened “La Gustave” in honor of King Gustav III of Sweden, who was in Lyon for lift-off. Thible is credited with feeding the fire-box and maneuvering the bumpy landing. Balloonomania swept France. Simon Schama reports a witticism of the time: “the invention of M. de Montgolfier has given such a shock to the French that it has restored vigor to the aged, imagination to the peasants and constancy to our women.”

From Montgolfier to the Moon, manned flight has raised problems for aeronauts and astronauts alike: in this issue the International Space Station reports that immune regulation may be compromised by apoptosis of lymphocytes within 48 hours of microgravity. Image courtesy of Betteman/Corbis; text by Ann Weissmann, fine arts editor.