

1. Leprosy has been feared since ancient times.
2. This infectious disease attacks the nerves and can cause blindness and the loss of
3. feeling in the hands and feet.
4. Leprosy was widely considered to be an inherited disease until 1873, when
5. Norwegian researcher G.A. Hansen identified the bacterium responsible for it:
6. *Mycobacterium leprae*.
7. His discovery laid the foundation for scientific research into the disease and the
8. development of a treatment for humans.
9. Initial attempts to cultivate *M. leprae* in the laboratory, however, only yielded
10. small amounts, which prevented any useful research from being carried out.

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21. Because the body temperature of the nine-banded armadillo is lower than that of
22. humans, she thought they would be a good breeding ground for the bacterium.
23. Furthermore, nine-banded armadillos give birth to four genetically identical
24. young, a fact Storrs knew would be useful when conducting experiments to
25. compare the condition of diseased and healthy animals.

Further Questions & Sample Answers

26. **3) Why were the bodies of armadillos a good breeding ground for bacterium?**
27. *It was a good breeding ground because their body temperatures are lower than*
28. *that of humans.*
29. **4) What's unusual about the young of nine-banded armadillo?**
30. *They give birth to four genetically identical young.*

31. Storrs found that nine-banded armadillos injected with *M. leprae* developed
32. infection resulting in large numbers of the bacterium.
33. Over the next 25 years, researchers studied bacteria taken from infected
34. nine-banded armadillos to learn more about leprosy.
35. A major breakthrough eventually came when a substance called lepromin was
36. produced.
37. When injected, lepromin causes a skin reaction in those infected with *M. leprae*.
38. If diagnosed in this way at an early stage, leprosy is now curable with long-term
39. treatment using a combination of antibiotics.

Further Questions & Sample Answers

40. 5) What happened when the nine-banded armadillo were injected with *M.*
41. *leprae*?
42. They developed an infection resulting in large numbers of the bacterium.

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53. 8) Why can't many of the people infected each year be diagnosed and receive
54. medication?
55. They live in poor and difficult-to-reach areas of the world.

56. *Choose the correct answer from these choices. 

57. (32) What was G.A. Hansen's contribution to the fight against leprosy?
58. 1. He made it possible to test treatments for leprosy by growing large amounts of
59. *M. leprae* in the lab.
60. 2. He developed a way to reduce the severity of nerve damage in leprosy sufferers.
61. 3. He discovered that leprosy was actually an acquired disease caused by one
62. specific bacterium.
63. 4. He reduced the public's fear of leprosy by showing the disease was, in fact, not
64. usually infectious.

65. (33) One reason nine-banded armadillos proved useful in leprosy research was that
66. 1. the high rate at which they contracted leprosy in the wild provided researchers with a large study sample.
 67. 2. the young of the armadillos infected with *M. leprae* demonstrated a natural immunity to the disease.
 68. 3. their symptoms develop more slowly than in humans, which allowed the researchers to perform long-term experiments.
 69. 4. they could be used as a means to grow *M. leprae* because of their relatively cool body temperature.
70. (34) What is one thing the author of the passage says about the current state of
71. leprosy?
 72. 1. Leprosy sufferers in certain places are unable to receive treatment due to
 73. limited access to medical care.
 74. 2. Leprosy is particularly difficult to control in areas with large populations of

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87. *that of humans.*
88. 4 What's unusual about the young of nine-banded armadillo?
89. *They give birth to four genetically identical young.*
90. 5 What happened when the nine-banded armadillo were injected with *M. leprae*?
91. *They developed an infection resulting in large numbers of the bacterium.*
92. 6 What was the result of 25 years of study of bacteria taken from the armadillo?
93. *A substance called lepromin was produced.*
94. 7 What has happened thanks to the development of easy diagnosis methods?
95. *The cases of leprosy worldwide have dropped dramatically.*
96. 8 Why can't many of the people infected each year be diagnosed and receive medication?
97. *They live in poor and difficult-to-reach areas of the world.*

- ハンセン病 (びょう) 古代 (こだい) の 伝染病 (でんせんびょう)
99. Leprosy has been feared since ancient times. This infectious disease
- 冒 (おか) す 神経 (しんけい) 引 (ひ) き起 (お) こす 盲目 (もうもく) の 喪失 (そうしつ)
100. attacks the nerves and can cause blindness and the loss of
- 感覚 (かんかく)
101. feeling in the hands and feet.
- 遺伝性疾患 (いでんせいしっかん)
102. Leprosy was widely considered to be an inherited disease until 1873, when
- ノルウェー人 (じん) 研究者 (けんきゅうしゃ) 細菌 (さいきん) ~の原因 (げんいん) である
103. Norwegian researcher G.A. Hansen identified the bacterium responsible for
- マイコバクテリウム・レプレ、らい菌
104. it: *Mycobacterium leprae*.
- 据 (す) える 基礎 (きそ)
105. His discovery laid the foundation for scientific research into the disease
- 開発 (かいぱつ) 治療法 (ちりょうほう)
106. and the development of a treatment for humans.
- 最初 (さいしよ) の 試 (こころ) み 改良 (かいいりょう) する 実験室 (じっけんしつ)

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113. In the late 1900s, an American biochemist named Eleanor Smith tried
- 培養 (ばいよう) すること コクノオビアルマジロ 哺乳動物 (ほにゅうどうぶつ)
114. cultivating *M. leprae* in the nine banded armadillo, a mammal
115. common in the southern United States.
- 勢 (いきお) いよく成長 (せいちょう) する
116. She knew that in humans, *M. leprae* thrives in cooler
- 末端 (まつたん)
117. extremities such as toes and fingers.
- 体温 (たいおん)
118. Because the body temperature of the nine-banded armadillo is lower than that
- 温床 (おんしょう)
119. of humans, she thought they would be a good breeding ground for the
- さらに ~を生 (う) み出 (だ) す
120. bacterium. Furthermore, nine-banded armadillos give birth to four
- 遺伝子的 (いでんしてき) に 同一 (どういつ) の
121. genetically identical young, a fact Storrs knew would be useful when
- 行 (おこな) うこと 実験 (じっけん) 病気 (びょうき) の
122. conducting experiments to compare the condition of diseased and healthy
123. animals.

Further Questions& Sample answers 

124. 3) Why were the bodies of armadillos a good breeding ground for bacterium?

125. アルマジロの体はなぜ細菌の温床となりましたか。

126. It was a good breeding ground because their body temperatures are lower than that of humans.

128. 4) What's unusual about the young of nine-banded armadillo?

129. 若いココノオビアルマジロはどんな点が珍しいですか。

130. They give birth to four genetically identical young.

131. Storrs found that nine-banded armadillos injected with *M. leprae*

132. developed infection resulting in large numbers of the bacterium. Over the

133. next 25 years, researchers studied bacteria taken from infected

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143. armadillo?

144. 25年にわたるアルマジロから採取された細菌の研究結果は何でしたか。

145. A substance called lepromin was produced.

146. Thanks to the development of easy diagnosis methods and effective treatment,

147. cases of leprosy worldwide have dropped dramatically. Unfortunately, many of

148. the 200,000 or so people who still become infected each year fail to be

149. diagnosed and receive medication before the disease causes permanent

150. damage because they live in poor and difficult-to-reach areas of the world.

 Further Questions& Sample answers

151. 7) What has happened thanks to the development of easy diagnosis methods?

152. 簡易な診断法の開発により、どうなっていますか。

153. The cases of leprosy worldwide have dropped dramatically.

154. 8) Why can't many of the people infected each year be diagnosed and receive medication?

155. なぜ各年の感染者の多数は診断されず、薬物治療も受けられないのですか。

156. They live in poor and difficult-to-reach areas of the world.

157. *Choose the correct answer from these choices.



158. (32) What was G.A. Hansen's contribution to the fight against leprosy?

159. ハンセン病と戦う G.A.ハンセンはどんな貢献をしましたか。

160. 1. He made it possible to test treatments for leprosy by growing large amounts

161. of *M. leprae* in the lab .

162. 2. He developed a way to reduce the severity of nerve damage in

163. leprosy sufferers .

164. 3. He discovered that leprosy was actually an acquired disease caused

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175. 3. their symptoms develop more slowly than in humans, which allowed the researchers to perform long-term experiments.

176. 4. they could be used as a means to grow *M. leprae* because of their relatively

177. cool body temperature.

178. (34) What is one thing the author of the passage says about the current state of leprosy?

179. 1. Leprosy sufferers in certain places are unable to receive treatment

180. due to limited access to medical care.

181. 2. Leprosy is particularly difficult to control in areas with large populations of nine-banded armadillos.

182. 3. The treatment that has proven most effective is difficult to manufacture

183. in large quantities.

187. ^{注射 (ちゅうしゃ)} 4. Lepromin injections are no longer considered a ^{实际的 (じっさいてき) な} practical way to ^{治療 (ちりょう) する} treat ^{発展途上国 (はってんとじょうこく)} leprosy in developing countries.

189. Review Questions



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190. 1) What symptoms are caused by Leprosy?
 191. *It can cause blindness and the loss of feeling in the hands and feet.*
192. 2) What did G.A. Hansen identify in 1873?
 193. *He identified the bacteria responsible for leprosy.*
194. 3) Why were the bodies of armadillos a good breeding ground for bacterium?
 195. *It was a good breeding ground because their body temperatures are lower than*
 196. *that of humans.*
197. 4) What's unusual about the young of nine-banded armadillo?

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207. *The cases of leprosy worldwide have dropped dramatically.*
208. 8) Why can't many of the people infected each year be diagnosed and receive
 209. medication?
 210. *They live in poor and difficult-to-reach areas of the world.*
 211. 解答: (32) 3 (33) 4 (34) 1



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