

## Passage 1

### Lifeline in Peril

The future of at least four children with a rare but deadly genetic disorder has been thrown into uncertainty.

The lives of the children, who have Pompe's disease, depend on an experimental enzyme obtained from the milk of genetically engineered rabbits. But the companies involved have decided to try to make it using cultured cells<sup>1</sup> instead.

Pompe's disease destroys muscles. Infants born with it are never able to roll over or even sit up, and usually die within a year. The disease is caused by lack of the enzyme alpha-glucosidase, which converts stored glycogen into glucose.

In 1995, Ans van der Ploeg of the University Hospital Rotterdam in the Netherlands and her colleagues managed to produce this enzyme using modified Chinese hamster ovary (CHO) cells. But they could not find any companies to help them make it this way. Eventually, Pharming of Leiden agreed to help them produce the enzyme in transgenic rabbits.

In clinical trials, two children who began receiving the enzyme when they were as young as two-and-a-half months have shown a vast improvement.

One child can sit up on her own. The other can walk and even ride a tricycle. Two children who began treatment later are dependent on respirators, but they can sit up and grab at things with their hands.

"we, and in particular the parents and the families, have experienced great joy," says van der Ploeg. Twenty infants who did not receive the enzyme all died.

Now Pharming and its partner Genzyme have decided to abandon transgenic production in favor of CHO cells. They believe this is the quickest way to get a treatment to market, because there will be fewer regulatory hurdles.

But van der Ploeg is worried. "What if the process fails?"<sup>2</sup> she asks. "I am called almost daily by parents who are in despair."

Rick Moscicki, Genzyme's chief medical officer, says there's no need for concern. "Genzyme is committed to ensuring that these patients will be treated and cared for." There will not be a treatment gap, he says.

Moscicki says that a researcher at Duke University has produced the protein using CHO cells and successfully treated three infants with it. "If CHO didn't work, then we would seek a program that would work," he adds.

But van der Ploeg says the enzyme produced from milk and the one from Duke are slightly different. She thinks both production methods should be pursued simultaneously. Moscicki says the companies don't have the resources to do this.

#### Vocabulary

genetic *a.* 遗传的

enzyme *n.* 酶

alpha-glucosidase *n.*  $\alpha$ - 葡糖苷酶

glycogen *n.* 糖原

transgenic *a.* 转基因的  
respirator *n.* 呼吸器  
hurdle *n.* 障碍  
simultaneously *a.* 同时地

### Reading Comprehension

**Directions:** *There are four suggested answers to each of the following questions. Choose the best one according to the passage you have just read.*

1. The future of the four children with Pompe's disease became uncertain because
  - A. their parents didn't have enough resources to support their treatment.
  - B. their conditions have not been improved in any way.
  - C. their lives were threatened by an experiment.
  - D. their treatment would be changed.
  
2. Pompe's disease can cause all the following except
  - A. lack of the enzyme alpha-glucosidase
  - B. inability to roll over.
  - C. inability to sit up.
  - D. death.
  
3. Pharming and Genzyme favored CHO cells rather than transgenic production because in their belief
  - A. CHO cells are more effective.
  - B. CHO cells have larger market.
  - C. CHO cells takes action more quickly.
  - D. CHO cells can be put to market more easily.
  
4. Moscicki mentioned the researcher at Duke University in order to
  - A. prove that CHO cells are promising.
  - B. persuade van der Ploeg to shift to CHO cells.
  - C. tell people that CHO cells have been very successful.
  - D. show the latest development in the study on CHO cells.
  
5. The author's attitude toward the decision of Pharming and Genzyme can be described as
  - A. worried.
  - B. objective.
  - C. indignant.
  - D. uncertain.

## Passage 2

### Anonymity

Anonymity has its virtues. Think of the friend who performs a thoughtful deed in secret, or the benefactor who insists that his name not appear on the building he funded.

But anonymity also comes with a darker side. Just ask the children who can't identify one parent, either because their biological father was a nameless donor at a sperm bank or because their genetic mother donated an egg to a surrogate-parenting program. For these offspring, the haunting question, "Who is my parent?" produces another anguished query: "Who am I?"

"Reproductive foundlings" is the phrase one British woman uses for those like herself whose donor fathers remain unknown.

So serious is the issue that three weeks from today, on Nov. 18, a children's charity in Britain, Barnardo's will hold a seminar in London to discuss the implications of donor-assisted pregnancies. Its title- "Are we just creating children for parents? Are we ignoring the child's identity and genetic needs?" Tessa Jowell, the British health minister, wants a position paper by Christmas, outlining the pros and cons of ending donors' rights to anonymity.

The debate is long overdue. In Britain, about 2,000 births result from donor-assisted pregnancies each year. In the United States, estimates put the figure above 30,000, but in an unregulated industry, no one knows for sure.

Donor identity also ranks as a fledgling issue in the US. One sperm bank in California, founded in 1983, is looking ahead to 2001, when the first babies born from its services will come of age and perhaps begin seeking information about their fathers. The facility has formed an "identity-release task force" to create guidelines so the experience will "be respectful for all involved." It claims it is the first sperm bank in the world to be doing this.

Selecting a potential father can be alarmingly simple—as easy as logging onto the internet and scrolling through listings of sperm donors. One sample description; "Caucasian / Irish, German, Slavic, fair skin, blond wavy hair, blue eyes, 5-ft. 11 in 168 pounds, O positive blood type." Yet only 21 of the 44 donors listed on this Web page are willing to have their identity released.

No one can minimize or trivialize the deep yearning for a child and the desire to create a family by any means necessary. Yet reproductive technology represents a slippery slope. Caught up in the "miracle" of being able to produce babies who otherwise would not have been born, well-meaning fertility specialists sometimes appear to forget that what is medically possible may not always be ethically wise.

The genie is out of the bottle. For better or worse, surrogate parenting is here to stay. The only prudent solution lies in carefully regulating every phase.

In the same way that adoption, once shrouded in secrecy, is becoming an open subject, surrogate arrangements must become more honest. Individuals are entitled to know their true background-knowledge that, when lovingly conveyed, need not diminish their relationship with the parents who raise them.

## Vocabulary

- anonymity *n.* 匿名  
benefactor *n.* 捐助者, 施主  
surrogate *adj.* 替代的  
anguish *n.* 极度的痛苦  
foundling *n.* 弃儿, 育婴堂  
trivialize *vt.* 轻视  
genie *n.* 神怪, 妖怪

## Reading Comprehension

**Directions:** *There are four suggested answers to each of the following questions. Choose the best one according to the passage you have just read.*

1. According to the passage, one of the greatest concerns of the “reproductive foundlings” is \_\_\_\_\_.
  - A. to remain anonymous
  - B. to establish their genetic identity
  - C. to perform thoughtful deeds in secret
  - D. to avoid being haunted by their anonymity
2. In her coming paper, Tessa Jowell may argue for \_\_\_\_\_.
  - A. the donors’ rights of anonymity
  - B. a legal ban on donor-assisted pregnancies.
  - C. a nation-wide debate on the issue of anonymity.
  - D. the genetic identity and needs of the “reproductive foundlings”
3. Which of the following is NOT true according to the passage?
  - A. Not all the donor parents are prepared to release their identity.
  - B. Reproductive technology is against moral ethics and should be banned.
  - C. It is understandable that people would try any means possible to create a family.
  - D. Adopted children and test-tube children are facing the similar issue of anonymous parents.
4. By saying “The genie is out of the bottle.” (para.9), the author implies \_\_\_\_\_.
  - A. that reproductive foundlings are conceived in vitro.
  - B. that sperm or egg donors have been out of control.
  - C. that surrogate arrangements need strict regulations.
  - D. that application of reproduction technology has been a fact.
5. Which of the following best expresses the main idea of the passage?
  - A. Rational application of Internet to select potential sperm and egg donors.
  - B. Possible implications of sperm and egg donors’ anonymous identity.
  - C. Significance of being anonymous as sperm and egg donor parents.
  - D. Positive arguments for sperm and egg donors’ rights to anonymity.

### Passage 3

**Directions:** There are 10 blanks in the following passage. For each blank there are four choices marked **A**, **B**, **C**, and **D**. You should choose the ONE that best fits into the passage.

There is an ever-growing expectation that stem cells will 1 substantial benefit to people living with neurodegenerative disorders of the central nervous system such as Alzheimer disease and Parkinson disease. However, stem cells and their derivatives will face a number of additional hurdles before they can be considered useful in clinical 2. First, can they differentiate appropriately when 3 in the environment of a diseased, adult central nervous system? Second, can they be shown not to migrate or integrate into circuits away from the site of the graft? Third, can they be shown not to significantly 4 once grafted? Finally, can they 5 in their differentiated state once grafted, 6 reverting to the stem cell state? Stem cells may offer great potential in 7 our understanding and treatment of neurodegenerative disorders of the central nervous system. However, exactly how much of a contribution they can make 8 unclear. Extravagant claims have been 9 of these cells, especially when commercial interests are attached to them. It is therefore critical that we understand the limitations of the technologies at our disposal, as well as the inherent difficulties in trying to take an 10 cell culture system to the heterogeneous complexities of patients in the clinic.

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|-----|-----------------|----------------|----------------|------------------|
| 1.  | A. supply       | B. deliver     | C. serve       | D. provide       |
| 2.  | A. atmosphere   | B. environment | C. settings    | D. conditions    |
| 3.  | A. to be placed | B. placing     | C. placed      | D. are placed    |
| 4.  | A. proliferate  | B. migrate     | C. metastasize | D. differentiate |
| 5.  | A. sustain      | B. survey      | C. surround    | D. survive       |
| 6.  | A. with         | B. without     | C. in          | D. from          |
| 7.  | A. accumulating | B. promoting   | C. furthering  | D. changing      |
| 8.  | A. remain       | B. remaining   | C. remains     | D. remained      |
| 9.  | A. made         | B. given       | C. taken       | D. did           |
| 10. | A. in vivo      | B. in vitro    | C. in situ     | D. in vain       |