**Esame Master 2008**

Il candidato svolga sotto forma di articolo giornalistico, saggio o racconto uno dei tre argomenti proposti. E specifichi quale forma narrativa ha scelto.

***1) Fury at DNA pioneer's theory: Africans are less intelligent than Westerners. Celebrated scientist attacked for race comments: "All our social policies are based on the fact that their intelligence is the same as ours - whereas all the testing says not really"***

***da "The Independent" 2007***

One of the world's most eminent scientists was embroiled in an extraordinary row last night after he claimed that black people were less intelligent than white people and the idea that "equal powers of reason" were shared across racial groups was a delusion.

James Watson, a Nobel Prize winner for his part in the unravelling of DNA who now runs one of America's leading scientific research institutions, drew widespread condemnation for comments he made ahead of his arrival in Britain today for a speaking tour at venues including the Science Museum in London.

The 79-year-old geneticist reopened the explosive debate about race and science in a newspaper interview in which he said Western policies towards African countries were wrongly based on an assumption that black people were as clever as their white counterparts when "testing" suggested the contrary. He claimed genes responsible for creating differences in human intelligence could be found within a decade.

The newly formed Equality and Human Rights Commission, successor to the Commission for Racial Equality, said it was studying Dr Watson's remarks " in full". Dr Watson told The Sunday Times that he was "inherently gloomy about the prospect of Africa" because "all our social policies are based on the fact that their intelligence is the same as ours – whereas all the testing says not really". He said there was a natural desire that all human beings should be equal but "people who have to deal with black employees find this not true".

His views are also reflected in a book published next week, in which he writes: "There is no firm reason to anticipate that the intellectual capacities of peoples geographically separated in their evolution should prove to have evolved identically. Our wanting to reserve equal powers of reason as some universal heritage of humanity will not be enough to make it so."

The furore echoes the controversy created in the 1990s by The Bell Curve, a book co-authored by the American political scientist Charles Murray, which suggested differences in IQ were genetic and discussed the implications of a racial divide in intelligence. The work was heavily criticised across the world, in particular by leading scientists who described it as a work of " scientific racism".

Dr Watson arrives in Britain today for a speaking tour to publicise his latest book, Avoid Boring People: Lessons from a Life in Science. Among his first engagements is a speech to an audience at the Science Museum organised by the Dana Centre, which held a discussion last night on the history of scientific racism.

Critics of Dr Watson said there should be a robust response to his views across the spheres of politics and science. Keith Vaz, the Labour chairman of the Home Affairs Select Committee, said: "It is sad to see a scientist of such achievement making such baseless, unscientific and extremely offensive comments. I am sure the scientific community will roundly reject what appear to be Dr Watson's personal prejudices.

"These comments serve as a reminder of the attitudes which can still exists at the highest professional levels."

The American scientist earned a place in the history of great scientific breakthroughs of the 20th century when he worked at the University of Cambridge in the 1950s and 1960s and formed part of the team which discovered the structure of DNA. He shared the 1962 Nobel Prize for medicine with his British colleague Francis Crick and New Zealand-born Maurice Wilkins.

But despite serving for 50 years as a director of the Cold Spring Harbor Laboratory on Long Island, considered a world leader in research into cancer and genetics, Dr Watson has frequently courted controversy with some of his views on politics, sexuality and race. The respected journal Science wrote in 1990: "To many in the scientific community, Watson has long been something of a wild man, and his colleagues tend to hold their collective breath whenever he veers from the script."

In 1997, he told a British newspaper that a woman should have the right to abort her unborn child if tests could determine it would be homosexual. He later insisted he was talking about a "hypothetical" choice which could never be applied. He has also suggested a link between skin colour and sex drive, positing the theory that black people have higher libidos, and argued in favour of genetic screening and engineering on the basis that " stupidity" could one day be cured. He has claimed that beauty could be genetically manufactured, saying: "People say it would be terrible if we made all girls pretty. I think it would great."

The Cold Spring Harbor Laboratory said yesterday that Dr Watson could not be contacted to comment on his remarks.

Steven Rose, a professor of biological sciences at the Open University and a founder member of the Society for Social Responsibility in Science, said: " This is Watson at his most scandalous. He has said similar things about women before but I have never heard him get into this racist terrain. If he knew the literature in the subject he would know he was out of his depth scientifically, quite apart from socially and politically."

Anti-racism campaigners called for Dr Watson's remarks to be looked at in the context of racial hatred laws. A spokesman for the 1990 Trust, a black human rights group, said: "It is astonishing that a man of such distinction should make comments that seem to perpetuate racism in this way. It amounts to fuelling bigotry and we would like it to be looked at for grounds of legal complaint."

***2) Sempre piu' spesso autorevoli riviste scientifiche pubblicano smentite riguardanti risultati di complesse ricerche, in particolare nell'area biomedica. Quali le motivazioni?***

**da Embo Reports 2008 (vedi allegato 1)**

*3) Venter vuole brevettare la vita artificiale. E' polemica.*

**a) da New Scientist 2007** …WILL genomics pioneer Craig Venter be the next Bill Gates, enjoying a Microsoft-like grip on a future industry based on synthetic forms of life? That was the claim of an advocacy group concerned about the social implications of technologies earlier this year, after Venter's institute applied for a patent on a synthetic "minimal genome" …

**b) da Repubblica.it 2007 …** LONDRA - "Un passo filosofico importante nella storia della nostra specie". Craig Venter, il biologo americano fra i pionieri del sequenziamento del genoma umano, così annuncia, al quotidiano britannico *The Guardian*, la realizzazione in laboratorio di un cromosoma di sintesi, primo passo verso la possibile creazione di una forma di vita artificiale. Venter si appresta a ufficializzare la notizia lunedì, in occasione dell'assemblea annuale del suo istituto scientifico a San Diego, in California.
Il cromosoma di sintesi, che Venter e la sua equipe di una ventina di scienziati (fra i quali anche il Nobel per la medicina, Hamilton Smith) sono riusciti a realizzare, copia parti essenziali del dna del batterio Mycoplasma Genitalium (un microbo che vive nel tratto umano riproduttivo), ed è stato battezzato dai suoi creatori Mycoplasma Laboratorium. Nella tappa finale del processo, scrive *The Guardian*, sarà inserito in una cellula vivente di cui dovrebbe "assumere il controllo", diventando così in sostanza una nuova forma di vita. Una ricerca che non mancherà di animare il dibattito sulle implicazioni etiche che attengono alla creazione di nuove specie. "Stiamo passando dalla lettura del codice genetico - spiega Venter - alla capacità di scriverlo. Ciò ci dà la possibilità ipotetica di fare cose che mai avremmo immaginato".
**Chi è Craig Venter.** Venter è il controverso imprenditore delle biotecnologie, celebre per aver decodificato il genoma umano, battendo sul tempo i ricercatori del governo americano. Dopo gli studi in biochimica e farmacologia all'università della California a San Diego, nel 1998 fonda la Celera Genomics. La società ha lo scopo di mappare il genoma umano (la struttura, la posizione e la funzione dei circa 30.000 geni) che caratterizza la specie umana. E ci riesce appena tre anni dopo. Nel febbraio 2001 pubblica sulla prestigiosa rivista *Science* i risultati del sequenziamento del suo Dna e di altri quattro donatori, battendo sul tempo il consorzio internazionale detto Progetto Genoma Umano. Al momento è presidente del J. Craig Venter Institute, cofondatore della Synthetic Genomics (azienda creata per "inventare" organismi artificiali in grado di produrre biocarburanti e combustibili alternativi a basso impatto ambientale). Ed è proprio in questa direzione che va l'annuncio di aver creato il primo cromosoma sintetico, il Mycoplasma laboratorium….

**c) da US Patent & Trademark Office**

Synthetic genomes
Methods are provided for constructing a synthetic genome, comprising generating and assembling nucleic acid cassettes comprising portions of the genome, wherein at least one of the nucleic acid cassettes is constructed from nucleic acid components that have been chemically synthesized, or from copies of the chemically synthesized nucleic acid components. In one embodiment, the entire synthetic genome is constructed from nucleic acid components that have been chemically synthesized, or from copies of the chemically synthesized nucleic acid components. Rational methods may be used to design the synthetic genome (e.g., to establish a minimal genome and/or to optimize the function of genes within a genome, such as by mutating or rearranging the order of the genes). Synthetic genomes of the invention may be introduced into vesicles (e.g., bacterial cells

from which part or all of the resident genome has been removed, or synthetic vesicles) to generate synthetic cells. Synthetic genomes or synthetic cells may be used for a variety of purposes, including the generation of synthetic fuels, such as hydrogen or ethanol.


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| Serial No.: | **635355** |
| Series Code: | **11** |
| Filed: | **December 6, 2006** |
| **U.S. Current Class:** | **435/69.1**; 435/325; 536/25.3 |
| **U.S. Class at Publication:** | **435/069.1**; 435/325; 536/025.3 |
| **Intern'l Class:** | C07H 21/04 20060101 C07H021/04; C12N 5/06 20060101 C12N005/06; C12P 1/04 20060101 C12P001/04 |