NATIONAL HEALTH COUNCIL

Resolution No. 340, of July 8, 2004.

The Plenary of the National Health Council, at its One Hundred and Forty-Fourth Ordinary Meeting, held on July 7 and 8, 2004, in the exercise of its regulatory powers and attributions conferred by Law No. 8,080, of September 19, 1990, and by Law No. 8,142, of December 28, 1990, and

Considering the recent technical and scientific advancements and their applications in human genetics research, requiring a stance from institutions, researchers, and Research Ethics Committees (RECs) throughout the country, thus demanding complementary regulations to CNS Resolution No. 196/96 (Guidelines and Regulatory Standards for Research Involving Human Beings), a responsibility of the National Research Ethics Commission (CONEP), as per item VIII.4 of that Resolution; Considering the

contributions from the CEPs-CONEP system and the accumulated experience in analyzing research projects in this area to date; and Considering the need to

observe potential health risks and protect human rights, fundamental freedoms, and respect for human dignity in the collection, processing, use, and storage of human genetic data and materials,

RESOLVE:

To approve the following Guidelines for Ethical Analysis and Processing of Projects. Research in the Special Thematic Area of Human Genetics:

I - Preamble:

This Resolution incorporates all the provisions contained in CNS Resolution No. 196/96 of the National Health Council, on Guidelines and Regulatory Standards for Research Involving Human Beings, of which this is a complementary part of the specific thematic area, and also incorporates, where applicable, the provisions contained in CNS Resolutions Nos. 251/97, 292/99, 303/2000 and 304/2000.

II - Terms and Definitions:

II.1 - Research in human genetics is that which involves the production of data. Genetic or proteomic factors in humans, which can take various forms:

a) Research into basic genetic mechanisms: studies on the location, structure, function, and expression of human genes and chromosomal organization;

b) Clinical genetics research: research that consists of the descriptive study of individuals and/or their families, aiming to elucidate certain conditions of probable genetic etiology, which may involve the analysis of clinical information and genetic material testing;

c) research in population genetics: studies of normal genetic variability

or pathological in groups of individuals and the relationship between these groups and a particular condition; d)

human molecular research: research involving molecular tests associated or not with diseases; genetic or epigenetic studies of nucleic acids (DNA and RNA) or proteins aimed at new treatments or the prevention of genetic disorders, other pathologies, or the identification of molecular variability; e) gene and cell therapy research: introduction of recombinant DNA or RNA molecules

into human somatic cells ***in vivo*** (in ***vivo gene therapy)*** or human somatic cells ***in vitro*** and subsequent transfer of these cells to the organism (ex ***vivo gene therapy)*** and research with genetically modified human stem cells; and f) behavioral genetics research: study aimed at establishing possible relationships between genetic characteristics and human behavior.

II.2 - Any procedure related to human genetics, whose acceptance is not yet established in the scientific literature, will be considered research and, therefore, must comply with the guidelines of this Resolution. This includes genetic procedures in assisted reproduction not regulated by the Federal Council of Medicine.

III - Ethical Aspects:

The primary purpose of genetic research should be related to accumulating scientific knowledge that allows us to alleviate suffering and improve the health of individuals and humanity.

III.1 - Genetic research produces a special category of data because it contains medical, scientific and personal information, and therefore the impact of this knowledge on the individual, the family and the entire group to which the individual belongs must be evaluated.

III.2 - Mechanisms for data protection should be in place to prevent the stigmatization and discrimination of individuals, families, or groups.

III.3 - Research involving predictive testing should be preceded, before data collection, by explanations regarding the meaning and potential use of the predicted results.

III.4 - Research subjects should be offered the option of choosing between being whether or not they were informed about the results of their tests.

III.5 - Research projects must be accompanied by a proposal for Genetic counseling, when appropriate.

III.6 - Research subjects are responsible for authorizing or not the storage of data and materials collected within the scope of the research, after being informed of the procedures defined in the Resolution on the storage of biological materials.

III.7 - Every individual can have access to their genetic data, just as they have the right to withdraw them from banks where they are stored, at any time.

III.8 - In order for individual genetic data to be irreversibly dissociated from any identifiable individual, justification for such a procedure must be presented for evaluation by the Ethics Committee (CEP) and the National Ethics Committee (CONEP).

III.9 - In cases where the dissociation of genetic data is approved by the Ethics Committee (CEP) and the National Ethics Committee (CONEP), the research subject must be informed about the advantages and disadvantages of dissociation, and a specific Informed Consent Form must be obtained for this purpose.

III.10 - Item V.7 of CNS Resolution No. 196/96 must be observed, including in

which refers to the potential registration of patents.

III.11 - Genetic data resulting from research associated with an identifiable individual may not be disclosed or made accessible to third parties, particularly employers, insurance companies, and educational institutions, nor should they be provided for cross-referencing with other stored data for judicial or other purposes, except when the consent of the research subject is obtained.

III.12 - Human genetic data collected in research for a specific purpose may only be used for other purposes if prior consent is obtained from the donor individual or their legal representative and through the preparation of a new research protocol, with approval from the Research Ethics Committee and, if applicable, CONEP. In cases where it is not possible to obtain informed consent, a justification must be presented for consideration by the Ethics Committee.

III.13 - When there is a flow of human genetic data between institutions, an agreement must be established between them in order to promote cooperation and equitable access to the data.

III.14 - Human genetic data should not be stored by a natural person.
requiring the participation of a reputable and responsible institution that guarantees adequate protection.

III.15 - The benefits of using human genetic data collected in research, including population genetics studies, should be shared among the international or national community involved as a whole.

III.16 - Research involving intervention to modify the human genome only
These tests can be performed on somatic cells.

IV - Research Protocol:

IV.1 - Research in the field of human genetics must be submitted to the Ethics Committee (CEP) and, when applicable, to the National Ethics Committee (CONEP) as complete protocols, in accordance with Chapter VI of CNS Resolution No. 196/96, and will not be accepted as amendments, addenda, or sub-studies of protocols from other areas, and must also include:

a) justification for the research;

b) how the genes/segments of DNA or RNA or gene products under study relate to any condition of the research subject; c) clear explanation of the

examinations and tests that will be performed and indication of the
genes/segments of DNA or RNA or gene products that will be studied;

d) justification for the choice and size of the sample, particularly when dealing with vulnerable populations or groups and differentiated cultures (indigenous groups, for example);

e) methods of recruiting research subjects and controls, when applicable
case;

f) careful analysis of the current and potential risks and benefits for the individual,
group and future generations, when applicable;

(g) Information regarding the use, storage, or other destinations of the material.
biological;

h) measures and precautions to ensure privacy and avoid any type or
situation of stigmatization and discrimination of the research subject, family, and group;

i) explicit statement of any pre-existing agreement regarding the ownership of the generated information and industrial property rights, where applicable;

j) Description of the genetic counseling and clinical follow-up plan, when indicated, including the names and contact information of the responsible professionals, the type of approaches according to expected situations, the consequences for the subjects, and the planned actions. The professionals responsible for genetic counseling and clinical follow-up must have the professional training and qualifications required by professional councils and specialty societies;

l) Justification for sending biological material and/or data obtained to other institutions, national or international, clearly indicating the type of material and/or data, as well as a list of the examinations and tests to be performed. Clarify the reasons why the examinations or tests cannot be performed in Brazil, when applicable; and

m) In international cooperative projects, a description of the opportunities for technology transfer.

V - Free and Informed Consent Form (TCLE): V.1 - The TCLE

must be prepared in accordance with the provisions of Chapter IV of CNS Resolution No. 196/96, with special emphasis on the following items:

a) clear explanation of the examinations and tests that will be performed, indication of the genes/segments of DNA or RNA or gene products that will be studied and their relationship with any condition of the research subject;

b) guarantee of confidentiality, privacy and, where applicable, anonymity;

c) genetic counseling and clinical follow-up plan, with the indication of the responsible parties, at no cost to the research subjects; d) type and degree of access

to the results by the subject, with the option to choose
or lack of knowledge of this information;

(e) In the case of material storage, this information must be included in the Informed Consent Form, explicitly stating the possibility of its use in a new research project. It is essential that it also states that the subject will be contacted to grant or deny authorization for the use of the material in future projects and that, when this is not possible, the fact will be justified to the Ethics Committee.
It should also be made clear that the material will only be used after the new project has been approved by the Ethics Committee and CONEP (when applicable);

f) Information regarding measures to protect individual data, examination and test results, as well as medical records, which will only be accessible to the researchers involved and access by third parties (insurance companies, employers, hierarchical supervisors, etc.) will not be permitted; g) Information regarding measures to protect against any

type of discrimination and/or stigmatization, individual or collective; eh) In family investigations, informed consent must be obtained.

and clarified for each individual studied.

VI - Operationalization:

VI.1 - It is the responsibility of the CEP, as stipulated in Chapter VII of CNS Resolution No.

196/96, the analysis of research projects, assuming co-responsibility with regard to ethical aspects.

VI.2 - It is the responsibility of the Ethics Committee to immediately return to the researcher any protocol that does not contain all the relevant information (Chapter VI – CNS Resolution No. 196/96, as well as those referred to in Chapters III and IV of this Resolution).

VI.3 - CONEP is responsible for the final approval of research in human genetics that include:

a) sending genetic material or any biological material abroad human for obtaining genetic material;

b) storage of biological material or human genetic data abroad and in the country, when in agreement with foreign institutions or in commercial institutions;

c) alterations to the genetic structure of human cells for ***in vivo use;*** d) research in

the area of human reproductive genetics (reprogenetics);

e) research in behavioral genetics; and f) research

in which irreversible dissociation of data from research subjects is anticipated.

VI.4 - In the cases foreseen in item VI.3 above, the Ethics Committee (CEP) must examine the protocol, prepare a substantiated opinion, and send both to CONEP with the complete documentation as per CNS Resolution No. 196/96, items VII.13.aebe and VIII.4.c.1. The researcher must be informed that they must await CONEP's opinion before beginning the execution of the project.

VI.5 - The final approval of human genetics projects that do not fall under item VI.3 above is delegated to the Ethics Committee (CEP). In these cases, the CEP must send the cover sheet and the final substantiated opinion, whether of approval or non-approval, to CONEP.

VI.6 - The shipment of material abroad must comply with the regulatory and legal provisions of the country.

HUMBERTO COSTA
President of the National Health Council

I approve CNS Resolution No. 340, of July 8, 2004, pursuant to the Delegation of Authority Decree of November 12, 1991.

HUMBERTO COSTA
Minister of State for Health