KETUA PENGARAH KESIHATAN MALAYSIA
DIRECTOR GENERAL OF HEALTH MALAYSIA

Kementerian Kesihatan Malaysia,
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Tarikh : 14 NOVEMBER 2011

SENARAI SEPERTI EDARAN

Y.Bhg. Datuk/ Dato' / Datin / Tuan / Puan,

PEKELILING KETUA PENGARAH KESIHATAN MALAYSIA BILANGAN 7/2011 : CHECKLIST FOR RESEARCH ON STEM CELL AND CELL-BASED THERAPIES

TUJUAN

1. Tujuan pekeliling ini dikeluarkan adalah untuk menerangkan mengenai prosedur yang perlu dipatuhi dalam membuat sebarang permohonan penyelidikan berkaitan sel stem, khasnya kajian yang melibatkan subjek manusia.

2. Setiap permohonan bagi menjalankan penyelidikan berkaitan sel stem haruslah mematuhi **Checklist For Research On Stem Cell And Cell-Based Therapies** yang telah disediakan oleh Jawatankuasa Kebangsaan Etika Penyelidikan dan Terapi Stem Cell (NCESRT).

3. Penyelidikan sel stem yang ingin dijalankan itu juga haruslah mematuhi etika yang ditetapkan dalam buku *Guidelines For Stem Cell Research and Therapy,* MOH/P/PAK/177.08(GU) yang telah diterbitkan oleh pihak Kementerian Kesihatan Malaysia pada Julai 2009.

LATARBELAKANG

4. Dengan peredaran masa dan berkembangnya perkhidmatan dan aktivti sel stem di negara ini, maka Jawatankuasa Kebangsaan Etika Penyelidikan dan Terapi Stem Cell (NCESRT) telah mengeluarkan satu garispanduan bertajuk Guidelines For Stem Cell Research and Therapy, MOH/P/PAK/177.08(GU).

5. Objektif penerbitan Guidelines For Stem Cell Research and Therapy, MOH/P/PAK/177.08(GU) adalah sebagai rujukan dan panduan kepada mana-mana pihak samada dari Kementerian Kesihatan Malaysia, mahupun universiti dan juga swasta dalam menjalankan penyelidikan sel stem di negara ini. Setiap penyelidik perlu mematuhi garispanduan yang telah diwujudkan itu.

PROSEDUR PERMOHONAN PENYELIDIKAN SEL STEM

6. Semua permohonan bagi menjalankan penyelidikan berkaitan sel stem dan melibatkan subjek manusia, samada dari pihak Kementerian Kesihatan Malaysia, universiti mahupun swasta, perlulah dikemukakan kepada Jawatankuasa Etika Penyelidikan Perubatan KKM (MREC). Semua permohonan ke MREC mesti mengikuti prosedur yang telah ditetapkan iaitu berdaftar melalui National Medical Research Register (NMRR).

7. Sekretariat Jawatankuasa Etika Penyelidikan Perubatan KKM (MREC) akan menyemak setiap permohonan yang dihantar itu menggunakan **Checklist For Research On Stem Cell And Cell-Based Therapies** seperti di Lampiran 1. Sekiranya permohonan tersebut tidak mematuhi senarai semak yang disediakan itu, maka Sekretariat Jawatankuasa Etika Penyelidikan Perubatan KKM (MREC) diberi tanggungjawab untuk memulangkannya semula kepada penyelidik berkenaan.

8. Sekiranya permohonan tersebut lengkap dan menepati senarai semak itu, maka Sekretariat Jawatankuasa Etika Penyelidikan Perubatan KKM (MREC) akan mengemukakannya kepada Jawatankuasa Kebangsaan Etika Penyelidikan dan Terapi Stem Cell (NCESRT) untuk dinilai dan memberi rekomendasi.

9. Jawatankuasa Kebangsaan Etika Penyelidikan dan Terapi Stem Cell (NCESRT) akan mengemukakan rekomendasi kepada Jawatankuasa Etika Penyelidikan Perubatan KKM (MREC) yang akan memberi keputusan akhir *(final decision)* berkaitan dengan permohonan penyelidikan tersebut. Carta alir pemohonan penyelidikan sel stem ini adalah seperti di Lampiran 2.

TARIKH KUATKUASA

10. Pelaksanaan Pekeliling ini adalah berkuatkuasa dari tarikh surat Pekeliling ini dikeluarkan.

PERTANYAAN

11. Sebarang pertanyaan mengenai pelaksanaan Pekeliling ini boleh dikemukakan kepada :-

URUSETIA JAWATANKUASA KEBANGSAAN ETIKA PENYELIDIKAN DAN TERAPI STEM CELL (NCESRT)
Bahagian Perkembangan Perubatan
Kementerian Kesihatan Malaysia
Aras 5, Blok E1, Parcel E
Kompleks Kerajaan Persekutuan
62590 Putrajaya
Tel : 03-88831153 atau 03-88831161 , Fax : 03-88831155

Sekian dan terima kasih.

``BERKHIDMAT UNTUK NEGARA"

Yang Ikhlas,

DATO' SRI DR. HASAN BIN ABDUL RAHMAN
Ketua Pengarah Kesihatan Malaysia

CHECKLIST FOR RESEARCH ON STEM CELL AND CELL-BASED THERAPIES

Phase/Process	Key requirements	Researcher (Please tick √)	Secretariat MREC (Please tick √)
1. Pre-clinical studies (investigators must show their own data and not from other laboratories)	• Approval letter from animal ethics committee is recommended	☐	☐
	• Accreditation of animal research facility in institution requiring GLP compliance	☐	☐
	• Evidence that the pre-clinical studies was subjected to rigorous and independent peer review and regulatory oversight	☐	☐
	• Safety data in small animals	☐	☐
	• Safety data in large animals	☐	☐
	• Comprehensive toxicology data in small animals (including contamination, acute infusional toxicity, deleterious immune responses, unexpected behavior of the cellular product, and tumorigenesis)	☐	☐
	• Comprehensive toxicology data in large animals (including risks of contamination, acute infusional toxicity, deleterious immune responses, unexpected behavior of the cellular product, and tumorigenesis)	☐	☐
	• Proof of principle of the desired effect (that the cells have repaired the damage/disease) – unequivocal efficacy data	☐	☐
	• Show biological distribution data	☐	☐
	• Show evidence of physiologic integration and long-lived tissue reconstitution	☐	☐
	• Show that differentiation (either *in vitro* before transplantation or *in vivo* after transplantation) occur only along the desired lineages	☐	☐
	• Design based on clinical expectations	☐	☐
	• Mechanistic studies to show biology (done by the group)	☐	☐
	• GLP compliant	☐	☐

CHECKLIST FOR RESEARCH ON STEM CELL AND CELL-BASED THERAPIES

Phase/Process	Key requirements	Researcher (Please tick √)	Secretariat MREC (Please tick √)
	• Evidence that the pre-clinical data has been submitted to the NPCB	☐	☐
2. Phase I trials	• Comprehensive pre-clinical studies have been done and data showed safety and efficacy in animals (performed by the group) is recommended	☐	☐
	• Procedures on how the cells be tracked in terms of homing to the target area, viability and longevity of the cells	☐	☐
	• Procedures on how the safety be monitored	☐	☐
	• Procedures to assess risks of tumorigenicity by an independent body must be implemented	☐	☐
	• Procedures to assess short, medium and long term side effects	☐	☐
	• GCP compliance	☐	☐
3. Phase II trials	• Data from Phase I trials (performed by the group themselves and if the trial is not performed by the group, explain why the data should be used for this trial)	☐	☐
	• Procedures on how the cells be tracked in terms of homing to the target area and viability of the cells	☐	☐
	• Optimisation of dose, route, regimen, patient population, endpoints, and controlled	☐	☐
	• Procedures on how the safety be monitored	☐	☐
	• Independent data safety monitoring board	☐	☐
	• Plan to assess short, medium and long term side effects	☐	☐
	• GCP compliance	☐	☐

CHECKLIST FOR RESEARCH ON STEM CELL AND CELL-BASED THERAPIES

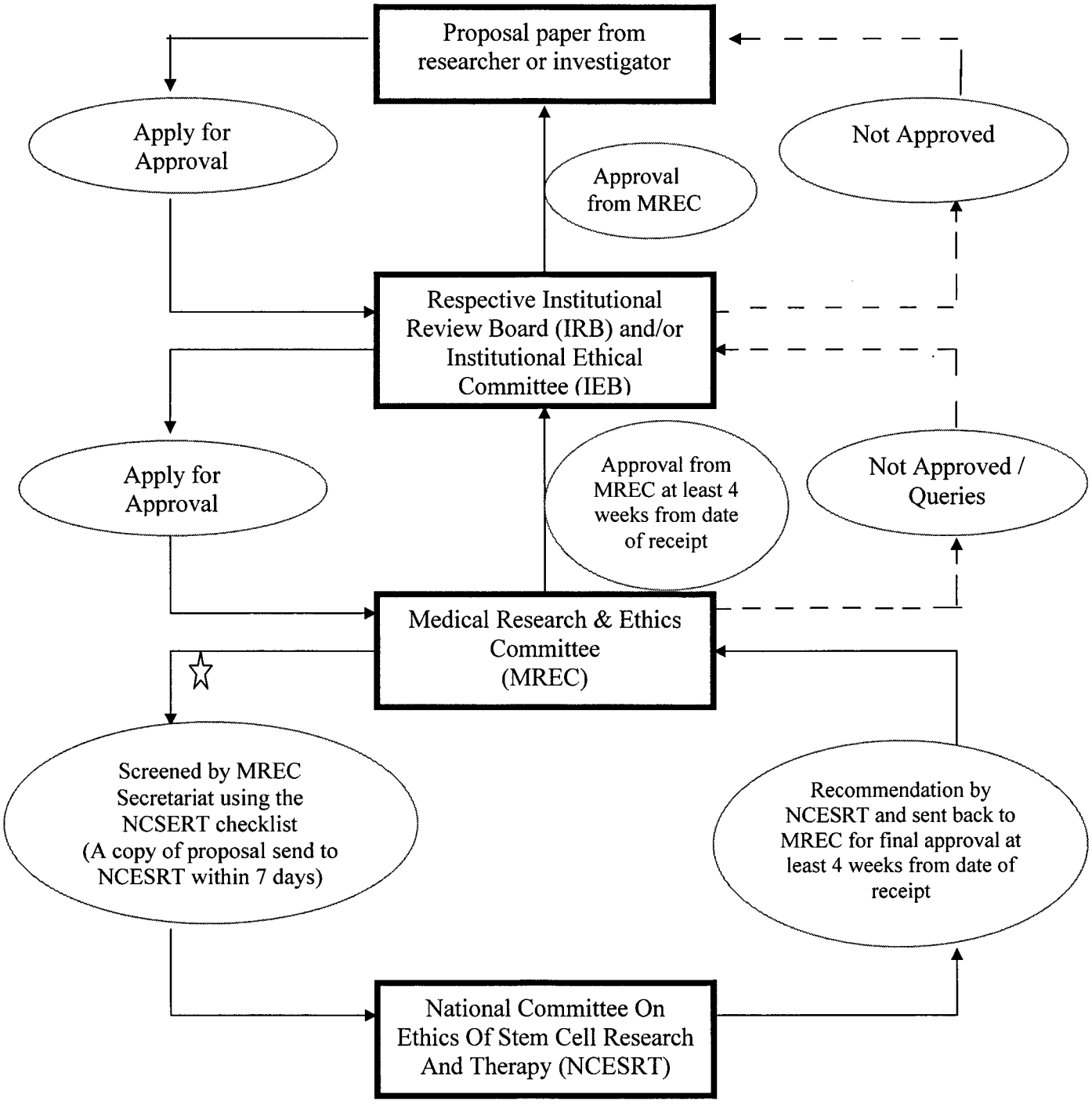
4. Phase III trials	• Data from Phase II trials (performed by the group themselves)	☐	☐
	• Design to show safety and efficacy	☐	☐
	• Independent data safety monitoring board	☐	☐
	• GCP compliance	☐	☐
	• Conduct 'randomised' control	☐	☐
5. Cell processing and manufacturing	• Evidence by a letter of conformance for GMP compliance and issued by relevant authority	☐	☐
	• Show evidence of relevant processes: Standard operating procedures, quality standards, environmental control, equipment qualification, analytical methods, audits, staff training, etc.	☐	☐
	• Cell processing and manufacture of any product must be conducted under scrupulous, expert, and independent review	☐	☐
	• Demonstrate that the product is safe, pure and potent	☐	☐
6. Product registration	• Show that the product has been registered with the National Pharmaceutical Control Bureau before use in human trials	☐	☐
	• License for clinical trial has been obtained	☐	☐
7. Cell characterization (pre-requisite to clinical trials)	• History of the cells in the stem cell or cell-based product	☐	☐
	• Biological characterisation of cell type	☐	☐
	• Demonstration of purity	☐	☐
	• Demonstration of potency (e.g. cells produce insulin in a physiological manner)	☐	☐
	• Manufacturing standards and independent certification, where relevant	☐	☐
	• Evidence that cells are free from contamination	☐	☐

CHECKLIST FOR RESEARCH ON STEM CELL AND CELL-BASED THERAPIES

	• Evidence of viability and longevity of cells after transplantation (to determine the likely duration of the therapeutic effect)	☐	☐
	• Evidence that cells will home into the area of damage or repair	☐	☐
	• Evidence of genomic stability during culture	☐	☐
8. Investigators and researchers	• Is the Principal Investigator trained in cell transplantation? (Show evidence of credentialing)	☐	☐
	• Are other investigators trained in cell transplantation? (Show evidence of credentialing)	☐	☐
	• Qualifications of scientists and researchers	☐	☐
	• Registration with National Medical Research Register, Ministry of Health (MOH)	☐	☐
9. Centres performing therapy (Information for patients)	• Registration with PHCFS Act, Ministry of Health	☐	☐
	• Informing subjects about the human embryonic cell source, if applicable	☐	☐
	• The unique risks; and disclose honestly that the treatment have not been tried before	☐	☐
	• Utmost clarity on the potential benefit	☐	☐
	• Disclosing financial and non-financial conflicts of interest	☐	☐
	• Provide monitoring patients long term	☐	☐
	• Providing a clear, timely, and effective plan for adverse event reporting	☐	☐

Lampiran 2

FLOWCHART ON APPLICATION FOR RESEARCH ON STEM CELL AND CELL-BASED THERAPIES



☆ *Any application of stem cell related research which involve human subject, shall be refer to MREC for approval.*