

DAFTAR ISI

HALAMAN PERNYATAAN KEASLIAN.....	Error! Bookmark not defined.
HALAMAN PENGESAHAN.....	Error! Bookmark not defined.
UCAPAN TERIMA KASIH.....	Error! Bookmark not defined.
HALAMAN PERNYATAAN PERSETUJUAN PUBLIKASI KARYA ILMIAH UNTUK KEPENTINGAN AKADEMIS	Error! Bookmark not defined.
ABSTRAK	Error! Bookmark not defined.
ABSTRACT	Error! Bookmark not defined.
DAFTAR ISI.....	viii
DAFTAR GAMBAR.....	x
DAFTAR TABEL.....	xi
DAFTAR LAMPIRAN	xii
BAB I PENDAHULUAN.....	Error! Bookmark not defined.
1.1 Latar Belakang.....	Error! Bookmark not defined.
1.2 Rumusan Masalah	Error! Bookmark not defined.
1.3 Hipotesis Penelitian.....	Error! Bookmark not defined.
1.4 Tujuan Penelitian.....	Error! Bookmark not defined.
1.5 Manfaat Penelitian.....	Error! Bookmark not defined.
BAB II TINJAUAN PUSTAKA.....	Error! Bookmark not defined.
2.1 Sel Punca	Error! Bookmark not defined.
2.2 Sel Fibroblas.....	Error! Bookmark not defined.
2.3 <i>Human Induced Pluripoten Stem Cells</i> ...	Error! Bookmark not defined.
2.4 Sel Endoderm	Error! Bookmark not defined.
2.5 Sel Urothelial.....	Error! Bookmark not defined.
2.6 Desain Primer	Error! Bookmark not defined.
2.7 <i>Real-Time Polymerase Chain Reaction</i> (RT-PCR)	Error! Bookmark not defined.
BAB III METODE PENELITIAN	Error! Bookmark not defined.
3.1 Kerangka Penelitian.....	Error! Bookmark not defined.
3.2 Tempat dan Waktu Penelitian	Error! Bookmark not defined.
3.3 Sampel Penelitian	Error! Bookmark not defined.
3.4 Alat dan Bahan	Error! Bookmark not defined.

3.4.1	Peralatan.....	Error! Bookmark not defined.
3.4.2	Reagensia dan Bahan Habis Pakai ...	Error! Bookmark not defined.
3.5	Cara Kerja.....	Error! Bookmark not defined.
3.5.1.	Desain Primer.....	Error! Bookmark not defined.
3.5.2.	Pembuatan Medium DMEM lengkap dengan FBS 15%	Error! Bookmark not defined.
3.5.3.	Kultur Sel Fibroblas Manusia	Error! Bookmark not defined.
3.5.4.	Isolasi RNA.....	Error! Bookmark not defined.
3.5.5.	Optimasi suhu <i>annealing</i> RT-PCR...	Error! Bookmark not defined.
3.5.6.	Analisis <i>melting curve</i>	Error! Bookmark not defined.
3.5.7.	Elektroforesis	Error! Bookmark not defined.
BAB IV HASIL PENELITIAN.....		Error! Bookmark not defined.
4.1.	Desain Primer	Error! Bookmark not defined.
4.2.	Kultur Sel Fibroblas Manusia.....	Error! Bookmark not defined.
4.3.	Isolasi RNA	Error! Bookmark not defined.
4.4.	Optimasi RT-PCR	Error! Bookmark not defined.
4.4.1.	Identifikasi Ekspresi Gen SOX2 dan CXCR4	Error! Bookmark not defined.
4.5.	Elektroforesis.....	Error! Bookmark not defined.
BAB V PEMBAHASAN		Error! Bookmark not defined.
5.1.	Desain Primer	Error! Bookmark not defined.
5.2.	Kultur Sel Fibroblas Manusia.....	Error! Bookmark not defined.
5.3.	Isolasi RNA	Error! Bookmark not defined.
5.4.	Optimasi RT-PCR	Error! Bookmark not defined.
5.5.	Analisis <i>melting curve</i>	Error! Bookmark not defined.
5.6.	Analisis Ekspresi gen	Error! Bookmark not defined.
5.7.	Elektroforesis.....	Error! Bookmark not defined.
BAB VI KESIMPULAN DAN SARAN.....		Error! Bookmark not defined.
6.1.	Kesimpulan.....	Error! Bookmark not defined.
6.2.	Saran	Error! Bookmark not defined.
DAFTAR PUSTAKA		Error! Bookmark not defined.
LAMPIRAN.....		Error! Bookmark not defined.

DAFTAR GAMBAR

- Gambar 1. Skema protokol turunan human Embryonic Stem Cells (hESC) dan sel Human Induced Pluripoten Stem Cells (hiPS).....**Error! Bookmark not defined.**
- Gambar 2. Protokol skematik untuk diferensiasi (hPSC menjadi sel urotelial kandung kemih**Error! Bookmark not defined.**
- Gambar 3. Jenis sel pada Urothelium**Error! Bookmark not defined.**
- Gambar 4. Alur Kerja penelitian.....**Error! Bookmark not defined.**
- Gambar 5. Tahapan dan Target Penelitian.....**Error! Bookmark not defined.**
- Gambar 6. Hasil Kultur Sel Fibroblas Manusia**Error! Bookmark not defined.**
- Gambar 7. Hasil Optimasi Suhu Annealing Primer **Error! Bookmark not defined.**
- Gambar 8. Ekspresi Gen**Error! Bookmark not defined.**
- Gambar 9. Identifikasi Tingkat Ekspresi Gen.....**Error! Bookmark not defined.**
- Gambar 10. Hasil visualisasi gel elektroforesis.**Error! Bookmark not defined.**

DAFTAR TABEL

- Tabel 1. Komponen Master Mix PCR setengah Reaksi..... **Error! Bookmark not defined.**
- Tabel 2. Silus RT-PCR.....**Error! Bookmark not defined.**
- Tabel 3. Hasil Primer Blast untuk SOX2 dan CXCR4 **Error! Bookmark not defined.**
- Tabel 4. Hasil Netprimer untuk SOX2 dan CXCR4 **Error! Bookmark not defined.**
- Tabel 5. Ukuran Kemrunian dan Konsentrasi Isolasi RNA. **Error! Bookmark not defined.**
- Tabel 6. Optimasi Suhu Annealing Primer 18S**Error! Bookmark not defined.**
- Tabel 7. Optimasi Suhu Annealing Primer SOX2 **Error! Bookmark not defined.**
- Tabel 8. Optimasi Suhu Annealing Primer CXCR4 Primer 1**Error! Bookmark not defined.**
- Tabel 9. Optimasi Suhu Annealing Primer CXCR4 Primer 2**Error! Bookmark not defined.**
- Tabel 10. Nilai Amplifikasi Ekspresi Gen.**Error! Bookmark not defined.**
- Tabel 11. Nilai Tingkat Ekspresi Gen.....**Error! Bookmark not defined.**

DAFTAR LAMPIRAN

- Lampiran 1. Kultur Sel Fibroblas pada *flask* T-75. **Error! Bookmark not defined.**
- Lampiran 2. Pengamatan Sel Fibroblas **Error! Bookmark not defined.**
- Lampiran 3. Pengamatan Sel Fibroblas dengan Mikroskop CKX41 (*Olympus, Japan*)..... **Error! Bookmark not defined.**
- Lampiran 4. Pengamatan secara *real time* saat menggunakan RT-PCR..... **Error! Bookmark not defined.**