GRANTS

Bahagian Penyelidikan dan Inovasi
Division of Research and Innovation
Pejabat Pengurusan dan Kreativiti Penyelidikan
Research Creativity and Management Office

Canselori II

Aras 2, Canselori II, Bangunan E42
Universiti Sains Malaysia
11800 USM Pulau Pinang, Malaysia
T : (6)04-653 6527 / 6525
F : (6)04-653 6553 / 6554
L : www.research.usm.my
www.usm.my

Tarikh : 21 Disember 2020

Profesor Madya Dr. Siti Noor Fazliah Binti Mohd Noor
Institut Perubatan & Pergigian Termaju
Universiti Sains Malaysia

YBrs. Profesor Madya Dr.,

KEPUTUSAN PERMOHONAN SKIM GERAN PENYELIDIKAN PEMBANGUNAN PROTOTAIP (PRGS) 2.0 TAHUN 2020

Dengan segala hormatnya saya merujuk kepada perkara di atas.

2. Tahniah diucapkan di atas kejayaan YBrs. Profesor Madya Dr. memperolehi Geran Penyelidikan Pembangunan Prototaip (PRGS) 2.0 Tahun 2020 di bawah Kementerian Pengajian Tinggi (KPT). Selaras dengan penerimaan peruntukan daripada Jabatan, bersama-sama ini dimajukan butiran penting berkaitan projek beserta nombor akaun untuk rujukan dan tindakan oleh pihak YBrs. Profesor Madya Dr..

Ketua Projek	Profesor Madya Dr. Siti Noor Fazliah Binti Mohd Noor	PTJ	Institut Perubatan & Pergigian Termaju
Penyelidik bersama	1. Prof. Madya Ir. Ts. Dr. Zuratul Ain Abdul Hamid 2. Profesor Dr. Ahmad Sukari Bin Halim 3. Dr. Muhammad Azrul Bin Zabidi 4. Profesor Dr. Shaifulizan Bin Ab Rahman 5. Puan Evelyn Wong Su Moi	PTJ	1. Pusat Pengajian Kejuruteraan Bahan Dan Sumber Mineral 2. Pusat Pengajian Sains Perubatan 3. Institut Perubatan & Pergigian Termaju 4. Pusat Pengajian Sains Pergigian 5. Progene Link Sdn Bhd
Tajuk Projek	*In Vivo Evaluation of Bioglass-Polymer Composite Film Patch for Treatment of Mucosal Ulceration*		
No. Akaun	**203.CIPPT.6740075**	Peruntukan Diluluskan	**RM173,600.00**
Tempoh Projek	24 bulan		
Tarikh Mula	1 Disember 2020	Tarikh Tamat	30 November 2022
Catatan	- **Perbelanjaan Geran Penyelidikan Pembangunan Prototaip (PRGS) 2.0** adalah secara kawalan vot. Penyelidik mestilah membuat perancangan dan pebelanjaan mengikut jumlah agihan vot yang diluluskan dan perlu mematuhi prosedur dan peraturan kewangan semasa Universiti. Sebarang permohonan/keperluan untuk pindaan vot perlu mendapat kelulusan RCMO dan dipertimbangkan/dibenarkan **setahun sekali sahaja**. - Semua pembelian, penempatan, pemantauan dan penyelenggaraan aset/inventori yang diluluskan merupakan **hak USM** dan tanggungjawab Ketua Penyelidk. Pengurusan dan pengawasannya diletakkan di bawah tanggungjawab PTJ setelah geran tamat. Universiti berhak untuk mengagihkan semula aset/inventori ini jika diperlukan.		

3. YBrs. Profesor Madya Dr. perlu memastikan output/hasil penyelidikan projek ini seperti yang dinyatakan/ditetapkan di dalam permohonan yang telah diluluskan oleh Kementerian (*revised proposal*). Butiran adalah seperti berikut:

Output/Hasil Penyelidikan	
Bilangan *Minimum Viable Product* (MVP)	1
Bilangan Harta Intelek (IP)	4

4. Untuk makluman selepas enam (6) bulan pertama penyelidikan, YBrs. Profesor Madya Dr. perlu menghadiri sesi pembentangan peemantauan untuk menentukan sama ada penyelidikan ini boleh diteruskan atau sebaliknya. Kemudian, **laporan kemajuan perlu dihantar pada setiap enam (6) bulan sekali melalui Sistem MyGRANTS dan laporan akhir dalam tempoh tiga (3) bulan selepas tamat tempoh geran**. Sekiranya YBrs. Profesor Madya Dr. gagal menghantar laporan kemajuan/akhir dalam masa yang ditetapkan, semua akaun geran YBrs. Profesor Madya Dr. yang masih berstatus aktif akan **dibekukan** serta-merta tanpa notifikasi dan hanya akan diaktifkan semula setelah laporan yang berkaitan diterima. Untuk makluman juga, berkemungkinan YBrs. Profesor Madya Dr. akan **disenarai hitam** dan secara tidak langsung akan mempengaruhi peluang YBrs. Profesor Madya Dr. untuk mendapat geran pada masa hadapan.

Sekian, terima kasih.

"BERKHIDMAT UNTUK NEGARA"

Saya Yang Menjalankan Amanah,

(IRNI SYUHADA BINTI IBRAHIM)
Pegawai Penyelidik
Pejabat Pengurusan & Kreativiti Penyelidikan

s.k. Pengarah
Pejabat Pengurusan dan Kreativiti Penyelidikan

Pengarah
Institut Perubatan & Pergigian Termaju
Universiti Sains Malaysia

Penolong Bendahari Kanan
Seksyen Kewangan & Penyelidikan
Jabatan Bendahari

Perincian Agihan Skim Geran Penyelidikan Pembangunan Prototaip (PRGS) 2.0 Tahun 2020

Kegunaan Pejabat		
Disediakan oleh	(Irni Syuhada Binti Ibrahim)	21.12.2020
Disemak oleh	(Irni Syuhada Binti Ibrahim)	21.12.2020

Jumlah Peruntukan yang diluluskan	:	**RM173,600.00**	**Ketua Projek**	:	**Profesor Madya Dr. Siti Noor Fazliah Binti Mohd Noor** *(Institut Perubatan Dan Pergigian Termaju)*
Agihan 1	:	**RM49,600.00**	**Tajuk Projek**	:	***In Vivo Evaluation of Bioglass-Polymer Composite Film Patch for Treatment of Mucosal Ulceration***
			Penaja	:	**Kementerian Pengajian Tinggi**
			Kluster/NIC	:	***Clinical & Health Sciences***
			Tempoh Geran	:	**24 Bulan (1 Disember 2020 – 30 November 2022)**
			No. Akaun	:	**203.CIPPT.6740075**

Agihan 1 Projek

Bil.	Vot USM	Agihan Sub 1 (RM)	Agihan Sub 2 (RM)
1.	11000	13,800.00	13,800.00
2.	14000	-	-
3.	21000	0.00	0.00
4.	22000	-	-
5.	23000	-	-
6.	24000	0.00	3,000.00
7.	26000	-	-
8.	27000	18,000.00	0.00
9.	28000	0.00	0.00
10.	29000	1,000.00	0.00
11.	35000	0.00	0.00
12.	42000	-	-
13.	52000	-	-
	JUMLAH DISALURKAN KE AKAUN	**32,800.00**	**16,800.00**

Keputusan : [/] **LULUS** [ ] **TIDAK LULUS**

Tandatangan: ARahman

PROF. DATO' IR. DR. ABDUL RAHMAN MOHAMED,FASc.
Timbalan Naib Canselor
Penyelidikan dan Inovasi

Tarikh : 21 Disember 2020

Peralatan yang diluluskan:

Tiada

MINISTRY OF HIGHER EDUCATION

APPLICATION FORM
PROTOTYPE DEVELOPMENT RESEARCH GRANT SCHEME (PRGS) 2.0 (PRGS)
Skim Geran Penyelidikan Pembangunan Prototaip (PRGS) 2.0 Tahun 2020

JABATAN PENDIDIKAN TINGGI
KEMENTERIAN PENGAJIAN TINGGI

A. Application Details

Application ID	383245-389053
Reference Code	PRGS/2/2020/SKK07/USM/02/2
A(i). Selected Grant	PRGS 2.0 (2020)
A(ii). Title of Proposed Research Project	In vivo evaluation of bioglass-polymer composite film patch for treatment of mucosal ulceration
A(iii). Keywords (must include keywords used in the Patent Search)	Bioactive glass composite, Film patch, Ulceration

B. Details of Project Leader

B(i). Name	Siti Noor Fazliah Binti Mohd Noor
B(ii). Nationality	Malaysia
B(iii). IC/Passport No.	730102015014
B(iv). Position	Associate Professor
B(v). University	Universiti Sains Malaysia (USM)
B(vi). Faculty/Centre	Advance Medical and Dental Institute
B(vii). Unit	Craniofacial and Biomaterials Science Cluster
B(viii). Office Phone No.	045622393 Ext.2393
B(ix). Handphone No.	0133960943
B(x). E-mail Address	fazliah@usm.my
B(xi). Date of first appointment with this University (tarikh lantikan)	01/06/2000
B(xii). Type of Service (Permanent/Contract)	Permanent

C. Research Information

C(i). Research Domain

Research Domain	Sub Research Domain
Clinical and Health Sciences	Health Science

Researcher Domain

Research Domain	Sub Research Domain
Pure and Applied Science	Materials Science
Technology and Engineering	Material and Polymer

C(ii). Focus Area

Focus Area: Emergency, Disaster and Pandemic-focused Medical Devices and Health Solutions

C(iii). Research Cluster

Cluster: Health and Wellbeing

C(iv). National Priority Area

Priority Area: Healthcare and Medicine

C(v). This Prototype Development Research is a continuation from a previous grant:

☑	**Other Research Grants:**	
	Project Source	Ministry of Science, Technology and Innovation (MOSTI)
	Name of Grant Scheme	ScienceFund
	Percentage of Contribution to This Research (%)	30
	Project Title	Development of bioactive glass scaffold for hard tissue regeneration
	Project Reference No.	02-01-05-SF0786
	Duration and Year Approved	01/11/2015 - 30/10/2018
Project Duration	3 years	
Amount Approved (RM)	241900	
Final Report	eScienceFund Portal - Monendproject Pdf.pdf	
RMC Verification Letter	H0338 TUTUP AKAUN.pdf	
Current Status of the Prototype	Complete	
Project Leader of this Grant	Yes	

☑	**Other Research Grants:**	
	Project Source	Universiti Sains Malaysia
	Name of Grant Scheme	Bridging
	Percentage of Contribution to This Research (%)	70
	Project Title	Development of bioactive glass-polymer composite film for treatment of oral ulcers
	Project Reference No.	BG0095
	Duration and Year Approved	25/01/2018 - 24/01/2019
Project Duration	1 year	
Amount Approved (RM)	9964	
Final Report	BORANG LAPORAN AKHIR GERAN BRIDGING 2018-240119.pdf	
RMC Verification Letter	BG0095-surat final report.pdf	
Current Status of the Prototype	Complete	
Project Leader of this		

Project Leader of this Grant	Yes

C(vi). Evidence from TTO/ICC/relevant department at Project Leader's home institution on the Technology Readiness Level (TRL) of the existing prototype

TRL SNFMN.pdf

C(vii). Location of Research

Location
Advanced Medical and Dental Institute, Universiti Sains Malaysia

C(viii). Duration of this research

From	1/December/2020
To	30/November/2022
Duration	2 years

C(ix). Other Researchers

Researcher Id	Name	IC / Passport Number	Faculty/ School/ Centre/ Unit	Position	Area of Expertise	Next Appointed Leader	Role
23841	Zuratul Ain Abdul Hamid	780203025030	Universiti Sains Malaysia	Associate Professor (Assoc. Prof. Ir. Ts. Dr.)	Polymeric Biomaterials, Drug Delivery Devices, Tissue Engineering	☐	Expertise in biocompatible polymer materials
31528	Ahmad Sukari Bin Halim	610404025019	Universiti Sains Malaysia	Professor (Professor)	Reconstructive Microsurgery	☐	Expertise in skin grafts and plastic surgeries
70776	Muhammad Azrul Bin Zabidi	840405025751	Universiti Sains Malaysia	Senior Lecturer (UNIVERSITY LECTURER)	Polymer Based Nanocarrier	☑	Expertise in polymeric materials and interactions
104405	Shaifulizan Bin Ab Rahman	700605035693	Universiti Sains Malaysia	Professor (Dr.)	implantology, head and neck oncology, trauma	☐	Expertise in oral surgeries and trauma
116070	Evelyn Wong Su Moi	600804055082	PROGENE LINK SDN BHD	Others (R&D DIRECTOR)		☐	Expertise in material designing and marketing strategy

C(x). Research projects that have been completed or ongoing by researchers related to the proposed prototype development project.

Title	Grant Name	Role	Progress (%)	Status	Duration	Start Date	End Date
Development and Characterization of Novel Zirconiacalcia-(ZrCaO3)-Bioglass for Dental Application	Research University (RUI) Grant Scheme	Member	N/A	In Progress	3 years 6 months	01/06/2020	30/11/2023
Parental Perception Towards Utilization of General Dental Anaesthesia Among Children	Research University (RUI) Grant Scheme	Member	N/A	In Progress	3 years 6 months	01/01/2020	30/06/2023
Study on Interaction between Polymer Based Artificial Blood with Human Vascular Endothelial Cells	FRGS	Member	0	In Progress	3 years 3 months	01/09/2019	30/11/2022

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Research Creativity and Management Office

Canselori II

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T : (6)04 653 6527/6525
F : (6)04 653 6553/6554
L : www.research.usm.my

Ruj. Kami : VO0075
Tarikh : 6 Disember 2021

Puan Syarifah Zurina Binti Syed Salim
Penolong Bendahari Kanan
Seksyen Kewangan Penyelidikan
Jabatan Bendahari

Puan,

PERMOHONAN PENYALURAN PERUNTUKAN AGIHAN TAHUN KEDUA SUB PERTAMA BAGI SKIM GERAN PENYELIDIKAN PEMBANGUNAN PROTOTAIP (PRGS) 2.0

Dengan segala hormatnya saya merujuk kepada perkara di atas.

2. Dimaklumkan bahawa penyelidik Geran Pembangunan Prototaip (PRGS) 2.0 seperti yang dilampirkan adalah layak untuk menerima peruntukan bagi tahun kedua sub pertama berjumlah **RM124,000.00**. Selanjutnya dimohon kerjasama Puan untuk mengambil tindakan sewajarnya. (Sila rujuk lampiran agihan berkenaan)

3. Kerjasama dari pihak Puan amatlah dihargai dan saya akhiri dengan ucapan terima kasih.

Sekian, terima kasih.

"WAWASAN KEMAKMURAN BERSAMA 2030"
"BERKHIDMAT UNTUK NEGARA"
Saya Yang Menjalankan Amanah

IRNI SYUHADA BINTI IBRAHIM
Pegawai Penyelidik
Pejabat Pengurusan & Kreativiti Penyelidikan

s.k. Pengarah
Pejabat Pengurusan & Kreativiti Penyelidikan

Pengarah
Institut Perubatan Dan Pergigian Termaju

Prof. Madya Dr. Siti Noor Fazliah Binti Mohd Noor
Institut Perubatan dan Pergigian Termaju

Perincian Agihan Skim Geran Penyelidikan Pembangunan Prototaip (PRGS) 2.0 Tahun 2020

Kegunaan Pejabat		
Disediakan oleh	(Nur Anati Amirah Bt Mohd Kamal)	02.12.2021
Disemak oleh	(Irni Syuhada Bt Ibrahim)	02.12.2021

Jumlah Peruntukan yang diluluskan	**:**	**RM173,600.00**	**Ketua Projek**	**:**	**Profesor Madya Dr. Siti Noor Fazliah Binti Mohd Noor** *(Institut Perubatan Dan Pergigian Termaju)*
Agihan 2	**:**	**RM124,000.00**	**Tajuk Projek**	**:**	***In Vivo Evaluation of Bioglass-Polymer Composite Film Patch for Treatment of Mucosal Ulceration***
			Penaja	**:**	**Kementerian Pengajian Tinggi**
			Kluster/NIC	**:**	***Clinical & Health Sciences***
			Tempoh Geran	**:**	**24 Bulan (1 Disember 2020 – 30 November 2022)**
			No. Akaun	**:**	**203.CIPPT.6740075**

Agihan 2 Projek

Bil.	Vot USM	Agihan Sub 1 (RM)	Agihan Sub 2 (RM)
1.	**11000**	11,500.00	0.00
2.	**14000**	-	-
3.	**21000**	20,000.00	0.00
4.	**22000**	-	-
5.	**23000**	-	-
6.	**24000**	7,000.00	0.00
7.	**26000**	-	-
8.	**27000**	43,000.00	0.00
9.	**28000**	6,000.00	0.00
10.	**29000**	36,500.00	0.00
11.	**35000**	0.00	0.00
12.	**42000**	-	-
13.	**52000**	-	-
	JUMLAH DISALURKAN KE AKAUN	**124,000.00**	**0.00**

Keputusan : [/] **LULUS** [ ] **TIDAK LULUS**

Tandatangan: _____

PROF. DATO' IR. DR. ABDUL RAHMAN BIN MOHAMED,FASc.
Timbalan Naib Canselor
Penyelidikan dan Inovasi

Tarikh : 6/12/2021

Peralatan yang diluluskan:

Tiada

Bahagian Penyelidikan dan Inovasi
Division of Research and Innovation
Pejabat Pengurusan dan Kreativiti Penyelidikan
Research Creativity and Management Office

Canselori II

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11800 USM Pulau Pinang, Malaysia
T : (6)04 653 6527/6525
F : (6)04 653 6553/6554
L : www.research.usm.my

Tarikh : 3 Mac 2021

Profesor Madya Dr. Siti Noor Fazliah Binti Mohd Noor
Institut Perubatan & Pergigian Termaju
Universiti Sains Malaysia

YBrs. Profesor Madya Dr.,

PENGAKTIFAN SEMULA SKIM GERAN PENYELIDIKAN PEMBANGUNAN PROTOTAIP (PRGS) 2.0 TAHUN 2020

Dengan segala hormatnya saya merujuk kepada perkara di atas.

2. Untuk makluman YBrs. Dr., akaun Geran PRGS YBrs. Dr. seperti mana perincian di bawah telah **diaktifkan semula** berkuatkuasa pada **3 Mac 2021** berikutan penerimaan surat kelulusan dari Jawatankuasa Etika USM bertarikh 3 Mac 2021.

Ketua Projek	Profesor Madya Dr. Siti Noor Fazliah Binti Mohd Noor	PTJ	Institut Perubatan & Pergigian Termaju
Penyelidik bersama	1. Prof. Madya Ir. Ts. Dr. Zuratul Ain Abdul Hamid 2. Profesor Dr. Ahmad Sukari Bin Halim 3. Dr. Muhammad Azrul Bin Zabidi 4. Profesor Dr. Shaifulizan Bin Ab Rahman 5. Puan Evelyn Wong Su Moi	PTJ	1. Pusat Pengajian Kejuruteraan Bahan Dan Sumber Mineral 2. Pusat Pengajian Sains Perubatan 3. Institut Perubatan & Pergigian Termaju 4. Pusat Pengajian Sains Pergigian 5. Progene Link Sdn Bhd
Tajuk Projek	*In Vivo Evaluation of Bioglass-Polymer Composite Film Patch for Treatment of Mucosal Ulceration*		
No. Akaun	**203.CIPPT.6740075**	Peruntukan Diluluskan	**RM173,600.00**
Tarikh Mula	1 Disember 2020	Tarikh Tamat	30 November 2022

3. Berikutan itu, YBrs. Dr. boleh menjalankan penyelidikan seperti yang telah diperakui oleh pihak Kementerian.

Sekian, terima kasih.

"PRIHATIN RAKYAT: DARURAT MEMERANGI COVID-19"
"BERKHIDMAT UNTUK NEGARA"
Saya Yang Menjalankan Amanah,

(IRNI SYUHADA BINTI IBRAHIM)
Pegawai Penyelidik
Pejabat Pengurusan & Kreativiti Penyelidikan

s.k. Pengarah
Institut Perubatan & Pergigian Termaju

Penolong Bendahari Kanan
Seksyen Kewangan & Penyelidikan
Jabatan Bendahari

MOA

RESEARCH COLLABORATION AGREEMENT

BETWEEN

UNIVERSITI SAINS MALAYSIA

AND

PROGENE LINK SDN BHD

RESEARCH COLLABORATION ON IN VIVO ASSESSMENT OF BIOACTIVE GLASS-POLYMER COMPOSITE FILM PATCH FOR TREATMENT OF MUCOSAL ULCERATION

RESEARCH COLLABORATION AGREEMENT

THIS RESEARCH COLLABORATION AGREEMENT is made this 17 day of FEBRUARY 2021 (hereinafter referred to as "Agreement");

BETWEEN

UNIVERSITI SAINS MALAYSIA, a public institution of higher learning established under the Universities and University Colleges Act 1971, which for the purpose of this Agreement is represented by its Advanced Medical and Dental Institute, with its main campus at 11800 USM, Pulau Pinang, Malaysia (hereinafter referred to as "USM") of the first part;

AND

PROGENE LINK SDN BHD (Company no. 591013-H), a company incorporated and existing under the laws of Malaysia and having its business address at 21-1, Jalan USJ 1/33, USJ 1, 47620 Subang Jaya, Selangor, Malaysia (hereinafter referred to as "PROGENE") of the second part.

(USM and PROGENE shall hereinafter be collectively referred to as "Parties" and individually as "Party", where the context so requires)

WHEREAS

A. USM is Malaysia's premier research university which strives to enhance and strengthen its educational programs and has taken various initiatives to complement its educational excellence. With its research and teaching facilities, experience, and a multi-disciplinary team of experts from among its staff members, USM has entered into various collaborative arrangements with other parties in its efforts to enhance its research content and strengthen its industrial networking.

B. PROGENE is a small-medium enterprise company established in 2002 with experience in dealing with fabrication of patch films via electrospinning method. The company's strength is aligned with the interest of an advanced research institution like AMDI, USM that is well equipped to provide relevant expertise and services in biomaterial prototyping and animal testing.

C. USM and PROGENE are of the view that there are synergistic benefits to be derived for the Parties in this collaboration through sharing and further developing the knowledge and expertise of both Parties in relation to the Project (as hereinafter defined).

D. USM and PROGENE are desirous of formalizing this research collaboration by entering into this Agreement subject to the terms and conditions as stipulated herein.

IN WITNESS WHEREOF the Parties hereto have caused this Agreement to be signed on the day and year first above written.

SIGNED BY
For and on behalf of

UNIVERSITI SAINS MALAYSIA

.....

PROFESSOR DR. FAISAL RAFIQ MAHAMD ADIKAN, *FASc*
Vice-Chancellor

SIGNED BY
For and on behalf of

PROGENE LINK SDN BHD

.....

LIM BENG HOCK
General Manager

WITNESSED BY:

.....

PROFESOR DR. SYED AZHAR SYED SULAIMAN
Director
Advanced Medical and Dental Institute

WITNESSED BY:

.....

WONG SU MOI
Director

ORIGINAL

PERJANJIAN KERJASAMA

ANTARA

KERAJAAN MALAYSIA

(DIWAKILI OLEH AGENSI NUKLEAR MALAYSIA)

DENGAN

UNIVERSITI SAINS MALAYSIA

KERAJAAN MALAYSIA

IBU PEJABAT
LEMBAGA HASIL DALAM NEGERI MALAYSIA
MENARA HASIL
PERSIARAN RIMBA PERMAI
CYBER 8, 63000 CYBERJAYA
SELANGOR DARUL EHSAN

LHDN MALAYSIA

SIJIL SETEM

ASAL

STAMP CERTIFICATE

(Sila lekatkan sijil setem ini ke atas surat cara sebagai bukti penyeteman)
Please attach this stamp certificate to the instrument as evidence of stamping

Cara Bayaran *Payment Method* FPX TRANSACTIONS

No. Adjudikasi *Adjudication No.* G01C570DF1XP009

Jenis Surat Cara *Type Of Instrument* PERJANJIAN KERJASAMA
SURAT CARA UTAMA

Tarikh Surat Cara *Date Of Instrument* 12/05/2022

Balasan *Consideration* RM 0.00

Maklumat Pihak Pertama / Penjual / Pemberi *First Party / Vendor / Transferor / Assignor*
AGENSI NUKLEAR MALAYSIA, NO SYARIKAT 00000000

Maklumat Pihak Kedua / Pembeli / Penerima *Second Party / Purchaser / Transferee / Assignee*
UNIVERSITI SAINS MALAYSIA, NO SYARIKAT 00000000

Butiran Harta / Suratcara *Property / Instrument Description*

Dengan ini disahkan surat cara ini disetem dan diindors seperti maklumat di bawah:
This is to certify this instrument is stamped and indorsed as below:

No. Sijil Setem *Stamp Certificate No.*	P0090A220744294
Tarikh Penyeteman *Date of Stamping*	26/05/2022
Duti Setem Dikenakan *Amount of Stamp Duty*	RM 10.00
Penalti *Penalty*	RM 0.00
Pelarasan *Adjustment*	RM 0.00
Jumlah Dibayar *Total Amount Paid*	RM 10.00
Indorsemen *Indorsement / Akta Setem 1949)*	Seksyen 37

Pemungut Duti Setem

No. Kelulusan Perbendaharaan *Treasury Approval No. :* KK/BSKK/10/600-2/1/2(60)

Tarikh Cetak *Printed Date : 26/05/2022 01:29:04*

Pengesahan ketulenan Sijil Setem ini boleh dipastikan di stamps.hasil.gov.my atau melalui aplikasi telefon pintar
The authenticity of this Stamp Certificate can be verified at stamps.hasil.gov.my or by mobile app
Ini adalah cetakan komputer dan tidak perlu ditandatangani
This is a computer generated printout and no signature is required

--- tamat/end ---

PERJANJIAN INI dibuat pada DUA BELAS (12) hari bulan MEI 2022

ANTARA

KERAJAAN MALAYSIA yang bagi maksud Perjanjian ini diwakili oleh Agensi Nuklear Malaysia, Kementerian Sains, Teknologi, dan Inovasi yang beralamat di Agensi Nuklear Malaysia, Bangi, 43000 Kajang, Selangor Darul Ehsan (selepas ini dirujuk sebagai "**Kerajaan**") bagi satu pihak;

DENGAN

UNIVERSITI SAINS MALAYSIA, sebuah institusi pengajian tinggi awam yang ditubuhkan di bawah Akta Universiti dan Kolej Universiti 1971 [*Akta 30*] yang beralamat di Universiti Sains Malaysia, Aras 6, Bangunan Canselori, 11800 USM, Pulau Pinang (selepas ini dirujuk sebagai "**Universiti**") bagi pihak yang satu lagi.

Kerajaan dan Universiti boleh dirujuk secara berasingan sebagai "Pihak" dan secara kolektifnya sebagai "Pihak-Pihak"

BAHAWASANYA –

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Kementerian Sains, Teknologi Dan Inovasi

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Slitup©

Composite film patch for soft tissue regeneration

An Emerging Healthcare Product

Our Team Members


Assoc. Prof. Dr. Siti Noor Fazliah Mohd Noor


Assoc. Prof. Ir. Dr. Zuratul Ain Abdul Hamid


Dr. Muhammad Azrul Zabidi


Evelyn Wong

Dr. Mamun Khan Sujon

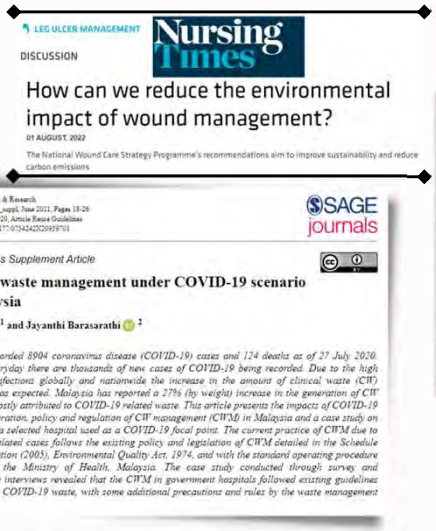
Ruzalina Baharin

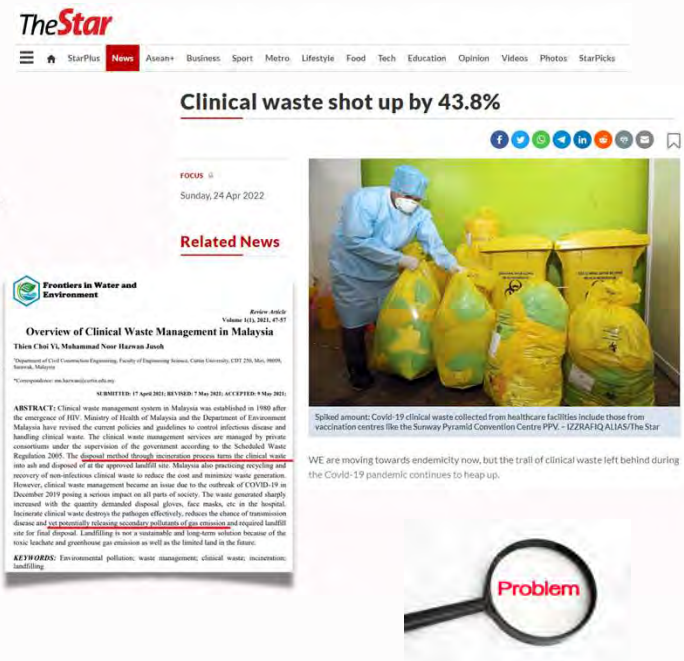
Siti Fatimah Samsurrijal

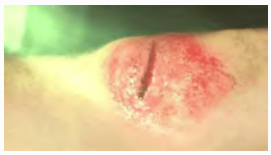
Dr. Nawal Radhiah Abdul Rahman

Non-resorbable

patch







Difficulty in finding resorbable product while at the same time able to regenerate tissue

PROBLEM STATEMENT

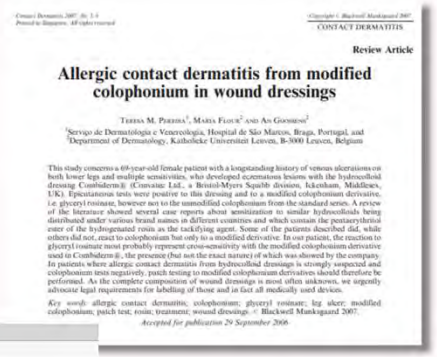
PROBLEM STATEMENT

WILEY CONTACT DERMATITIS

ORIGINAL ARTICLE

Allergic contact dermatitis caused by acrylic-based medical dressings and adhesives

Lien Mestach | Sara Huygens | An Goossens | Liesbeth Gilissen



CONTACT DERMATITIS

Review Article

Allergic contact dermatitis from modified colophonium in wound dressings

PubMed.gov

Case Reports > Pediatr Dermatol. 2020 May;37(3):510-511. doi: 10.1111/pde.14084. Epub 2020 Jan 24.

Allergic contact dermatitis caused by wound closure tape in a pediatric patient

Idy Tam, JiaDe Yu

Affiliations + expand

PMID: 31975451 DOI: 10.1111/pde.14084

Abstract

Wound care products are emerging as causes of allergic contact dermatitis (ACD). There are increasing reports of ACD to certain medical adhesives; however, there are no published reports of contact sensitization solely due to wound closure tape such as Steri-Strips™. Herein, we present the first confirmed case of ACD in a child caused by wound closure tape.

Keywords: acrylates; adhesives; allergic contact dermatitis; patch testing; wound closure tape; wound dressing.

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Clinical waste has reportedly increased by 27% since Covid-19

Image from The Star

Before we get into the other stuff, let's start with: **what's clinical waste**?

Clinical waste is ultimately **scraps that come from healthcare activities or within a laboratory**, and can potentially **threaten human health or even the environment** if exposed. The waste can include things like **syringes, bandages, gloves, blood bags, organs, and personal protective equipment (PPE)**, as long as they:

11 SUSTAINABLE CITIES AND COMMUNITIES

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

3 GOOD HEALTH AND WELL-BEING

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Clinical waste shot up by 43.8%

FOCUS

Sunday, 24 Apr 2022

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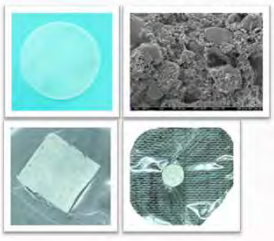
Spiked amount: Covid-19 clinical waste collected from healthcare facilities include those from vaccination centres like the Sunway Pyramid Convention Centre PPV. – IZZRAFIQ ALIAS/The Star

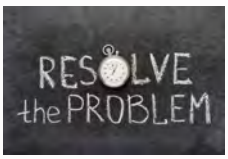
WE are moving towards endemicity now, but the trail of clinical waste left behind during the Covid-19 pandemic continues to heap up.

SLITUP

Advanced Wound Dressing

KPT's Niche Areas: ADVANCED MATERIALS

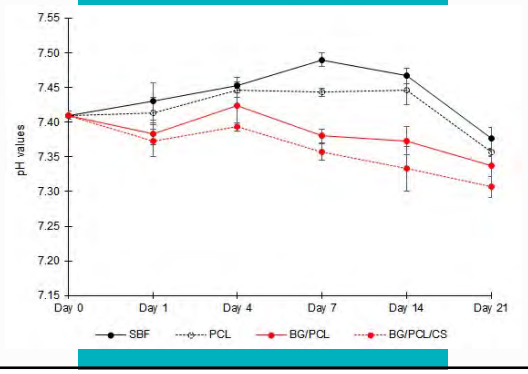




Product Milestone

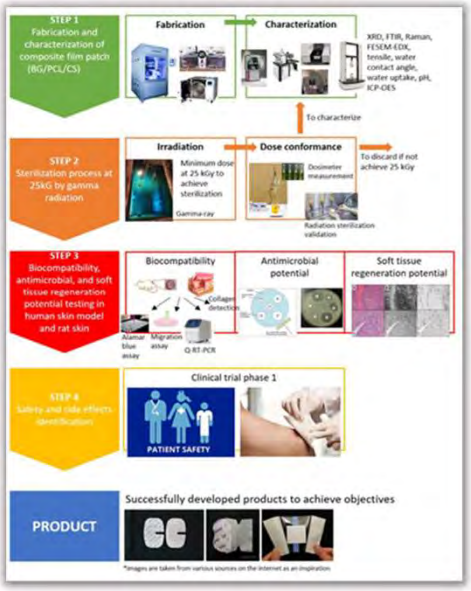
Fabrication Process

- Solvent casting
- Low-cost method
- Small scale manufacturing
- Can be upgraded using electrospinning
- Stable pH in simulated body fluids



Sterilisation Process

- Sterilisation through gamma irradiation at Malaysian Nuclear Agency
- Ionic elements important for soft tissue regeneration



International Journal of Molecular Sciences

MDPI

Review

The Role of Calcium in Wound Healing

Thayaalini Subramaniam, Mh Busra Fauzi, Yogeswaran Lokanathan and Jia Xian Law

Centre for Tissue Engineering and Regenerative Medicine, Universiti Kebangsaan Malaysia Medical Centre, Cheras, Kuala Lumpur 56000, Malaysia; subramaniamthayaalini@gmail.com (T.S.); fauzibusra@ukm.edu.my (M.B.F.); lyogesh@ppukm.ukm.edu.my (Y.L.)
* Correspondence: lawjx@ppukm.ukm.edu.my; Tel.: +60-3-9145-7677

Abstract: Skin injury is quite common, and the wound healing is a complex process involving many types of cells, the extracellular matrix, and soluble mediators. Cell differentiation, migration, and proliferation are essential in restoring the integrity of the injured tissue. Despite the advances in science and technology, we have yet to find the ideal dressing that can support the healing of cutaneous wounds effectively, particularly for difficult-to-heal chronic wounds such as diabetic foot ulcers, bed sores, and venous ulcers. Hence, there is a need to identify and incorporate new ideas and methods to design a more effective dressing that not only can expedite wound healing but also can reduce scarring. Calcium has been identified to influence the wound healing process. This review explores the functions and roles of calcium in skin regeneration and reconstruction during would healing. Furthermore, this review also investigates the possibility of incorporating calcium into scaffolds and examines how it modulates cutaneous wound healing. In summary, the preliminary findings are promising. However, some challenges remain to be addressed before calcium can be used for cutaneous wound healing in clinical settings.

Keywords: calcium; skin; wound healing; fibroblast; keratinocyte

1. Introduction

Wound healing is a complex process aimed at restoring the damaged skin to pre-serve tissue f

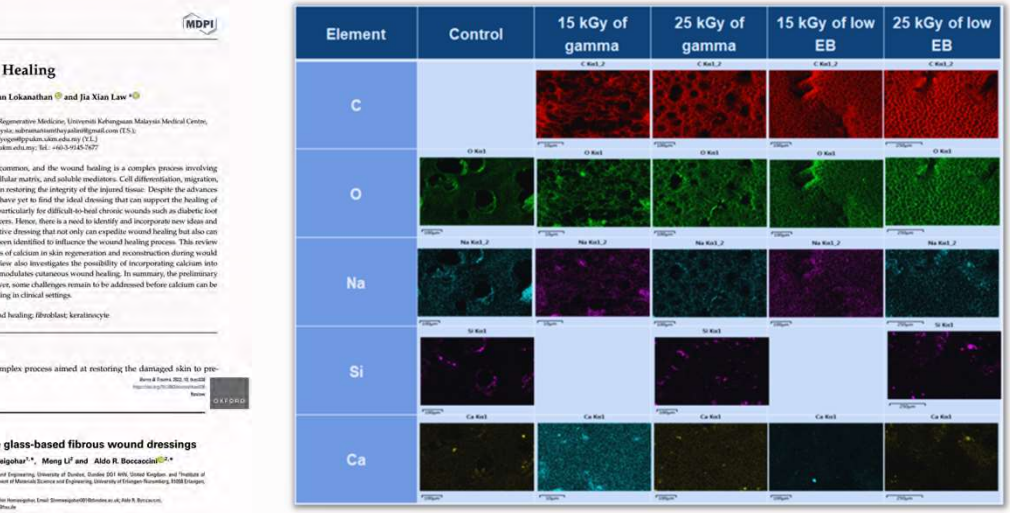
Review

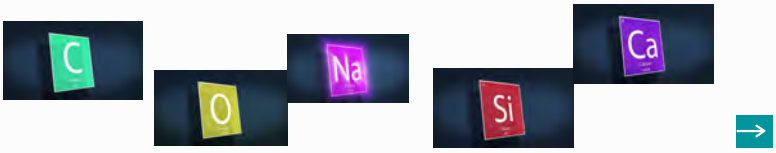
Bioactive glass-based fibrous wound dressings

Shahin Homaeigohar, Meng Li and Aldo R. Boccaccini

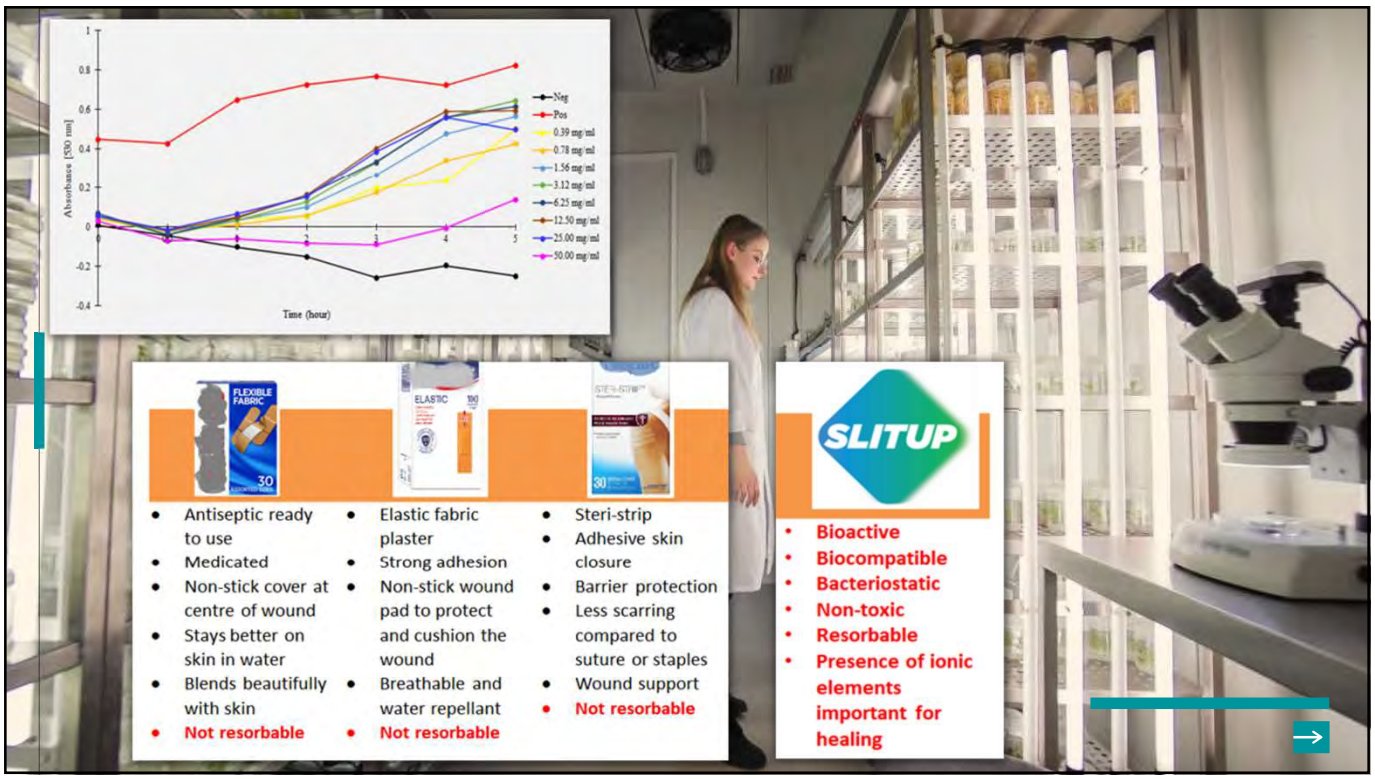
Abstract

Highlights






SLITUP
Composite Film Patch for
soft Tissue Regeneration


Absorbance [530 nm]
Time (hour)
Neg
Pos
0.39 mg/ml
0.78 mg/ml
1.56 mg/ml
3.12 mg/ml
6.25 mg/ml
12.50 mg/ml
25.00 mg/ml
50.00 mg/ml
FLEXIBLE FABRIC
ELASTIC
• Antiseptic ready to use
• Medicated
• Non-stick cover at centre of wound
• Stays better on skin in water
• Blends beautifully with skin
• Not resorbable
• Elastic fabric plaster
• Strong adhesion
• Non-stick wound pad to protect and cushion the wound
• Breathable and water repellant
• Not resorbable
• Steri-strip
• Adhesive skin closure
• Barrier protection
• Less scarring compared to suture or staples
• Wound support
• Not resorbable
SLITUP
• Bioactive
• Biocompatible
• Bacteriostatic
• Non-toxic
• Resorbable
• Presence of ionic elements important for healing

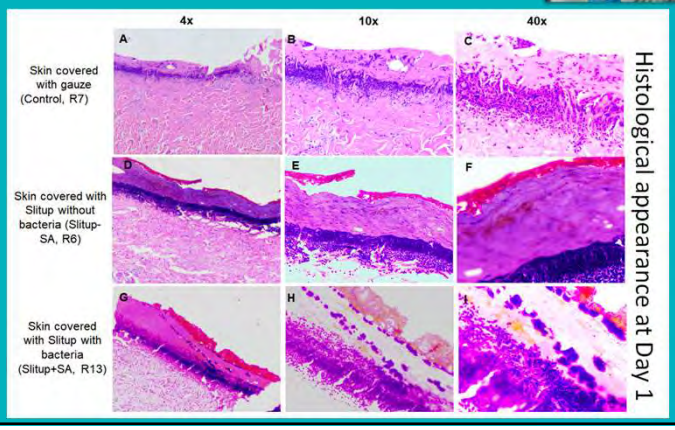
- Safe to use
- Slitup contains natural and synthetic products that is FDA approved

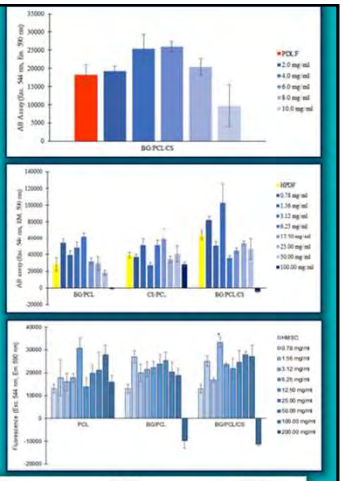
- Oral ulcer
- Oral CA
- Skin ulceration
- Diabetic foot ulcer
- Trauma / Cuts
- Guided tissue regeneration of periodontal problems

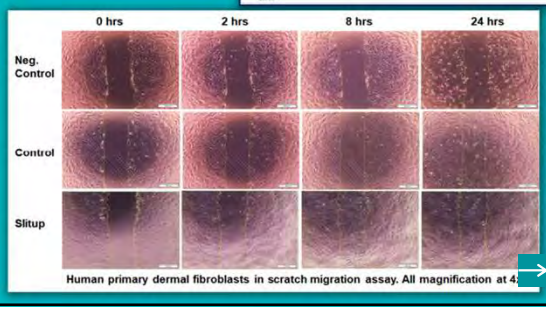
- Clean
- Gamma radiation for sterilisation

TRL 6: Demonstration in real environment

In vitro and in vivo studies







Human primary dermal fibroblasts in scratch migration assay. All magnification at 4

frontiers in Bioengineering and Biotechnology

Selection of Appropriate Wound Dressing for Various Wounds

Chenyu Shi, Chenyu Wang, He Liu, Qiuju Li, Ronghang Li, Yan Zhang, Yuzhe Liu, Ying Shao and Jincheng Wang

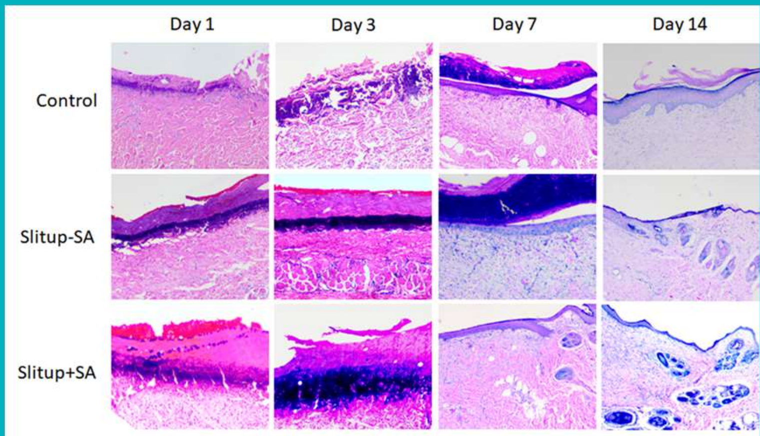
OPEN ACCESS

There are many factors involved in wound healing, and the healing process is not static. The therapeutic effect of modern wound dressings in the clinical management of wounds is documented. However, there are few reports regarding the reasonable selection of dressings for certain types of wounds in the clinic. In this article, we retrospect the history of wound dressing development and the classification of modern wound dressings. In addition, the pros and cons of mainstream modern wound dressings for the healing of different wounds, such as diabetic foot ulcers, pressure ulcers, burns and scalds, and chronic leg ulcers, as well as the physiological mechanisms involved in wound healing are summarized. This article provides a clinical guideline for selecting suitable wound dressings according to the types of wounds.

Keywords: wound, wound healing, wound dressing, clinical application, physiological mechanism

INTRODUCTION

Physical or thermal damage can cause defects or interruptions in the epidermis of the skin or mucous membranes, forming a wound. Wounds are classified as acute or chronic wounds. Acute wounds can recover in a short period of time. The size, depth, and degree of injury of the wound are factors that influence the healing process. However, the healing process of chronic wounds is longer and different from that of acute wounds. The healing of acute wounds occurs in a normal, orderly and timely manner throughout the entire process. However, the repair of chronic trauma in this fashion is challenging, and it is difficult to restore normal anatomical structure and function.



Magnification 4x for all images

Animal Ethics Approval No: USM/IACUC/2021/(EXP)/(1137)

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REFERENCE NO :- TS/IO/2021/133

NAME OF PRINCIPAL INVENTOR :- ASSOC. PROF. DR. SITI NOOR FAZLIAH BINTI MOHD NOOR

TITLE :- BG/PCL/CS COMPOSITE FILM PATCH

SCHOOL/CENTRE/DEPARTMENT :- ADVANCED MEDICAL AND DENTAL INSTITUTE

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TEL :- EXT 84 2393

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I hereby declare that I have received and perused all the above mentioned documents submitted to Centre for Innovation & Consultation

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ZULKARNAIN MUHAMMAD
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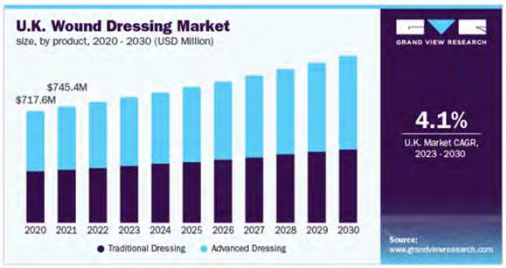
(Agensi di bawah Kementerian Perdagangan Dalam Negeri dan Hal Ehwal Pengguna)

Commercial Potential

Global Advanced Wound Dressings Market Insights:

The global Advanced Wound Dressings market size is predicted to grow $8,460.8 million by 2026, exhibiting a CAGR of 4.6% during the forecast period. Advanced Wound Dressings is treatment applied to treat complex wounds to treat and heal wound from harm.



Malaysian market

- Veterinary
- Palliative care ward
- Stoma clinic
- Chemists/Pharmacists
- Stores with OTC
- Hospitals & hospital dispensaries
- Supermarkets
- Mass merchandise
- Online retail

COST STRUCTURE

Raw Materials → Renting of production facilities → Manufacturing cost → Distribution & supplies → Sales & marketing

REVENUE STREAMS

- Additional protective resorbable protective membrane
- Reduce the need for suturing

Product enhancement

Partnership commission

- Dropship agents
- Distributors

Sales of products

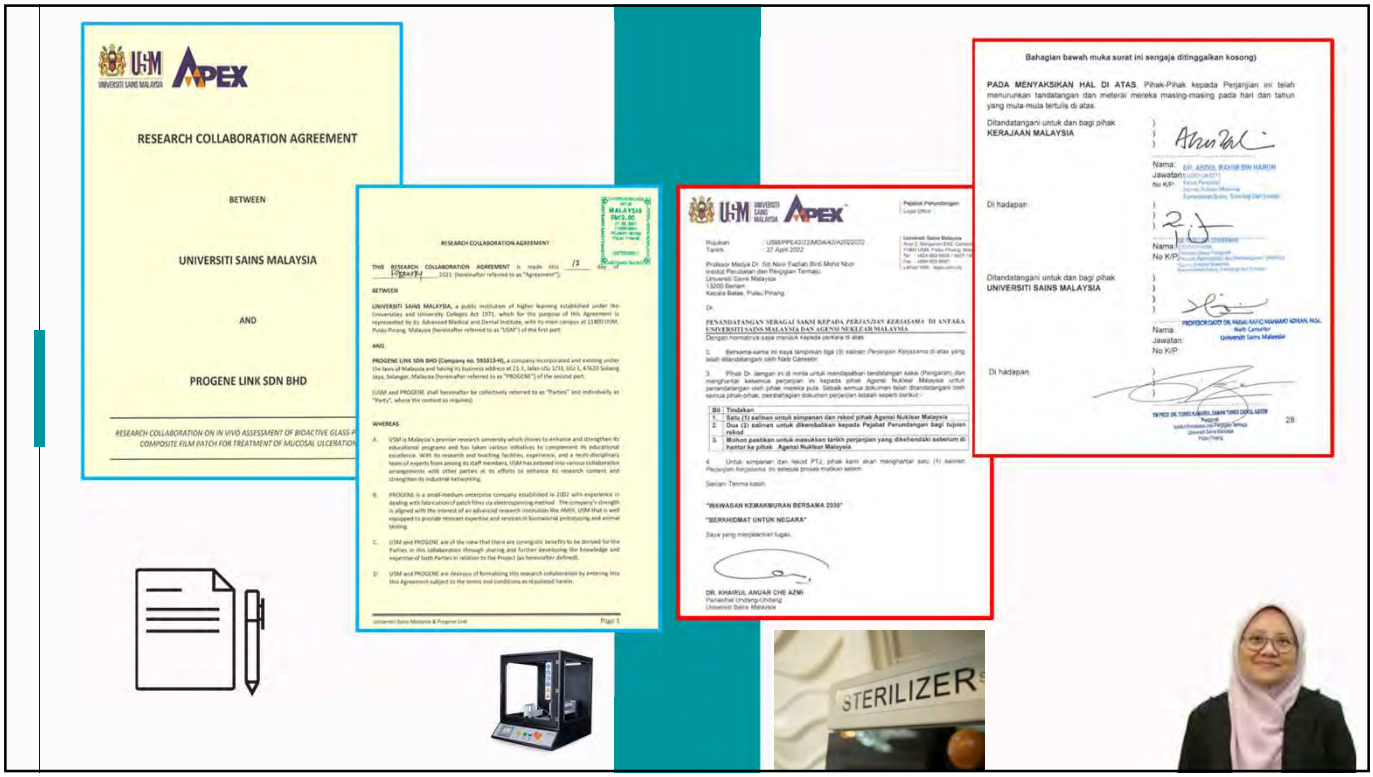
- Competitor product (4cm x 7cm) priced at RM720.00 (USD$160.00)
- SLITUP (6cm x 6cm) affordable price at RM15.00

Consultation

- Face to face and online application guide
- Knowledge enhancement

Testing and customer feedbacks

- Face to face and online feedbacks
- Scheduled visitation where applicable



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Project No. PRGS/2/2020/SKK07/USM/02/2
Amount: RM173,600.00

Human Capital Development:

Research Assistant: 1
PhD student: 1

AIP Conf Proceedings 2020;2267:020059

Related Publications

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57207730558	GNH-2924-2022
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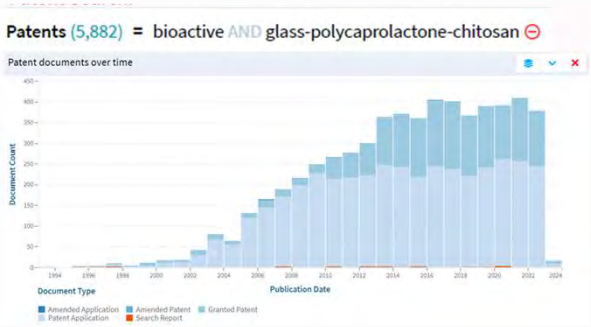

Publications:

IFMBE Proceedings 2022;86:511-518

01

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Journal of Tissue Viability

The prevalence and associated factors of skin tears in Belgian nursing homes: A cross-sectional observational study

Hanne Van Tiggelen, Nele Van Damme, Sofie Theys, Eline Vanheyste, Sofie Verhaeghe, Kimberly LeBlanc, Karen Campbell, Kevin Woo, Ann Van Hecke, Dimitri Beeckman

ARTICLE INFO

ABSTRACT

1. Introduction

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- Coronavirus (COVID-19) News (2,518)

Advanced Wound Care Management Market: Rising Prevalence of Chronic Wounds to Drive the Market

Published: Aug 12, 2022

Wilmington, Delaware, United States, Transparency Market Research Inc. – According to a research report by the Transparency Market Research, the global advanced wound care management market was evaluated at US$ 8,531 million in the year of 2017 and the industry is set to grow at a steady CAGR of 5.8 % during the forecast period of 2018 to 2026.

The research authors at Transparency Market Research project that the global advanced wound care management market will expand to reach the evaluation of US$ 14.05 billion by the end of the forecast period i.e. 2026. Key reasons behind this upward trajectory are increasing prevalence of chronic wounds, rising patient awareness, increasing need for treating complex wounds, technological advancements in healthcare and medical industries, and increase in the healthcare expenditure.

P307

Telemedicine consultation for patients with chronic wounds especially pressure ulcers

CrossMark

N. Salles, J. Jenn, M. Barateau, O. Sarry, K. Libert, M. Baudinet, M. Rainfray

Pôle de gérontologie clinique, hôpital Xavier-Arnozan, CHU de Bordeaux, Bordeaux, France

http://dx.doi.org/10.1016/j.eurger.2013.07.371

02

Encyclopedia of Materials: Plastics and Polymers

Volume 4, 2022, Pages 717-733

Current Trends in the Development of Wound Dressings, Biomaterials and Devices

Ahana Banerjee, Jayanta Bhattacharyya

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Abstract

Wound repair and regeneration of structurally and functionally active tissues is extremely challenging and comprise of one of the major developing sectors in the healthcare industry. Under normal circumstances wound healing proceeds through the four overlapping phases of hemostasis, inflammation, proliferation, and remodeling; however, for chronic cases, the healing stalls owing to the presence of repeated external stimuli and existing micro-environmental anarchy at the wound site. Persistent problems in the healing of chronic wounds lead to ulceration and, under severe circumstances

COMPREHENSIVE INVITED REVIEW

WHS

Wound Dressings and Comparative Effectiveness Data

Aditya Sood, Mark S. Granick, and Nancy L. Tornetta

SCOPE AND SIGNIFICANCE

Impact of product

03

04

Impact of product

New Economic Model

- IMPROVED RAKYAT QUALITY OF LIFE
- ENTREPRENEURIAL AND INNOVATIVE
- SUSTAINABILITY
- HIGH INCOME
- JOB CREATION

05

Impact of product


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