November 2011

TYGER land

Fakulteit Gesondheidswetenskappe
Faculty of Health Sciences
Universiteit ▪ Stellenbosch ▪ University

Kinderkanker in Afrika

Genetiese sifting vir borskanker

Community Psychiatry in the 21st century

The devastation of foetal alcohol syndrome

Mother and Child

by Patrick W Hunt

We would like to extend a word of gratitude to Mr. Hunt for his kind permission to use this painting on the cover.
http://patrick-hunt.fineartamerica.com

Biography: Patrick W. Hunt was born on the island of Jamaica and immersed himself in the West Indian and African Culture. He was influenced by both his love of art and music. Patrick grew up listening to music and took piano lessons at the age of six. The most pivotal time for Patrick's development as a painter began when he immigrated to the United States at the age of 13 and began taking art classes in high school. Patrick attended Pratt Institute in Brooklyn, New York for a year prior to enlisting in the U.S. Navy. He lived in Hawaii and other parts of the Pacific and toured many of the islands during this period. During his travels Patrick became a true lover of painting. His use of oils, acrylics and water colors, shows in his works the years he has spent on mastering his craft.
This richness of Patrick's background, coupled with his relative artistic exposure to the globe have been formative to Patrick's work. The paintings are stylistically distinctive and rooted in his West Indian/African background. His paintings are representative of his understanding of world cultures, whether depicting an individual, a group, landscapes, animals, or pieces which represents the places he has visited or places he dreams of visiting some day: they all represent his love for and respect of the vibrant cultures which has been critical in the development of his unique artistic vision. His favorite painters are: Georgia O'Keeffe, Claude Monet, Norman Rockwell and the list goes on..
Patrick's work has been acquired by private collectors and Merck Pharmaceutical through Swain's Gallery of Plainfield, NJ. He recently granted permission to Harvard Medical Research Group to use his 'African Double Mask' painting for promotional purposes for a Symposium entitled 'The Forgotten Epidemic HIV/AIDS Crisis in Black America'.

TYGER land

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Tygerland word uitgegee deur die Afdeling Bemarking en Kommunikasie van die Universiteit Stellenbosch se Fakulteit Gesondheidswetenskappe. Die tydskrif word gratis aan oudstudente van die fakulteit en ander belanghebbendes gestuur. Indien u kommentaar wil lewer op die inhoud van die tydskrif, of voorstelle maak ivm toekomstige uitgawes, kontak ons gerus. Indien u *Tygerland* gratis wil ontvang, kontak Mandi Barnard, Fakulteit Gesondheidswetenskappe, Posbus 19063, Tygerberg, 7505. Tel: 021 938 9505
Faks: 021 931 0088
epos: tygermar@sun.ac.za

Foto (regs bo):
In die middel van die foto is die Tygerbergkampus se grys Fakulteitsgeboue reg voor die bruin geboue van die Tygerberg Akademiese Hospitaal en regs in die voorgrond is die Karl Bremer-hospitaal. Anton Jordaan, SFD

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From the Dean's desk

This issue of *Tygerland* provides an opportunity to look back on the past year and forward to some of the opportunities and challenges that lie ahead in 2012 and beyond.

Institutional culture

People first! This is one of the core values underlying my strategic vision for the Faculty. It is my firm belief that when people feel valued they are motivated to add value. For this reason I pledged at the start of my term as dean to promote an inclusive environment where a diverse community of students and staff feel supported, respected, acknowledged and valued.

In keeping with this goal, the Faculty's Marketing and Communication office has been restructured and its orientation is being changed from being primarily a disseminator of information to one which supports relationship building and responsiveness to peoples' needs. It is our intention to provide mechanisms to ensure that everyone is able to have their voice heard. We are not there yet, but the process has begun. One recent initiative introduced is an independent equality impact assessment of the student experience aimed at determining where issues of Equality, Diversity & Transformation (ED&T) has helped or hindered student progress. I would like to take this opportunity to thank all students and staff who participated in this important exercise. The initial findings of the ED&T assessment are being studied prior to wider dissemination and a follow up programme and strategic action plan will be initiated in 2012. In addition, a faculty committee has been established to advise on the implementation of a health and wellness initiative and further plans in this regard will be announced in the new year.

In addition, we are encouraging people to do more to care for our planet. As a Faculty we wish to provide leadership in terms of responding to the challenges of climate change and sustainable development. Our annual tree planting ceremony was very well attended this year despite the inclement weather at the start of spring. We are grateful to the faculty's Green Committee for compiling a report on "Greening up the campus". The report

Prof Jimmy Volmink

Van die Dekaan se lessenaar

Hierdie uitgawe van *Tygerland* bied geleentheid tot 'n terugblik na die afgelope jaar en ook 'n vooruitskouing na die geleenthede en uitdagings wat 2012 inhou.

Institusionele kultuur

Mense eerste! Dit is een van die kernwaardes wat my strategiese visie vir die Fakulteit onderskryf. Ek glo vas dat mense wat gewaardeer voel, gemotiveer is om waarde toe te voeg. Dit is om hierdie rede dat ek aan die begin van my termyn as dekaan onderneem het om 'n inklusiewe omgewing te bevorder waar 'n diverse gemeenskap van studente en personeel voel dat hulle ondersteun, gerespekteer, erken en gewaardeer word.

In ons strewe om hierdie doelwit te bereik, is die Fakulteit se Bemarkings- en Kommunikasiekantoor geherstruktureer. Die fokus van dié kantoor word tans uitgebrei van onder meer inligtingsvoorsiening tot 'n meer omvattende rol in terme van die bou van deelnemende verhoudings.

Ons plan is ook om meganismes, wat sal verseker dat almal bemagtig word om hulle stem te laat hoor, daar te stel. Ons is nog nie daar nie, maar die proses is in werking gestel. Een onlangse inisiatief in hierdie verband is 'n onafhanklike gelykheidsimpak-assessering van die student se ervaring, gemik daarop om te bepaal waar kwessies van Gelykheid, Diversiteit en Transformasie (GD&T) studentevooruitgang aangehelp of benadeel het. Ek maak graag van hierdie geleentheid gebruik om alle studente en personeel wat aan dié belangrike proses deelgeneem het, te bedank. Die eerste bevindings van die GD&T assessering word tans bestudeer, en 'n opvolgprogram sowel as strategiese aksieplan sal in 2012 ingestel word. 'n Verdere stap is die daarstelling van 'n Fakulteitskomitee wat ons sal adviseer oor die gesondheid- en welweesinisiatief en verdere planne hieroor sal in die nuwe jaar aangekondig word.

Ons wil graag mense aanmoedig om meer vir die planeet om te gee. As Fakulteit wil ons leierskap bied rakende hoe ons as samelewing reageer op die uitdagings van klimaatsverandering en volhoubare ontwikkeling. Ons jaarlikse boomplantdag is goed ondersteun ten spyte van die gure weer aan die begin van die lente. Ons het waardering vir die

highlights issues relating to energy and water consumption as well as the assessment of travel, food and land use. It contains several attainable recommendations for improving our carbon footprint.

Core business

Our Faculty has continued to achieve the high levels of performance that has come to be expected of us. We currently enjoy the best undergraduate success rate at the university and our researchers continue to excel in terms of research outputs, grant income and visibility. However, as we strive for both global excellence as well as local relevance we might ask: how do our programmes shape up in relation to these twin goals?

During the past 12 months two important articles focussing on the training of health professionals appeared in one of the world's leading medical journals, *The Lancet*. The first, submitted by a Global Commission consisting of academic and professional leaders, notes that the education of health professionals has not kept up with the challenges of the 21st century and calls for various institutional and instructional reforms to promote transformative learning and interdependence in education that will lead to more equitable and better functioning health care systems. The second paper reports the findings of the sub-Saharan African Medical School Study providing information on the key challenges, innovations and trends in medical education in the region.

These articles provide rich material for comparison, reflection and debate. They leave no doubt regarding our privileged position as a health sciences training institution in comparison to many others in respect of numbers and quality of staff, infrastructure, systems and other resources. They also provide reassurance that many of the educational reforms that are currently underway at our Faculty are in line with international thinking and trends. Foremost among these reforms are our focus on community-based education, the promotion of a patient-centred, a caring and ethical approach to patients and defined graduate attributes, including social responsibility and community responsiveness.

The Faculty is continuously striving to strengthen its rural and district based training of undergraduate health professionals and general medical specialists, thereby equipping practitioners to respond to the unique needs of patients and communities in South African and other African settings. This year our Rural Clinical School (RCS) - a partnership venture with the Provincial Government of the Western Cape - supported by funding from the University's HOPE Project and the Medical Educational Partnership Initiative (MEPI) grant from the US government, was fully established. The RCS enabled the first cohort of 6th year MB,ChB students to have a full year of training in Worcester and surrounding areas. We are delighted to report that this group of students not only expressed a high level of satisfaction with their training but excelled in their final examinations. We are currently seeking to further develop educational innovations, many of these contained in the recommendations of the Global Commission report, such as curriculum

Fakulteit se Groenkomitee se verslag getiteld "Die vergroening van die kampus". Dié verslag fokus op kwessies wat verband hou met energie- en waterverbruik, sowel as die assessering van vervoer, voedsel en grondverbruik. Dit bevat verskeie haalbare voorstelle om ons koolstofvoetspoor te verbeter.

Kernbesigheid

Ons Fakulteit handhaaf deurentyd hoë vlakke van werkverrigting soos van ons verwag. Ons het die beste voorgraadse suksessyfer aan die universiteit en ons navorsers presteer deurlopend uitstekend ten opsigte van navorsingsuitsette, befondsingsinkomste en sigbaarheid. Maar, terwyl ons streef na beide globale uitnemendheid en plaaslike toepaslikheid, kan ons vra: hoe ontwikkel ons programme in verhouding met dié tweelingdoelwitte?

Gedurende die afgelope 12 maande het twee belangrike artikels wat fokus op die opleiding van gesondheidspraktisyns in een van die wêreld se voorste mediese vaktydskrifte, *The Lancet*, verskyn. Die eerste, ingedien deur 'n Wêreldkommissie bestaande uit akademiese en professionele leiers, voer aan dat die opleiding van gesondheidspraktisyns nie tred gehou het met die uitdagings van die 21ste eeu nie. Dit dui op die noodsaaklikheid van verskeie institusionele- en onderrigshervormings om herskeppende leer en interafhanklikheid in opleiding te bevorder, wat sal lei tot gesondheidsorgstelsels wat meer doeltreffend en vir meer mense werk. Die tweede artikel doen verslag oor die bevindings van die sub-Sahara Afrika Mediese Skoolstudie wat inligting verskaf oor die hoofuitdagings, -ontwikkelings en -neigings in mediese opleiding in die streek.

Hierdie artikels bied uitstekende materiaal vir vergelyking, besinning en debat. Dit laat geen twyfel oor die bevoorregte posisie waarin ons onsself bevind as 'n opleidingsinstansie in gesondheidswetenskappe in vergelyking met baie ander in terme van die aantal en kwaliteit van personeel, infrastruktuur, stelsels en ander hulpbronne nie. Dit bevestig ook dat baie van die opleidingshervormings wat tans by die FGW plaasvind, belyn is met internasionale denkwyses en neigings. Die belangrikste hiervan is ons fokus op gemeenskapsgebaseerde opleiding, die bevordering van 'n pasiëntgesentreerde, versorgende en etiese benadering tot pasiënte en spesifiek omskryfde graduant-eienskappe, insluitend sosiale verantwoordelikheid en 'n deelnemende ingesteldheid teenoor gemeenskapsbetrokkenheid.

Die Fakulteit streef deurlopend daarna om sy landelike en distriksgebaseerde opleiding van voorgraadse gesondheidspraktisyns en algemene mediese spesialiste te versterk, en daardeur praktisyns toe te rus om te reageer op die unieke behoeftes van pasiënte en gemeenskappe in Suid-Afrika en ander Afrika-omgewings. Vanjaar is ons Landelike Kliniese Skool (LKS) - 'n vennootskap met die Provinsiale Regering van die Wes-Kaap wat ondersteun word deur befondsing van die universiteit se HOOP Projek en die *Medical Educational Partnership Initiative (MEPI)* toekenning van die VS-regering, volledig ingestel. Die LKS het die eerste groep van sesdejaar MB,ChB studente die geleentheid gebied om 'n volle jaar opleiding in Worcester en omliggende omgewings te deurloop. Ons is bly om verslag te kan doen dat hierdie groep baie tevrede was in terme van hul belewenis van die opleiding en boonop besonder goed in hul finale eksamens gevaar het. Ons is tans besig om onderrig-innovasies - waarvan baie as aanbevelings in die Wêreldkommissie

reform, interprofessional education, with an emphasis on the health team, e-learning and evidence-based practice. Recently the national Minister of Health requested that Faculties of Health Sciences increase their intake of first year medical students by 40 on an ongoing basis. While we support this move we have indicated that a number of staff, infrastructure and training platform-related issues would have be addressed to make this increase possible. Despite the strong track record of research in the Faculty we believe that a thorough review of our research is long overdue and accordingly an external review has been commissioned which will commence early in 2012. This review should help us gain a deeper understanding of the areas of our research excellence, but also identify areas that are in need of development and renewal. A decision has been taken to invest more intensively in the recruitment and support of PhD students and postdoctoral fellows during the coming years as these two cohorts are internationally regarded as being key drivers of research output and expansion. A specific goal is to double the number of PhDs graduates from the FHS over the next 5 years. This will require intensive efforts to increase postgraduate student recruitment and to strengthen supervisory capacity.

Value recognition

Is our excellence being recognised? I am pleased to report that again this year our students, researchers and teachers have been again widely acknowledged both on the home front as well as abroad. Our research has been reported or featured in leading journals such as the *New England Medical Journal* and *Science*. Furthermore, new partnerships have been established with such illustrious academic institutions as Sweden's Karolinska Institute (KI), with which an agreement to offer joint SU/KI PhDs is being concluded, as well as Makerere University in Uganda. One example of a partnership with the private sector is the Clinical Science Workshop jointly hosted with Novartis this year. Furthermore, our Faculty is extremely pleased to have been identified in a competitive bid as the host for two African Network for Drugs and Diagnostics Innovation (ANDI) Centres by the World Health Organization. The Department of Biomedical Sciences will host a Centre of Excellence in TB Translational Research and the Centre for Infectious Diseases (CID) has been selected as the ANDI Centre of Excellence for HIV Translational Research. These are but a few selected examples of the wide and growing recognition our Faculty is enjoying in South Africa and globally.

Finally, allow me to thank you all for your support during the past year. It is encouraging to know that your ongoing dedication and hard work can be relied upon to continuously raise the standards of performance of the Faculty of Health Sciences. I hope you will all soon enjoy a relaxing festive season with friends and family.

Yours sincerely,

Prof Jimmy Volmink
Dean

se verslag vervat is - verder te ontwikkel. Dit sluit in kurrikulumhervorming, interprofessionele opleiding met die klem op die gesondheidsplan, e-leer en bevordering van die bewysgebaseerde praktyk. Die nasionale Minister van Gesondheid het onlangs versoek dat Gesondheidswetenskappe Fakulteite hulle inname van eerstejaar mediese studente met 40 vermeerder op 'n voortgesette basis. Alhoewel ons hierdie versoek ondersteun, is daar 'n aantal kwessies in terme van personeel, infrastruktuur en die opleidingsplatform wat eers aangespreek sal moet word om dit moontlik te maak.

Die FGW het 'n bestendige rekord in terme van sterk navorsingsprestasies, maar ons glo dat deeglike hersiening van ons navorsing nodig geraak het, en 'n eksterne hersiening sal vroeg in 2012 begin. Hierdie oorsig sal ons help om 'n beter begrip te kry van die areas van ons navorsingsuitnemendheid, en ook om areas te identifiseer waar ontwikkeling en vernuwing nodig is. 'n Besluit is geneem om meer intensief te belê in die werwing en ondersteuning van PhD-studente en nadoktorale genote oor die komende jare, omdat hierdie twee afdelings internasionaal beskou word as die hoofdrywers van navorsingsuitsette en -uitbreiding. Die doel is om die aantal PhD graduandi van die FGW te verdubbel oor die volgende vyf jaar. Ons sal hard moet werk om die nagraadse studenteverwerwing te vermeerder en om ons kapasiteit in terme van studieleiding te versterk.

Erkenning van Waarde

Word ons uitnemendheid erken? Ek is bly om verslag te kan doen dat ons studente, navorsers en dosente hierdie jaar weer eens wye erkenning op die tuisfront, sowel as internasionaal, ontvang het. Ons navorsing is gepubliseer in vooraanstaande vaktydskrifte soos die *New England Medical Journal* en *Science*. Nuwe vennootskappe is gevorm met vermaarde akademiese instansies soos Swede se Karolinska Institute - met wie 'n ooreenkoms om gemeenskaplike SU/KI PhD's gesluit word - en ook met Makerere Universiteit in Uganda. 'n Voorbeeld van 'n vennootskap met die privaatsektor is die Kliniese Wetenskapswerkswinkel wat vanjaar saam met Novartis aangebied is. Die FGW is ook trots dat ons gekies is as gasheer van twee *African Network for Drugs and Diagnostics Innovation (ANDI) Centres* deur die Wêreld Gesondheidsorganisasie. Die Departement van Biomediese Wetenskappe sal 'n Sentrum van Uitnemendheid in Toepasbare Navorsing op TB huisves en die Infeksiesiektes Sentrum is gekies as die Sentrum van Uitnemendheid in Toepasbare Navorsing op HIV. Hierdie is maar 'n paar voorbeelde van die wye en toenemende erkenning wat die Fakulteit in Suid-Afrika en internasionaal geniet.

Laastens, laat my toe om u elkeen vir u ondersteuning oor die afgelope jaar te bedank. Dit is bemoedigend om te weet dat ons kan steun op u voortgesette toewyding en harde werk om die standaarde en uitsette van die Fakulteit Gesondheidswetenskappe op volgehoue wyse te verbeter. Ek hoop almal geniet 'n rustige feesseisoen met vriende en familie.

Die uwe,

Prof Jimmy Volmink
Dekaan

KINDERKANKER

Tot en met 1950 het kinders baie selde kanker oorleef. Wat egter in die eerste helfte van die 20ste eeu 'n troostelose vooruitsig was, is in die tweede helfte van die eeu omskep in een van die groot suksesverhale van die moderne geneeskunde – soveel so dat meer as 75% van alle kinderkanker in die ontwikkelde wêreld vandag genees word. Dit was hoofsaaklik te danke aan nuwe geneesmiddels, fyn deurdagte kliniese proewe met samewerking op internasionale vlak, sowel as beter diagnostiek en nasorg.

Kinders in ontwikkelende lande – veral in Afrika – deel egter nog nie in hierdie suksesse nie, sê prof Mariana Kruger, 'n kinderonkoloog en hoof van die Departement Pediatrie en Kindergesondheid, Universiteit Stellenbosch (US). Dit is omdat toegang tot die behandeling nie altyd in ontwikkelende lande beskikbaar is nie. "Ongeveer 80% van kinders in hierdie lande het nie voldoende toegang tot die nodige medisyne en kundigheid om te kan genees nie. Verder word hierdie kinders dikwels laat gediagnoseer en is dit veel moeiliker om die kanker te behandel."

Hoewel Suid-Afrika oor die middels en kundigheid beskik om kinderkanker met net soveel sukses as Europa of Amerika te behandel, word net die helfte van die verwagte getal kinderpasiënte hier gediagnoseer. Kruger skryf dit toe aan laat of gebrekkige diagnose in die primêre en sekondêre gesondheidsdienste wat nog nie gesensitiseer is vir die vroeë simptome van kanker in kinders nie, asook skreiende armoede, wat lei tot kinders wat nie vir die behandeling in tersiêre sentra opdaag nie. Verder verhoog onder- en wanvoeding die komplikasies van die behandeling.

Die US en Tygerberghospitaal se kinderkanker-eenheid het in 1974 tot stand gekom en die kinderonkoloë wat aan hierdie eenheid verbonde is, span sedertdien al hul kennis en kundigheid in om die lot van kinders met kanker te verbeter. Terselfdertyd doen hulle pionierswerk in verskeie Afrikalande om deur middel van navorsing effektiewe en bekostigbare behandelingsprotokolle te ontwikkel om kinders, wat min of geen toegang gehad het tot kankerbehandeling nie, te bereik.

In hierdie uitgawe van *Tygerland* fokus ons die soeklig op die baanbrekerswerk wat hierdie kinderonkoloë in Suid-Afrika en in ander Afrikalande doen. T

Hoewel kinderkanker vir jare nie meer 'n doodsvonnis is nie, het 80% van kinders in Afrika nie voldoende toegang tot die medisyne en kundigheid wat nodig is om die siekte te genees nie.

Foto: Mark Jones/World Child Cancer

Burkitt's limfoom is die mees algemene kanker wat kinders in Suider-Afrika affekteer. Die Burkitt-pasiëntjie op die foto is van die Queen Elizabeth Sentrale hospitaal in Blantrye, Malawi.

'n Suksesverhaal van die 20ste eeu

Die geskiedenis van kinderkanker is een van die 20ste eeu se suksesverhale in geneeskunde: Van 'n nul-oorlewingsyfer in 1950, staan die genesingskoers in ontwikkelde lande vandag op meer as 70%. 'n Belangrike rede vir die sukses is die feit dat kinderkanker baie beter op chemoterapie reageer as volwasse karsinome. Ander faktore sluit in die gespesialiseerde sorg deur kinderonkoloë in kinderonkologie-eenhede, sowel as die insluiting van kinders by goed beplande kliniese proewe. Hierdie kliniese proewe het 'n terapeuties-empiriese grondslag, en werk streng volgens die behandelingsprotokol. Siektestadiëring sowel as patologiese kennis het verbeter, en gekombineerde behandelingsvorme, wat chemoterapie, chirurgie en radioterapie insluit, word gebruik. Die verbetering in steunbehandeling om die toksisiteit van chemo- en radioterapie te bestuur het daartoe gelei dat potensiële dodelike behandeling beter genesing kon bewerkstellig.

Die suksesverhaal spreek ook uit die verbeterde siektevrye oorlewing, oftewel 'genesing', van die verskillende kankers wat geïllustreer kan word aan die hand van die geskiedenis van die behandeling van die algemeenste kinderkanker, naamlik akute limfoblastiese leukemie (ALL).

Voor 1950 het 'n kind met ALL gemiddeld slegs drie maande lank oorleef. Tussen 1950 en 1960 is 'n enkele geneesmiddel toegedien – eers aminopterien, gevolg deur 6-merkaptopurien of prednisoon – en daar was geen oorlewendes nie. Tussen 1960 en 1967 word die gebruik van kombinasiechemoterapie ingestel met die middels vinkristien, aspariginase, siklofosfamied, daunorubisien en sitosienarabinosied. Kinders op dié behandeling het in remissie gegaan: die siekte het dus uit die beenmurg verdwyn.

Die betrokkenheid van die sentrale senustelsel was egter 'n probleem. Dít het tot die instel van sentralesenustelselradioterapie as voorkomende behandeling gelei, wat 'n genesingsyfer van 20% meegebring het.

In die tydperk 1967 tot 1970 konsentreer die St Jude-studies daarop om die maksimum draaglike dosis chemoterapie by kinders te bepaal, sowel as op die ontwikkeling van aggressiewe steunbehandeling en intratekale chemoterapie, wat die siektevrye oorlewing na 40% opstoot.

Tussen 1970 en 1980 ontwikkel verskeie groepe wêreldwyd verskillende behandelingstrategieë, waaronder die Duitse BFM (Berlin-Frankfurt-Munster) en die Amerikaanse POG (*Pediatric Oncology Group*), CCG (*Children's Cancer Group*) en Dana-Farber, en word SIOP (*Société Internationale d'Oncologie Pédiatrique*) ook gestig.

Hierdie behandelingsprotokolle het die remissietydperke verleng, en dit moontlik gemaak om sommige van die prognostiese kenmerke uit te wys, soos dat die manlike geslag 'n swakker prognose het, en dat die aanvanklike perifere witseltelling langtermynoorlewing bepaal. Steunbehandeling vir die toksisiteit van chemoterapie, sowel as die bepaling van laat newe-effekte van kankerbehandeling, het ook verbeter. Teen 1980 was die siektevryeoorlewingsyfer 50%.

Behandelingsprotokolvernuwing van 1980 tot 2000 lei tot 'n verbeterde genesingskoers van 75% by kinders, sowel as die verbetering van sentrale senustelselprofilakse, wat nou radioterapie uitskakel en slegs uit chemoterapie bestaan. Só word die langtermynnewe-effekte van radioterapie op die ontwikkelende brein uitgeskakel. Tans is die grootste suksesverhaal die gebruik van goeie, doeltreffende kliniese proewe, wat grootliks op evolusionêre empiriese ('probeer-en-fouteer') benaderinge gegrond is. Verder toon adolessente met ALL 'n beter oorlewingsyfer as hulle deur kinderonkoloë behandel word, teenoor dié in die hande van volwasseneartse. Dié verskynsel word toegeskryf aan die intensiewer behandelingsprotokolle in kinderonkologie, en die insluiting van alle kinders by kliniese proewe, teenoor die minder intensiewe behandelingsprotokolle van volwasseneartse, en die gebrekkige insluiting van kinders by hul kliniese proewe.

Dieselfde benadering het ook die oorlewingsyfer vir ander kinderkankers verbeter, byvoorbeeld akute nie-limfoblastiese leukemie ('n verbetering van meer as 50%), Hodgkinlimfoom (meer as 90%) en nie-Hodgkinlimfoom (meer as 80%). Dieselfde word by soliede tumore opgemerk, wat nefroblastoom, neuroblastoom en sommige breintumore insluit. Die sleutel by hierdie kankers is egter vroeë diagnose.

Die merkwaardige verhaal van ALL (en die behandeling van ander kinderkankers) illustreer die sukses wat met kliniese proewe behaal word. Wat presies is 'n kliniese proef egter?

Dit is 'n mediese eksperiment wat 'n bepaalde vraag probeer beantwoord, en wat uitgevoer word nadat die dokter/navorser bepaal het onder watter omstandighede die proef sal geskied. 'n Waardevolle kliniese proef word gekenmerk deur die verkryging van duidelike, betroubare en vertolkbare resultate. Die ALL-suksesverhaal toon egter ook 'n ander kenmerk van kinderonkologie, naamlik dat groot groepe kinderonkoloë sowel nasionaal as internasionaal saamgewerk het om hierdie deurbraak te maak. T

Artikel en foto deur Prof Mariana Kruger

Kinderkanker in Afrika -

'n herbesinning

Foto:Vera van Dalen;TLC Kansa

Prof Mariana Kruger in die kinderkankersaal by die Kalafonghospitaal.

Kinderkanker is 'n stryd wat nie net deur die kinderonkoloog gevoer word nie. In Suid-Afrika, maar veral in ander Afrikalande, speel verpleegsters en ook ouers 'n sleutelrol, sê prof Mariana Kruger, wat ten nouste betrokke is by die behandeling van kinders met kanker op die subkontinent.

"Ons kan vandag 70% tot 80% van kinderkankers genees, maar 'n mens vra jouself af: Wat van die ander 20 tot 30%? Ten spyte van ons toegang tot nuwe middels en die reuse vordering wat gemaak is met die genesing van kinderkanker, bly daar steeds struikelblokke wat oorkom en uitdagings wat getrotseer moet word."

Sy sê die sukses wat behaal word met die behandeling van kinderkanker is toe te skryf aan goeddeurdagte kliniese proewe, en sowel nasionale as internasionale samewerking tussen navorsers in hierdie veld. Tesame met kundige ondersteuning en die nasorg vir kinders wat vandag kankerbehandeling ontvang, word meer as 75% van hierdie kinders genees – maar slegs as hulle in 'n ontwikkelde land woon!

"Min nuwe geneesmiddels het ook die afgelope 20 jaar die lig gesien, en die nodige navorsing moet gedoen word om die bykans 30% van pasiënte wat nié genees word nie, te genees".

Die grootste probleem is egter dat 80% van die wêreld se kinders steeds net beperkte toegang tot kankerbehandeling het – en dit is kinders in ontwikkelende lande, veral in Afrika waar die probleem akuut is, wat die ergste geraak word. Dit is omdat mense meestal aangeneem het dat dit te ingewikkeld en te duur is om kanker in Afrika onder die knie te kry. Boonop het infeksiesiektes soos MIV en Tuberkulose nog altyd prioriteit geniet.

Kinderonkoloë soos Peter Hesseling en Kruger is deel van 'n groepie kinderkankerkenners wat toenemend bewys het dat hierdie siening nie korrek is nie. Hulle het trouens getoon dat dit moontlik is om die sterftesyfer as gevolg van kinderkanker dramaties in te kort in lande met 'n lae of middelinkomste. Dit vereis nie hoë tegnologie of duur, geteikende terapieë nie, maar 'n nuwe, sinvolle benadering wat gerig is op die vestiging van kostedoeltreffende strukture vir navorsing, behandeling en nasorg in arm lande waar daar 'n gebrek is aan spesialiskundigheid en ander hulpbronne.

"Dit beteken ook noue samewerking met die dokters en gesondheidswerkers in die betrokke lande, maniere om kanker by kinders vroeg op te spoor, die skep van kundigheid en lokaal-geskikte protokolle wat gebruik maak van goedkoop en goed-gevestigde chemoterapeutiese middels."

Kruger wys daarop dat Suid-Afrika, in terme van die beskikbaarheid van geneesmiddels, kundigheid en ander hulpbronne, beter daaraan toe is as die meeste Afrikalande. "En tog diagnoseer ons steeds net die helfte van die verwagte getalle kinderkankers. Dit is daarom noodsaaklik om van ons kant af bydraes te maak om primêre en sekondêre gesondheidsdienste te verbeter sodat kinders met kanker vroegtydig gediagnoseer word. Ons moet ook herbesin oor die hantering van kanker in adolessente. Daar is verskeie studies wat 'n beter oorlewingskoers toon in tieners wat in kinderonkologie sentra behandel word met kinderonkologie protokolle. "Daarom glo ek dat tieners met kanker na 'n kinderonkoloog verwys moet word – hulle verdien die spesiale sorg en aandag wat pediatriese onkologie bied."

Kruger glo ook dat daar 'n eie ruimte in hospitale geskep moet word vir adolessente.

> Sterftes agv kinderkanker in lae-inkomste lande kan dramaties ingekort word sonder hoë tegnologie of duur geneesmiddels.

Kinderkanker en armoede

Sy sê die taak van dokters wat kinderkanker behandel word bemoeilik deur die geweldige armoede in Afrika. "Tygerberghospitaal is byvoorbeeld goed gevestig, met goeie navorsing, maar ek was nie voorbereid op die armoede in die Wes-Kaap nie. Ondervoeding en wanvoeding is 'n groot probleem »

« wanneer kinderkanker behandel word want sulke kinders hanteer nie chemoterapie baie goed nie."

Die US-span en Tygerberghospitaal kry nietemin baie ondersteuning van die provinsiale en nasionale gesondheidsowerhede. "Ons kan al die nodige middels hier kry en kan alles hier doen, maar daar is steeds te veel kinders wat nog te laat of nooit gediagnoseer word nie. In ander Afrikalande is die situasie nog meer benard – dit is hoekom die Universiteit Stellenbosch vir jare reeds bydraes maak om kapasiteit en vaardighede in Afrika te ontwikkel sodat meer kinders behandeling kan kry."

Kruger self werk saam met prof Peter Hesseling in Kameroen, waar hulle reeds belangrike deurbrake gemaak het op die gebied van kinderkanker met navorsing en verfynde protokolle, en met opleiding en die uitbouing van kapasiteit. Terselfdertyd fokus ander lede van die US/Tygerberg Kinderkankereenheid, in die besonder prof Cristina Stefan en dr Anel Dippenaar, op kinders in Namibië.

As kontinentale president van SIOP is Kruger tans besig om te karteer in watter lande kinders kankerbehandeling ontvang en wie dit kan doen. "In die verlede was daar nie baie Afrikalande wat prioriteit aan kinderkanker gegee het nie, en baie van hierdie lande wou nie chemoterapie aankoop nie."

As voorsitter van die SIOP-kampvegtersgroep vir kinders met kanker, kyk sy tans na vennootskappe (oftewel 'twinning') met goedgevestigde eenhede in Europa en Amerika om kinders in Afrika se toegang tot kankerbehandeling sover moontlik uit te brei.

Omdat daar min of geen onkologiese spesialiste in Afrika is nie, fokus die US-onkoloë baie sterk op die opleiding van die beskikbare geneeskundige kapasiteit in hierdie lande - gewone huisdokters en verpleegsters (sien ook die artikel oor prof Peter Hesseling). Verpleegsters speel veral 'n sleutelrol in die versorging van kinders met kanker, veral wanneer dit kom by die opvolging van pasiënte wat behandeling ontvang het en die instandhouding van kankerregisters. Omdat ouers so 'n belangrike rol speel wanneer 'n kind met kanker gediagnoseer word, gaan Kruger en haar kollegas ook uit hulle pad om die ouers te betrek en ondersteuningstrukture vir ouers te vestig.

"By SIOP se jaarlikse kongres, is die program so saamgestel dat parallelle kongresse terselfdertyd gehou word vir kinderonkoloë, kinderonkologieverpleegsters, ouers en langtermynoorlewendes." Volgende jaar sal

SIOP

Société Internationale d'Oncologie Pédiatrique

Odile Schweisguth

SIOP, die internasionale organisasie van kinderonkologie, is tans die belangrikste internasionale groep waartoe die meeste toegewyde kinderonkoloë behoort. Proff Peter Hesseling en Mariana Kruger – albei van die US se Departement Pediatrie en Kindergesondheid – speel 'n leidende rol in die organisasie. Hesseling was die eerste president van SIOP in Afrika, terwyl Kruger vir die volgende drie jaar die kontinentale president van die organisasie is.

Prof Kruger verduidelik hoe die organisasie in die sestigerjare ontstaan het:

"SIOP is in 1968 gestig deur die merkwaardige dr Odile Schweisguth, wie se lewenslange beywering vir kinderkankerbehandeling duidelik toon waarom kinderonkologie hierdie suksesse kon behaal.

Odile Schweisguth het as jong kinderarts in die *Hôpital des Enfants-Malades* in Parys - die eerste kinderhospitaal in die Westerse wêreld - gewerk, toe haar direkteur, prof Robert Debré, haar na 'n hospitaal in Villejuif, 'n kommune in die suidelike voorstede van Parys, gestuur het om daar na die kinders met kanker om te sien.

Sy het onmiddellik aangedring op aparte ruimte vir die kinders, weg van volwasse pasiënte (en selfs 'n aparte ruimte vir adolessente), en daar met haar lewenstaak begin om kinders met kanker te versorg. Teen 1959 word sy direkteur van die eerste opleidingsprogram in kinderonkologie, naamlik 'n somerskool in Parys waarheen elke Europese land met 'n beurs jaarliks slegs een dokter kon stuur om opleiding in die behandeling van kinders met kanker te ondergaan, en die kennis deur middel van kapasiteitsbouprogramme in hul land van herkoms te gaan toepas.

Vroeg in die sestigerjare reis sy na die belangrikste kinderkankersentra in Amerika om verdere waardevolle kennis oor Amerikaanse behandelingsprogramme te versamel. Kort daarna reël sy die eerste vergadering van die *Club Européen d'Oncologie Pédiatrique* in 1966, en stig SIOP in 1968.

Vandag leef haar naam voort in SIOP se jaarlikse Schweisguth-prys, wat aan die beste kinderonkoloog in opleiding se navorsing toegeken word. Só het kinderonkologie nie net deur die ontwikkeling van goeie kliniese proewe sukses behaal nie, maar ook deur van die begin af goeie opleidingsprogramme vir dokters op hierdie gebied te verseker. Tans is SIOP uniek deurdat hulle hul jaarkongres saam met die internasionale ouerondersteuningsorganisasie van kinders met kanker (ICCPO), verpleegkundiges, en in die afgelope drie jaar ook die langtermynoorlewendes hou". T

die SIOP kontinentale kongres vir Afrika in Kaapstad gehou word.

Kruger se spesifieke belangstelling op die gebied van kinderkanker is retinoblastoom wat die oë van kinders aantas. Die kanker is meer algemeen in kinders in sub-Sahara Afrika, en in warm lande soos Indië as wat normaalweg in Kaukasiese kinders gevind word. Sy het die nasionale behandelingsprotokol geskryf sodat alle pasiënte met hierdie vorm van oogkanker dieselfde behandeling kry en almal dieselfde protokol volg. "My navorsing vir die volgende tien jaar is gerig op vroegtydige diagnose en die spaar van die oog. Daar is vroeër vanjaar 'n belangrike nuwe instrument, wat bekend staan as die RETCAM, aan Tygerberghospitaal geskenk. Die kamera ter waarde van meer as 'n miljoen rand, word aangewend om verskeie oogprobleme by babas te hanteer, onder meer ook die diagnose, hantering en dokumentering van retinoblastoom. Die kamera kan oogkanker vinnig opspoor en as dit gou behandel word, kan die visie gespaar word."

In Afrika lê Kruger en die SU-span hulself toe op bekostigbare middels en behandelings wat in enige omgewing toegepas kan word, sonder die noodsaak vir hoë tegnologie. Hulle poog dus om protokolle te verfyn en aan te pas by die heersende omstandighede in die Afrikalande waar hulle betrokke is. 'n Mens kan nie vir wangevoede, of ondervoede kinders hoogs toksiese middels gee nie, daarom kyk ons na lae tegnologie-behandelingsprotokolle en ons poog om die intensiteit van die chemoterapie in ooreenstemming te bring met die ondersteunende sorg wat dmv bestaande personeel van fasiliteite voorsien kan word.

Aggressiewe terapie nie altyd nodig nie

"Ons glo ons benadering kan rewolusionêr wees, selfs vir die eerste wêreld waar terapie baie aggressief is en hoogs gesofistikeerde tegnologie ingespan word om kinderkanker te behandel. Die sukses wat ons in lande soos Kameroen behaal, toon dat dit nie nodig is om sulke aggressiewe terapie te gebruik om kinderkankers te genees nie.

"Die belangrikste sleutel tot die sukses van alle kinderkankerbehandeling bly egter vroeë diagnose en daarna volg die beskikbaarheid van geneesmiddels en alles wat daarmee saamgaan."

Kruger verduidelik dat die verdeling van selle in kinderkanker baie vinnig is en drie tot vier middels word gewoonlik gebruik om kankerselle – wat gewoonlik uit nie-ektodermale embrionale weefsel bestaan - in verskillende stadiums van verdeling te teiken. Dit is ook een van die redes hoekom kinderkanker so suksesvol behandel kan word, in vergelyking met volwasse karsinoom wat uit epiteliale weefsel ontstaan.

* Kruger beklemtoon dat kinderkanker 'n diepgaande uitwerking het op almal wat daardeur geraak word. Daarom is dit so belangrik om kankerbewustheid aan te wakker en sodoende vroeë diagnose in die hand te werk. In hierdie verband speel organisasies soos die ouerondersteuningsgroep, CHOC, 'n belangrike rol. CHOC in Suid-Afrika het takke oor die hele land en bied ondersteuning aan gemeenskappe, ouers en kinderkankerpasiënte. Die organisasie ondersteun ook navorsing en genereer fondse om essensiële toerusting aan te koop vir hospitale en kinderkankereenhede. T

Prof Mariana Kruger

Prof Mariana Kruger, 'n kinderonkoloog en kenner op die gebied van etiek, het in 2009 die leisels oorgeneem as uitvoerende hoof van die Departement Pediatrie en Kindergesondheid aan die Universiteit Stellenbosch (US).

Sy het haar mediese opleiding aan die Universiteit Pretoria voltooi en 'n PhD aan die Katolieke Universiteit van Leuven. Daarbenewens het sy ook 'n MPhil in Toegepaste Etiek van die US. Sy praktiseer sedert 1988 as kinderonkoloog. Haar belangstelling in kinderonkologie dateer terug na haar opleiding as kliniese assistent, en in 1985 stig sy die eerste nie-amptelike kinderonkologie-eenheid by die Kalafong-hospitaal vir voorheen benadeelde kinders, en in 1993 vestig sy die amptelike kinderonkologie-eenheid by Kalafong-hospitaal, wat sy uitbou tot een van die grootste kinderonkologie-eenhede in die land. "Dit was destyds 'n groot uitdaging en baie moeilik om 'n kankereenheid by 'n swart hospitaal te begin omdat daar soveel ander gesondheidskwessies was wat op daardie stadium prioriteit geniet het, onder meer MIV. Die eenheid het aanvanklik kinderkanker sowel as kinders met MIV behandel," sê sy.

Kruger dien sedert 1991 as lid van SIOP (*Société Internationale d'Oncologie Pédiatrique*), 'n internasionale organisasie wat vir jare reeds konsentreer op navorsing wat daarop gemik is om oorlewing van kinders met kanker te verbeter, In die laaste aantal jaar fokus hulle veral op kinders in Afrika, en ander ontwikkelde lande om toegang tot behandeling te verkry. Kruger is vir die volgende drie jaar aangewys as die Afrika kontinentale president van dié vereniging.

As kinderonkoloog lê sy haar toe op die vroeë diagnose van kinderkanker en navorsing op veral retinoblastoom, 'n oogkanker wat kinders aantas. T

Beating the obstacles to reach children with cancer in Africa

As one of the chief architects and pioneers of paediatric oncology in sub-Saharan Africa, Prof Peter Hesseling has shown that it is possible to research and implement effective treatments and cancer care structures in low-income and resource-poor countries.

Prof Peter Hesseling on a home visit to cancer patients in Cameroon. With him on the photo is Dr Paul Wharin (sitting, right), as well as patients, family and community members.

More than 40 years ago, when Prof Peter Hesseling embarked on a career in paediatric oncology, clinical outcomes for childhood cancer were dismal – so much so that one of the leading international textbooks described childhood leukemia as 'a uniformly fatal disease' and only 25% of children, suffering from lymphoma, survived.

However, as a clinical assistant, Hesseling had developed an interest in this field and in 1974, as a clinician in the Department of Paediatrics and Child Health, he indicated that he would like to establish a paediatric oncology service at Stellenbosch University and the Tygerberg Hospital. Thus he laid the foundations for a childhood cancer service that would eventually reach out into neighbouring countries and deep into Africa, where he and members of the Department are active to this day.

At Tygerberg, Hesseling worked at the coalface as new cancer treatments and interventions gradually improved the survival rates of children with cancer - to the extent that the outcome for childhood leukemia today stands at 85% in the developed world while 90% of children with lymphoma are treated successfully.

"Our initial challenge was to establish an excellent service, based on the best international knowledge in the field," he remembers. "However, the rural areas of South Africa and neighbouring countries like Namibia became a research learning field for the Stellenbosch paediatric team

and it brought us face to face with our next big challenge namely effective treatments for children with cancer in other African countries where access to care, expertise and facilities are extremely limited".

This challenge marked the beginning of Hesseling's life-long efforts to research cost-effective protocols and build capacity in African countries – even after his retirement as head of the SU Department of Paediatrics and Child Health.

"Some 80% percent of all childhood cancers occur in developing countries. While unprecedented gains have been made in the cure rates of children in the developed world, the majority of African children have little or no access to effective cancer therapy. We therefore asked ourselves if anything could be done for the poverty stricken children of Africa when they develop cancer".

Hesseling's efforts in this regard started in 1976 when he established a cancer referral service to Tygerberg Hospital for children diagnosed with cancer in Namibia and he and his team provided a full, free service to all these patients which lasted until Namibian independence in 1990. Afterwards, he continued to help the country build capacity in the treatment of children with cancer by advising World Child Cancer on the establishment of a dedicated child cancer service in Windhoek. Currently, the Department of Paediatrics and Child Health, is carrying the SU baton in Namibia by providing teaching and training to the doctors in terms of a memo of understanding between SU and the Ministry of Health in Windhoek.

Through his involvement in childhood cancer in South Africa and Namibia, Hesseling became a member of the International Society of Paediatric Oncology (SIOP) and was elected the first African SIOP continental President. In 1994 he organized the inaugural SIOP African Continental meeting, and "it was at this meeting that the enormous differences in survival between children with cancer in western countries and poor developing nations became apparent. At the time, the cure rate for children diagnosed with Burkitt's lymphoma, the most common childhood cancer in sub-Saharan Africa, was around 20% compared to over 75% in South Africa and western countries. We therefore decided to make Burkitt's lymphoma our target in Africa and drafted a resolution to attempt to develop affordable and effective treatment for African children suffering from this disease." »

The ward for children with Burkitt's lymphoma at the Banso Baptist Hospital in Cameroon.

Prof Hesseling and a nursing sister with a young patient with Burkitt's Lymphoma and his mother in Cameroon.

« Burkitt's lymphoma is not only endemic to Africa, but it is the most common malignancies in sub-Saharan African children. It is a disfiguring disease that involves the jaw and other facial bones, as well as the abdomen and organs. It is invariably fatal if it goes untreated, and yet potentially curable with chemotherapy.

Hesseling's venture into Africa brought him face to face with a host of practical problems within the health care environment on the subcontinent, especially regarding cancer. Not only did the cost and availability of cancer drugs pose enormous problems, but the lack of resources such as trained clinical expertise, ill-equipped hospitals and the long distances were hampering efforts to research and implement effective cancer treatments and care in many African countries.

In a search for practical solutions for these problems, Hesseling targeted Malawi as a country with sufficient infrastructure to support his research. He thus initiated a Burkitt's lymphoma treatment study in Malawi at the Queen Elizabeth Central Hospital in Blantyre and at Lilongwe Central Hospital. Eventually he and his team completed seven clinical trials in Malawi and demonstrated that it was possible and affordable to treat children with cancer in a resource-poor country, especially if you work closely with the doctors and care givers in that country.

"We found that we could achieve considerable success by using old generic cancer drugs in new, low-tech treatment protocols and by matching the intensity of chemotherapy with the supportive care that existing facilities could provide."

From the outset this approach resulted in survival rates rising from around 20% to more than 60% and it could be achieved with few facilities and resources and a four-week treatment strategy costing just $50 per patient."

Because of their experience in Malawi, Hesseling and the SU paediatric oncologists today subscribe to the motto that "the golden standard of treatment for children with cancer in the developing world, is the best that you can achieve with the resources at your disposal"

As the work in Malawi progressed, colleagues from Egypt started collaborating with the SU team and further trials were conducted in Ghana and Cameroon.

Nine years ago, a UK volunteer doctor, Peter McCormick, working at the Banso Baptist Hospital in Cameroon, asked Hesseling if he would advise on the management of the many local children with Burkitt's lymphoma for whom there was no proper treatment strategy. In response to this request, Hesseling extended the Burkitt's lymphoma research protocols to three Baptist hospitals in Northwest and Southwest provinces of Cameroon and together with his Malawian studies, this work has led to the development of simple, low cost treatment strategies for Burkitts lymphoma that can be used in any rural hospital.

Working in cooperation with doctors, nursing staff and other care givers, Hesseling and SU clinicians are now achieving cure rates of over 60% for Burkitts lymphoma, using a four- to eight week long treatment strategy. This is achieved by using old cancer drugs in a different way, and by teaching and training hospitals and medical staff to provide cancer care and the requisite supportive care facilities.

Clinical treatment is only the beginning of the doctor's responsibility to cancer patients and in Africa it requires particular dedication, persistence and innovation. For instance, following up children who have been treated for cancer, is very important to determine their health status after completion of the treatment. Without regular follow-ups, the survival rate of patients cannot be calculated and the results of the work cannot be published. However, it becomes an extremely difficult task when most of the patients live hundreds of kilometers away from their nearest hospital, often in abject poverty and without the means to return to the hospital for follow-up care. An essential component of treatment is therefore a parent support program which provides local transport and food while the child is in hospital.

Motorcycles and mobile phones play an important role in the management of childhood cancer in Cameroon. In the photo is a motorcycle driver at one of the many cellphone booths in the country.

In Cameroon, Hesseling and the medical teams at the three Baptist hospitals treat most of the children with cancer in the country, as well as patients from Nigeria and other African countries. Most of these patients live within a radius of 400 km from the hospital where they are treated. They are usually followed up by a nurse, travelling to the outlying areas by taxi, car or motorcycle. Hesseling himself travels to the Cameroon twice a year to do follow-ups with the whole team. During these visits they travel vast distances in

4x4 vehicles to cope with rough tracks through the bush, sometimes up to 400km in one day, starting at the break of dawn and returning after midnight.

While their follow-up rate is about 90%, Hesseling says they are always searching for new ways of reaching more of their patients. "In this regard, the mobile phone is a wonderful addition to our arsenal; it has revolutionized communication with our patients."

In a study conducted by the team, they reviewed the archived records of 285 Burkitts patients at the Banso and Mbingo Baptist hospitals at the end of December 2010. Ownership or access to a mobile phone had been routinely recorded in these records. Guardians of 101 children, known to be alive at the last follow-up were called. "We found that access to mobile phones increased from 33% to 80%, while the number of parents with personal mobile phones increased annually from 20% in 2007 to 60% in 2010. We were successful in making contact with 59% of the guardians, with a similar success rate in mobile phones owned by people other than parents. Re-charging of the phones proved no problem.

"As part of our follow-up strategies, we have thus decided to provide all parents with mobile phones when they have a child diagnosed with Burkitts lymphoma, to ensure that we can monitor the child's progress after treatment, on a regular basis."

Working in a country like Cameroon where there are no oncology specialists or support staff, except for a paediatric oncology centre in the capital Yaounde, Hesseling and the SU team had the added responsibility of training and supervising the medical staff – "not only to ensure efficient treatment but also as a requirement for funding from international organizations, such as the Swiss Cancer League, the World Health Organisation, parent organizations like CHOC, and individuals and organizations in countries like Germany, Norway and the Netherlands," he says.

"Qualified doctors and nurses in the Cameroon have limited experience of oncology and they must be trained to implement the necessary protocols. Nurses play a vital role in the treatment strategy. They are responsible for all the data collection and they maintain a cancer register and organise all the follow-up visits. The three hospitals receive many visitors from the outside, such as postgraduate and elective students who visit the hospitals to do research projects."

Since the state in Cameroon does not provide cancer drugs, Hesseling and the hospitals rely on funding to run the various projects and as clinical director of these projects, Hesseling plays a key role in finding the money to fund projects. Dr Peter McCormick founded the Beryl Thyer Memorial Trust in England. This trust now provides all the cancer drugs, has established infrastructure at each hospital, and supports local staff members financially.

He says the Cameroon Baptist Convention Health Board has an institutional review board, who must approve the treatment protocols The work ethic at the hospitals is very good and each hospital has a registry office and strong financial management system to meet the requirements of donors. While the SU Pathology department used to help with pathology tests in Malawi because of a very long local waiting period for reports, the Cameroon Baptist hospitals have a full-time pathologist on site.

Recently, Hesseling and local doctors and nurses were instrumental in the establishment of a child cancer parent organisation for the north-western region of Cameroon. This is a first for Cameroon and he and his team hope that the Prime Minister's wife will become a patron of the organization, which can play a vital role in supporting children who undergo cancer treatment.

In the meantime, Hesseling, with the help and support of Prof Mariana Kruger – current head of the SU Department of Paediatrics and Child Health and a paediatric oncologist in her own right – is developing treatments for other childhood cancers in Cameroon. "We are also treating children with Wilms tumour (a paediatric cancer of the kidneys), and have started to treat children with retinoblastoma (paediatric eye cancer) and Aids-related Kaposi's sarcoma."

A memorandum of understanding was signed in 2010 between the Department of Paediatrics and Child Health at SU and the Cameroon Baptist Convention Health Board. This, and the continued support of the Beryl Thyer Memorial Trust, has led to the establishment of a recognised international paediatric oncology twinning program, which will be supported financially by the NGO known as World Child Cancer, for the next 5 years.

Today Prof Peter Hesseling is recognised as one of the chief architects and pioneers in paediatric oncology in Africa. Relying on a strategy that involves close co-operation with doctors and care-givers, he has shown that it is possible to overcome the obstacles to good cancer care in African countries – even in environments without specialist capacity and limited resources.

Hesseling has shown that it is possible to overcome the obstacles to good cancer care in African countries - even without specialist capacity and limited resources.

Prof Hesseling was recently awarded the GA Oettle medal of the Cancer Association of South Africa (CANSA) in recognition of his work in the field of paediatric cancer in South Africa and other countries on the subcontinent. Mrs Sue Janse van Rensburg, chief executive officer of CANSA presented him with his medal.

paula b photography

Prof Cristina Stefan with a young patient in the Oncology ward of the Tygerberg Children's Hospital..

Teaching, training and collaboration

passwords for the management of childhood cancer in Africa

Because most African countries do not have paediatricians or oncology nurses, much of Prof Cristina Stefan's work in Africa is focused on teaching, training and workshops – activities that have taken her to countries as far afield as Namibia, Mozambique, Rwanda and Ethiopia.

In 2007, the SU Haematology and Oncology Unit resumed its collaboration with Namibia, where the unit's oncologists had provided a free service to all children diagnosed with cancer until Namibian independence in 1990. Afterwards all Namibian patient were treated in Windhoek.

Stefan is currently providing teaching and training to doctors and other medical staff, as well as treatment protocols, in terms of a memo of understanding between SU and the Ministry of Health in Windhoek. She visits the country at least three times a year and her unit regularly hosts visitors from Namibia.

Workshops

Over the past three years, Stefan has also organised paediatric oncology workshops for medical professionals from Zimbabwe, Kenya, Angola, Cameroon and a host of other African countries. In 2010, she hosted an African cancer registration workshop which attracted 105 delegates from 14 African countries.

At the same time, her teaching and training activities take her all over the continent, i.e. as external examiner in Zimbabwe; medical mentor for childhood cancer in Mozambique; clinical coordinator of Burkitt's lymphoma studies in East Africa for the National Cancer Institute in the United States; as a collaborator of the Dana Farber Hospital of Harvard, USA, in Rwanda and as part of a teaching team in Ethiopia earlier this year.

As a member of SIOP (*Société Internationale d'Oncologie Pédiatrique*) in Africa, Stefan chairs the organisation's Education committee and she was asked to organize the paediatric oncology session for the annual conference of the The African Organisation for Research and Training in Cancer (AORTIC), which was held in Egypt later this year.

Cancer registration

Since reliable statistics for childhood cancer are an important component of planning the capacity needed for treatment and support, the Oncology unit has been involved in cancer registration for many years, running the South African Children's Cancer Study Group's tumour registry. As head of the Paediatric Oncology unit, Stefan chairs the registry and is the principal investigator of HIV malignancy in South Africa.

"The South African pediatric cancer registry is the only dedicated childhood cancer registry in Africa," she says. "It was established in 1987 and reports 600 to 700 new patients every year."

Stefan points out that childhood cancer is a relatively rare disease that represents between one and 10 percent of all cancers. "However, if one takes into account that 200 000 children worldwide are diagnosed with cancer every year, the extent of the disease is frightening. "Of these newly diagnosed cases, 80% occur in developing countries – more than 50 000 of them in Africa."

While leukemia is the most prevalent childhood cancer in South Africa, cancers such as the AIDS-related Kaposi sarcoma, as well as retino- and nephroblastoma are most prevalent in Zimbabwe while East Africa is most affected by Burkitt's lymphoma – so much so that it is known as the 'Burkitt belt', she says.

Fostering collaboration

With the lack of trained capacity and resources in most of the African countries, collaboration with these countries – especially in terms of teaching and training – is essential. Stefan and her team use all the means at their disposal to foster such collaboration, including workshops and telephonic conferences.

"Telemedicine can play an important role in future," she says.

Stefan is a strong believer in the role of "twinning" between oncology units in different African countries, with the most advanced unit taking the leading role. »

In the tradition of her predecessors - Prof Peter Hesseling and the late Prof Glyn Wessels - Prof Cristina Stefan, current head of the SU-FHS Haematology and Oncology Unit, is widely involved in childhood cancer in Africa.

Chasing a cancer gene in affected South African families

Prof Sam Moore

RET *(REarranged during Transfection)* proto-oncogene mutation may be cause of some 50 percent of thyroid tumours and plays a role in the inherited cancer syndrome, known as multiple endocrine neoplasia type 2, says Prof Sam Moore of the Paediatric Surgery division in the SU Faculty of Health Sciences.

RET is a vital gene which directs the migration, proliferation and the survival of the enteric neural crest-derived cells of the enteric nervous system during embryogenesis. It is also responsible for development of the autonomic nervous system as well as controlling kidney development and spermatogenesis among other functions. Genetic mutation and/or variation may result in RET malfunction, which has been associated with at least four clinical conditions namely Hirschsprungs disease, multiple endocrine neoplasia [MEN] type2 syndromes (A and B) and familial medullary thyroid carcinoma.

The oncogene is involved in the regulation of cell growth and development and its germline mutation is responsible for nearly all cases of hereditary or familial medullary thyroid cancer, as well as multiple endocrine neoplasia type 2 – and generally known as MEN2A and MEN2B. Patients with these cancers have a poor survival rate unless the cancer is diagnosed at a very early stage and treated surgically.

In a wide-ranging study, conducted from 2003 to 2009 by Prof Moore and Dr M G Zaahl of the SU Department of Genetics, the researchers showed that the RET mutation increased the risk of medullary thyroid cancer and MEN2A and MEN2B in all ethic groups in South Africa. Genetic screening was therefore important for the identification of high risk patients.

"This project arose out of a long standing study of the RET gene in congenital intestinal dysganglionosis and Hirschsprungs disease and MEN2 and is the first comprehensive genetic study of the RETproto-oncogene in the diverse South African population," Moore says.

Titled *Chasing the ubiquitous RET proto-oncogene in South African MEN2 families* – implications for the surgeon, the study was published in the *SA Journal of Surgery* in November 2010. Earlier this year, it was selected as the best article to be published in the journal over a period of two years. Consequently, the Association of Surgeons of SA invited Moore to present the work at an international conference held in Cape Town in April this year.

The researchers investigated a cohort of MEN2-related patients, referred to Tygerberg Hospital between 2003 and 2009 and families with identified high risk factors were recalled. Forty persons, representing three race groups – white, black and mixed race – were genetically screened and 21 of the 40 patients were found to carry RET gene mutations associated with medullary thyroid cancer and MEN2.

Moore says 15 patients underwent surgical removal of the thyroid gland – a total thyroidectomy - including three prophylactic thyroidectomies in gene-positive family members. In one six-year-old, premalignant disease was identified along with a twice the normal serum calcitonin level. Increased serum calcitonin levels usually indicate the presence of a tumour. In another three patients, three times the normal calcitonin levels were detected, while a further two were awaiting prophylactic surgery at the time of publication.

The study indicated that approximately 50 percent of medullary thyroid carcinoma can be genetically related to an RET proto-oncogene mutation.

"Prohylactic surgery may prevent the disease, therefore genetic screening is important to identify and treat high risk patients, particularly the children of affected parents," Moore says.

« She emphasizes the importance of protocols and guidelines, adapted to the local conditions within various countries, and replacing high tech equipment with more affordable low tech equipment. "Instead of using CT scans, for instance, ultrasound could be the preferred choice."

Prof Stefan and her colleagues in the Oncology Unit - Drs Anel Dippenaar and Ronelle Uys - provide a tertiary clinical referral service for children with all types of malignancies and haematological disorders. The unit is housed in a 19 bed ward with dedicated nursing staff and has approximately 650 admissions per annum. They deal with approximately 60 new cases of childhood cancer and 2000 outpatients are seen every year. One of the Stefan's latest initiatives is a survivors clinic that will open early next year to add to the comprehensive services offered by the Unit.

Preventing the devastation of fetal alcohol syndrome

While the devastating effects of alcohol abuse during pregnancy are evident in the mental and physical defects that affect large numbers of children in South Africa and elsewhere in the world, an extensive field study now indicates that specific, timely interventions could save future generations from Fetal Alcohol Syndrome – an incurable condition that affects more children in the Cape winelands than anywhere else in the world.

FAS is a disease for life. The mental and physical defects that can develop in a fetus in association with high levels of alcohol consumption during pregnancy are permanent and irreversible. That is why a team of local and international scientists have been searching for new ways to prevent pregnant women from drinking during pregnancy – and thus to save babies and communities from a lifelong burden of fetal alcohol syndrome (FAS).

In rural areas of the Western Cape, research on the prevention of FAS disorders (FASD) has been conducted over the last four years. An information day was held in September this year to discuss the preliminary findings of the research where Mr Robert MacDonald, provincial head of the Ministry for Social Development of the Western Cape, said that "FAS represented a health crisis with crushing socio-economic implications." He added, "It has a long-term impact on the health system, but it affects families and communities for much longer."

Behind the wide-ranging FAS prevention study are leading researchers of the universities of Stellenbosch and Cape Town, the SA Medical Research Council and the University of New Mexico in the United States. Having just entered its 5th year, the study represents not only a successful partnership between the different academic institutions, but it is also one of the largest prevention studies ever conducted. Sponsored by the National Institute of Alcoholism and Alcohol Abuse of the National Institutes of Health (NIH) in the USA, it also enjoys the support of stakeholders such as the Western Cape Department of Health and various municipalities, Prof Jimmy Volmink, dean of the SU Faculty of Health Sciences, said in his opening remarks at the information meeting.

fas in the western cape:

An immense and widespread problem

According to Robert MacDonald, the harmful effects of alcohol cost South Africa more than R5 billion a year in terms of injuries, accidents and psychiatric disorders.

He says the long-term effects of FAS are difficult to manage. "We are under no illusion about the scale of the problem. The challenge is to change people's behaviour and to find skilled social workers to work in rural areas. Awareness campaigns alone cannot solve the problem."

The principal investigator, Prof Philip May of the University of New Mexico, believes that the very high rates of FAS in the Western Cape should receive as much attention as is feasible. "Although the dop system is no longer practiced, the legacy of heavy drinking over weekends still persists. "While the problem is immense and widespread, it is one that can be remedied by social change and public campaigns that make drinking during pregnancy less attractive and less acceptable.

"Currently maternal drinking, particularly binge drinking, is too prevalent, too acceptable and there are too few alternatives for weekend social and recreational activities that do not involve alcohol consumption," May said.

the research:

Focusing the spotlight on the range of FAS disorders

The FAS prevention study is conducted in rural, wine-producing areas of the Western Cape. Communities taking part include Wellington, Robertson, Bonnievale, Ashton and Montague. After studying hundreds of children and their parents, the researchers found that up to a tenth of children in these areas are born with FAS.

In Wellington, the prevalence of FAS ranges from six to nine percent and in the other four towns it is between nine and thirteen percent.

Up to one quarter of the children have been exposed to alcohol before birth, but not all of them had the full spectrum of FAS disorders.

According to the investigators, one can learn more of FAS disorders in the Western Cape than anywhere else in the world, and some of the best data in the world is collected here because people are very honest about their drinking habits.

May and his team were the first scientists to conduct prevention studies in American Indian communities. With Dr Phillip Gossage - also of the University of New Mexico - and South African scientists, May conducted ground breaking research in South Africa with a population-based FAS study that re-

corded the highest FAS rates in the world in the Western Cape Winelands, some years ago.

During these studies, May and his team also pioneered classroom screening in South Africa. This form of screening was also used in the current study and at the information meeting, the reported FAS rates in the primary schools of Wellington in 2009 and the combined areas of Bonnievale, Robertson, Ashton and Montagu in 2010 amounted to the following:

- The rate of FAS children in Wellington among Grade 1 children was between 6.1 %* and 9.4%**.
- Among children in the combined areas, the rate was between 9.4 % * and 12.9 % ** among the Grade 1 children. (* The lower prevalence rate is the percentage of FAS cases found among all the children enrolled in the first grade classes. **The higher prevalence of FAS rates found among the consenting sample).

"Both of these rates are very high and call for action to both reduce the rate of FAS in the future and provide appropriate and needed educational and developmental services to those children who are affected," May said.

With the scientific spotlight focused on full range of these disorders, previous FAS facts were confirmed and new evidence about the damaging effects of the disorder in the Western Cape came to light. All of the defects are caused by prenatal exposure to alcohol, which can manifest in growth deficiencies, mental retardation as well as physical and central nervous system abnormalities.

The effects of Fetal Alcohol Syndrome are permanent and irreversible. There is no cure or treatment. FAS seriously impairs a child's lifetime ability to function mentally, physically and socially and to achieve his/her full potential.

According to Soraya Seedat, professor of Psychiatry in the SU Faculty of Health Sciences, and one of the research leaders, FAS and its related disorders represent the most common preventable cause of intellectual disability worldwide. And Prof Colleen Adnams of the University of Cape Town (UCT) pointed out that alcohol intake during pregnancy can negatively affect the central nervous system and co-ordination of children, as well as their mental and social development and their ability to reason.

Furthermore, the team did antenatal screening and assessment and made substantial progress in diagnosing children with fetal alcohol syndrome disorders (FASD) in the first 18 months of life.

The team undertook new-born screening research for two to five years at all the sites where the research is conducted. Thus 1 036 babies were tested at six weeks of age, and again at nine months and 18 months and a diagnostic profile was compiled to determine how early FAS can be diagnosed and whether earlier diagnosis could lead to more positive outcomes.

The researchers found that earlier diagnosis did provide opportunities for earlier interventions and a more positive outcomes. They believe that FAS children, if diagnosed early and provided with special education and opportunities, could develop fairly well – especially with targeted developmental education for enhancing each child's abilities.

"However, even though we can make the future brighter for FAS children, it will never be as bright as that of other children," says Adnams.

Researchers and clinicians are assessing children for symptoms of FAS.

community surveys:

Patterns of hazardous and harmful drinking

The team's research included community surveys which indicated that a high percentage of the drinkers involved in the study exhibited signs of 'hazardous' and 'harmful' drinking.

According to Prof Charles Parry, director of the MRC Drug and Alcohol Research Unit, 34 percent of the women surveyed in Wellington were drinkers and 38 percent for the entire research area.

One of the biggest problems is binge drinking when people do not necessarily drink every day, but indulge in binge drinking over weekends. Some of these people have indicated that they would drink seven to nine tots at a time; some would drink even more – i.e. 24 percent of males in Wellington and 15 percent of males in the other towns.

The researchers found that 5.7 drinks twice a week in the first and second trimesters of pregnancy could result in a baby with FAS. In comparison, a control group showed that 3.8 drinks twice a week could end in a normal birth.

preventing fas:

Case management and motivational interviewing are key

The question that the researchers are seeking to answer, is whether comprehensive prevention lead to a drop in FAS rates.

Based on the Institute of Medicine model, the study utilises case management and motivational interviewing in universal, selective and indicated prevention, said Prof Cudore Snell, dean of the School of Social Work, Howard University, Washington DC, who acts as lead prevention specialist of the study. »

« He says the Institute of Medicine model incorporates selective activities such as targeted education and intervention services for select groups in the community, particularly women and men of childbearing age. "Special and personal education of groups of women and screening for alcohol use problems among women in their earliest childbearing years are believed to be the most direct and effective techniques of selective prevention for FASD.

According to Snell, case management is designed to determine whether the rate of FASD can be reduced over time by applying the Institute of Medicine prevention model, focusing on indicated prevention. This model incorporates case management, motivational interviewing and a community reinforcement approach.

"This level of prevention is to provide support to women who are known to drink heavily during pregnancy. It is especially aimed at:

- Women who already have one child diagnosed as having FAS or FASD.
- Heavy drinking pregnant women who consume eight or more drinks per week or one binge of more than three drinks any day of the week.
- Women who score high on the self-administered questionnaire, provided by the research team.

Case management is about healthy babies and supporting women to stop drinking, Snell says.

The goals of case management are:

- To protect the health of the fetus through prenatal care.
- To support heavy drinking, pregnant women by motivating them to abstain or reduce their alcohol intake.
- To contribute to a better life by reducing the prevalence of FASD.

A total of 71 heavy drinking pregnant women were recruited into case management at antenatal clinics in Wellington and a trained team of social workers and nurses used motivational interviewing and community reinforcement techniques to encourage positive changes in drinking habits to reduce the rates of FAS disorders.

"Twenty cases have been completed," Snell says.

He explains that motivational interviewing is aimed at strengthening each woman's motivation for change. The approach is "respectful, quietly attentive, and supportive of the individual's right to make decisions and take action".

Community reinforcement, on the other hand, comprises a comprehensive behavioural programme for treating substance abuse problems and the goal is to make a sober lifestyle more rewarding than the use of substances.

"Community reinforcement has been used successfully as a treatment approach with family members and friends to respond more effectively to high risk behaviour and reinforcing healthier choices."

findings to date from case management:

drinking characteristics

The mean age of first drinking amongst the women in the group was 16.1 years and ranged from 12 years of age to 22 years of age. The mean number of years that these women had consumed alcohol was 7.5 years - a minimum of one year and a maximum 18 years.

At the first interview, the mean number of drinks per week was 15.3 drinks and ranged from 1.3 drinks per week to 45.1 drinks per week. Most of the alcohol was consumed on weekends with a mean of 14.5 drinks, ranging from 1.3 drinks over the weekend to 40.7 drinks.

nutritional characteristics

Sixty percent of the women reported being hungry during pregnancy because of a lack of food.

mental health characteristics

At the first interview, 15% of the women met criteria for major depressive disorder on an international neuropsychiatric interview scale. Fifteen percent of the women met the criteria for posttraumatic stress disorder while 95 percent of them reported that they experienced life circumstances as stressful.

partner violence characteristics

Verbal, physical and emotional abuse by an intimate partner was common in the group. Forty five percent of the women reported being insulted in front of others by a husband or partner; 40 percent of them have been slapped by a husband or partner; 40 percent reported that a husband or partner had threatened to hurt them, and 25 percent reported that they had been physically forced to have sexual intercourse against their will.

conclusions

Snell says the study indicated that case management as a prevention method is useful to help women abstain from, or reduce their alcohol intake during pregnancy.

"Findings to date showed a reduction in the total number of drinks consumed during case management and other prevention activities were especially effective in reducing consumption in the first six months of the process.

"These prevention methods have merit in meeting the goals.

While it is not possible to attribute causality solely to our intervention after 6 and 12 months, 30 percent of the women had stopped drinking, increasing to 40 percent at 18 months."

The FAS research team.
***Te**amleader, Prof Philip May (centre front) of the USA describes them as the best FAS research team in the world.*

MEDICAL

ETHICS AND LAW in the 21st century

A large grant from the Fogarty International Centre has allowed the SU Faculty of Health Sciences to extend its training and expertise in research ethics to universities and health sciences institutions in all of Southern Africa.

Prof Keymanthri Moodley

In 2003, a Bioethics Unit was established at the Faculty of Health Sciences in recognition of the vital role of bioethics in health sciences education, and the subject was incorporated into the education of all FHS students on both post and undergraduate levels.

Headed by Prof Keymanthri Moodley, this Unit has now been transformed into a centre attached to the Department of Medicine, and has changed its name to the Centre for Medical Ethics and Law.

These changes were made to meet University requirements regarding postgraduate training, which now enables the Centre to offer a postgraduate Diploma in Health Research Ethics. At the same time, medical law was added as a focus area. "With the increase in medical litigation, it is imperative that students in the health sciences should also be aware of the legal environment in which they will be operating as health care professionals," Moodley says.

In 2011, the National Institutes of Health (NIH) in the United States awarded a huge grant to the Centre for postgraduate training to advance capacity development through research ethics training in Southern Africa. Known as ARESA, this is a comprehensive collaborative project between SU and the Centre for Bioethics at the University of North Carolina (Chapel Hill) in the United States and comprises a postgraduate diploma programme in health research ethics, offered to senior academics from health sciences institutions in South Africa and countries in Southern Africa.

"Many of the trainees are PhD's and will be awarded a postgraduate diploma on completion of their training. Once they have completed the course, we expect these academics to return to their home institutions to train members of their own research ethics committees."

Moodley says the five-year grant, awarded by the Fogarty International Centre within the NIH, allows the SU Centre to train ten postgraduate students per year, completely free of charge. The first ten ARESA trainees have enrolled in October this year and have recently attended the first of three compulsory contact sessions planned for the 2011 to 2012 academic year. Among the first trainees are representatives from different parts of South Africa, as well as Zambia, Ethiopia and Uganda. Ten are doing the diploma course while two are doing some of the modules as a short course. Moodley hopes to eventually graduate some 40 trainees.

The Centre for Medical Ethics and Law also teaches medical ethics and health law to SU health sciences students from their first to their fifth year. As from March next year, 5th year medical students will do a rotation of three weeks at the Centre.

A new book for health care professionals

Moodley is also the editor of the Centre's first book on medical ethics for students in the health sciences. Published at the beginning of the year, the book comprises contributions from 11 authors from different universities in South Africa. It is both comprehensive and practical, covering basic ethical theory and specific topics such as HIV/Aids, reproductive ethics, end of life issues, paediatric ethics and others. Since Ethics is a compulsory aspect of continued professional development (CPD), the book has an online CPD programme attached for health professionals in practice.

According to Moodley medical ethics has gained enormous currency in this century, and health care professionals are expected to practice medicine in a manner that reflects clinical, social and ethical responsibility.

"At the same time, technological advances in medical science demand that we are proactive in formulating creative solutions to challenges raised in patient care - be they clinical or ethical challenges. In this century society will judge the profession for how it embraces and responds to health care challenges - health care professionals will be held accountable for their clinical expertise and their ability to locate clinical care within an ethical and legal framework taking considerations of human rights into account. At the same time our sensitivity to cultural dimensions of care, and the impact of medical care on the community and environment must also be factored into an equation that is expanding in complexity," she says. T

A new breast from stem cell-enriched fat

The new technique uses a person's own fat tissue for reconstruction.

A revolutionary new breast reconstruction technique, utilising stem and regenerative cells derived from a patient's own fat tissue, was recently demonstrated at Tygerberg Hospital.

While Dr Jeffery Hartog, a plastic surgeon from the United States, performed the procedure, Prof Frank Graewe – head of Plastic and Reconstructive Surgery at the SU Faculty of Health Sciences - explained how breast cancer patients, who cannot have implants, can now benefit from this natural reconstruction option which does not introduce anything foreign into the body. It uses a woman's own fat tissue, skin and muscle to create a more natural breast.

Graewe pointed out that some women, who have lost their breasts, cannot have breast implants due to a variety of factors, i.e. unhealed wounds that are sometimes a side-effect of radiotherapy.

How it is done

The new procedure involves the surgeon removing fat from the patient's body by means of liposuction. Half of the fat is used to extract stem an regenerative cells – known as ADRC's – from the fat tissue. The rest of the fat is washed to remove impurities and it is prepared for the transplant.

The concentrated ARDC's are mixed with the clean fat to form a cell-enriched graft and injected into the affected breast in the form of micro droplets. This method gives the stem cells a better chance of survival because they are added to the fat tissue as a concentrate.

Why it is better than other fat transfer methods

ADRC's comprise a large group of cells, including adult stem cells, that can be readily extracted from fat tissue. It is believed that these cells increase survival rates for fat transplantation from one part of the body to the other by bringing the necessary oxygen and nutrients to the transplant area. This helps the body to heal, rather than scar.

According to Graewe, the new technique is indeed a significant improvement on other, similar fat transfer methods which have been used in South Africa for a number of years. The technique generally used involves only the washing of the fat after which it is regrafted into the breast. Although the technique remains effective in breast reconstruction, there is a 50 to 80 percent chance of the stem cells dying because they were not extracted from the fat.

The new technique provides an even better chance of survival when the concentrate of fat cells is added to the second portion of fat that already contains its own stem cells

The benefits

Known as RESTORE, the technique was developed in the United States and was widely tested as a breast reconstruction tool in clinical trials. It has been used in more than 4 000 patients in Europe and Asian countries such as China. According to surgeons, the benefits of the technique include the correction of contour defects after breast conservation surgery, as well as tissue defects after radiotherapy or wounds that can be improved by the body's own repair cells.

Women eligible for the procedure include those who have had breast-conserving therapy and want a natural reconstruction option; also those who would like to cover an implant with fat for a more natural appearance; want to correct deformities of asymmetry of her breasts or may have had a mastectomy and radiotherapy and would like to improve their skin quality and scarring.

The cost

Graewe says the technique is new in South Africa and comes at a fairly high cost. It will consequently be used only in select cases in the public health sector, but will also be available to private patients.

While stem cells are widely used in South Africa to treat leukaemia, these cells are now set to play a vital role in breast reconstruction for women who have lost a breast to cancer but cannot use the implants which are generally used in reconstruction surgery.

Dealing with the ugly face of INTIMATE PARTNER VIOLENCE

As a mental health nursing lecturer in the SU Faculty of Health Sciences, Dr Kate Joyner focused her PhD research on intimate partner violence and the development of a practical and comprehensive model for the care and management of the survivors of intimate partner violence within the primary health care sector. This model and its potential to address a huge gap health care is gaining growing recognition in South Africa and internationally.

Gender-based violence permeates South African society, manifesting in brutal machismo as male on male and male on female violence, such as child sexual abuse and intimate partner violence. Not only are statistics for intimate partner violence (IPV) in South Africa among the highest in the world, but the highest rates for murders of women by intimate partners have been recorded in this country.

As a mental health nursing academic in the SU Faculty of Health Sciences, Dr Kate Joyner started working on these issues whilst training nurses in psychiatric nursing science and gender-based violence nursing. When she eventually chose IPV as the research topic for her PhD studies she worked in a transdisciplinary approach with Prof Kees van der Waal from the Department of Sociology and Social Anthropology and Prof Bob Mash from the Division of Family Medicine and Primary Care. Her main aim was to develop a practical system for comprehensive care for IPV in South Africa's primary health care system.

Her research exposed a much neglected area of physical and emotional care within the country's health system, so much so that when analysing the health sector's response, she found that "most health professionals in the country tend to hide from the problem.

"IPV is largely unrecognised by primary care providers who deal with patients in the primary health care (PHC) sector. In the few cases that are diagnosed on the primary health care level, the standard of care is fragmented, poorly co-ordinated, lacking in continuity and missing important aspects," she says.

Joyner defines IPV as behaviour that violates the full humanity of another person. It includes physical, sexual, emotional, spiritual and financial abuse and is recognised by the World Health Organisation as a major public health problem impacting women's mental and physical health. "In fact, in the latest World Health Report, IPV is showcased as a top priority," she says.

Focusing on the public health care (PHC) sector in the Western Cape, Joyner identified the standard of care for IPV as "inexcusably inadequate." Her research at two urban and three rural community health centres also revealed significant health risks in patients experiencing IPV.

This research formed the basis of a solution that she formulated, with her supervisor Professor Mash and the action research team, to address the neglect and lack of IPV care. It represents a comprehensive model for the identification and management of intimate partner violence for the South African public health sector "which sees the ugly face of IPV and its impact most immediately."

Care and management of IPV survivors

Since the PHC system allows only seven minutes per consultation, Joyner's model starts with a patient's initial visit to a primary care clinic. It then expands into "the activation, engagement and elevation of a network of committed individuals who can start healing their communities by creating and sustaining a genuinely supportive safety net for IPV survivors, perpetrators and children." »

« This model requires primary providers (doctors and nurses) to be responsive to cues that alert them to the hypothesis that this patient may be experiencing intimate partner violence and to ask her whether she is unhappy in her relationship. The cues encompass vague, non-specific symptoms; a history of mental illness, medication and psychological symptoms; fatigue, sleep problems, unexplained somatic complaints; symptoms of depression; anxiety ("thinking too much" or dizziness); chronic pain syndromes, repeated sexually transmitted infections, HIV and ARV preparation; assault or trauma, or suspected alcohol or substance abuse.

Where IPV is identified, the provider offers relevant clinical care before referring the woman to the facility's IPV specialist. This specialist - or 'IPV champion' - can be selected from the staff of the particular facility by the manager and allowed a number of hours per week to deal with IPV activities.

"The 'champion' could be any member of staff who is interested in working with IPV, providing that the person shows an interest or desire to work with IPV, as well as empathy and good listening skills; respect for patient confidentiality and autonomy, and a collaborative approach to problem solving. She or he must also be an effective multidisciplinary team player and good networker for intersectoral collaboration to promote and develop the support group project," Joyner says.

When a health provider identifies an IPV survivor, the person is referred to the IPV champion who will assess her psychosocial wellbeing and legal/advocacy needs and refer accordingly. The IPV survivor then joins a weekly therapeutic group process facilitated by the IPV champion who is guided by a Lifestyle Intervention for Empowerment programme (designed by the head of Chronic Care for the Western Cape, Ms Unita Van Vuuren). This tool is used in conjunction with the group process to stabilise the health of an IPV survivor, modify her behaviour and making her aware of her rights and available resources – such as medical, legal, psychological and social.

"Care for IPV survivors does not fit the 'quick fix' paradigm," Joyner says. Understanding IPV as a chronic condition indicates that sometimes there is no 'cure', but as with HIV/AIDS, the quality of life and overall mental and physical health for affected individuals, family systems and communities can be significantly enhanced. When the patient has completed the Lifestyle Intervention for Empowerment programme she moves into a support group – which should be a source of ongoing support for IPV survivors when and as they need it. If a system of IPV support groups, for adolescents and young adults, women and men, could be established nationwide, it will enhance the sustainability of IPV care.

Growing recognition

Since 2009, when she was awarded a PhD-degree, Joyner's work in the field of intimate partner violence has enjoyed growing recognition, in South Africa and internationally.

In 2010, after the superintendent general of the Western Cape Department of Health, Prof Craig Household, listened to an Academic Day presentation by Joyner on her IPV work, he indicated his support for her initiatives in the field. Subsequently, the Health department authorized her model for IPV care to be piloted for a year in the Tygerberg and Witzenburg subdistricts.

In the meantime, the director of global initiatives at the University of Maryland in the United States, Prof Joe O'Neill, heard about the IPV care model and Joyner's work in this regard from Prof Lee Wallis, Head of Emergency Medicine at the Universities of Stellenbosch and Cape Town. O'Neill invited Joyner for a week-long visit to the United States to explore possibilities of collaboration between SU and the University of Maryland.

During the visit, O'Neill invited Joyner to present her model to meetings at the White House and the State Department in Washington DC. Plans are afoot to secure funding to research this model for IPV care in both the United States and South Africa.

"The senior advisor for gender at the Office of the U.S. Global AIDS Coordinator, Dr Daniela Ligiero, indicated that the model addresses a huge gap internationally where there is virtually no evidence of the benefits of interventions for women experiencing intimate partner violence. She said the model was exactly what was needed to move the field forward," Joyner says.

Dr Kate Joyner

Further international recognition followed when Joyner presented her work at the 2011 Sexual Violence Research Initiative forum and won an award for the best presentation on Health Sector Response. Earlier, she was invited by the WHO's director of Violence, Injury Prevention and Disability, to be the discussant for the speakers on intimate partner violence, at the 5th milestone meeting of the Global Campaign for Violence and Injury prevention that was held in Cape Town in September this year.

Joyner also edited a 2010 textbook, *Aspects of Forensic Medicine*, relating to sexual assault and violence against women and children. The textbook deals with the medical, psychosocial and legal responsibilities of health care professionals when they deal with trauma cases – including physical and sexual violence against women and children.

Recently, Joyner gave a technology-mediated lecture to Masters' students in Social Work at the University of Maryland which elicited appreciative responses from both the students and their lecturers. "The universality of the issues, and yet the cultural contexts within which people respond were evident and appreciated by the students," one of them commented after the lecture. T

Landmark research exposes trickery in the TB bacillus

Dr Gail Louw has exposed an important protective mechanism in the drug resistant tuberculosis bacillus

One of the top young researchers in the Faculty of Health Sciences, Dr Gail Louw of the Department of Biomedical Sciences, has recently published landmark research in a highly rated international journal that questions the dogma that genetic mutations are the main culprits involved in rifampicin-resistant tuberculosis.

Furthermore, her research highlights the potential dangers associated with the treatment of undiagnosed multiple drug resistant TB (MDR-TB) with a drug such as rifampicin, to which the TB pathogen is already resistant – a practice recommended by the World Health Organisation.

Gail's research has shown that TB drug resistance can not only be explained by mutations, but is far more complex and also involves other mechanisms that confer drug resistance - most notably efflux pumps.

"Rifampicin induces the activation of efflux pumps in rifampicin-resistant TB thereby causing a ripple effect when the subsequent treatment with second-line drugs, containing ofloxacin, is also significantly compromised," she says. "In other words, treatment with rifampicin programs the bacillus to become resistant to clinically relevant second-line drugs, such as ofloxacin. Since ofloxacin is normally used to treat MDR, this means that the duration of treatment to achieve a clinical cure, may be compromised."

Another danger is that the prolonged treatment of undiagnosed MDR with rifampicin could lead to extremely drug resistant TB (XDR), says Prof Tommie Victor, who supervises Gail's post doctoral research, along with Prof Rob Warren, at the Centre of Excellence in TB Research, in the department. XDR-TB is a much deadlier form of MDR TB and much more difficult to treat.

Victor says Gail's work emphasises the need for more rapid drug resistance testing to prevent the treatment of MDR patients with rifampicin for extended periods. It furthermore highlights the need for novel drugs to counteract the phenomenon.

At the 2011 Academic Day of the SU Faculty of Health Sciences, Gail presented research which indicated that drug susceptibility could be restored with efflux pump inhibitors in combination with anti-TB therapy. "We have done studies in the laboratory which have shown that rifampicin switches on the efflux pump, whereas a compound, comprising efflux inhibitors, can be used to block the pump. This suggests that efflux pump inhibitors may be important additions to enhance the efficacy of TB therapy," she says.

Since she started her postgraduate studies in the Department of Biomedical Sciences in 2004, Gail's research has been focused on TB drug resistance and received wide recognition, in South Africa and internationally. She has been the first author of several publications in top international scientific journals and presented her research at a number of international meetings – all before the age of 30!

In 2005, Gail won the faculty trophy for an outstanding presentation by a young researcher, under 35 years, at the faculty's annual Academic Day. This year, her presentation at the Annual Academic Day again won the first prize in the Infectious Diseases session for a presentation by a young researcher under 35.

In 2009, she was awarded a PhD-degree for her research on resistance to first-line anti-TB drugs by gene mutation and gene modulation and in 2010 she was a visiting postdoctoral fellow at the Harvard School of Public Health and the partner's organisation's Centre for Personalised Genetic Medicine in the United States. She has won prestigious scholarships from the National Research Foundation, as well as the Claude Leon and Harry Crossley foundations.

As a postdoctoral scientist, Gail is part of the productive team of researchers in the Centre of Excellence in TB research who are using the new tools of molecular biology to confront the challenges of the TB epidemic in South Africa. Her work is an example of how these scientists are also contributing to an international pool of TB knowledge. T

Dr Gail Louw and Prof Tommie Victor in the laboratory.

Iron deficiency and multiple sclerosis

A new research study seeks to improve the quality of life of MS patients with low iron levels.

Multiple sclerosis is a condition that spreads apprehension, fear and despair in patients, says dr Susan Janse van Rensburg, a scientists in the Chemical Pathology division of the SU Faculty of Health Sciences.

"We believe that we can make a difference by teaching people the basics about the disease and finding new ways to improve the quality of life of those who suffer from multiple sclerosis (MS).

Van Rensburg explains that MS is a common inflammatory disease of the nervous system. "The clinical outcome of MS is extremely variable, which makes it difficult to predict the eventual severity of the disease at diagnosis. Once diagnosed, some patients may have a benign form of MS for the rest of their lives, while for others it can be fatal within one year."

"It is one of the aims of researchers involved in a MS project at the FHS, to investigate the factors which may lead to a benign disease outcome, so that the prevalence of benign MS may be increased," she says.

Photo: Sr Treska Botha

Dr Mona Fewster, Dr Marius de Klerk and Prof Susan Janse van Rensburg, at an informal meeting to discuss past and future research on multiple sclerosis at the FHS.

A research history

Scientists and clinicians in the Chemical Pathology division have been conducting MS research for many years. Dr Mona Fewster, who worked in the division from 1976 to 1978, studied the relationship between genetics and environmental factors in the etiology of multiple sclerosis. Her particular interest was to determine whether measles antibodies could interact with HLA expression in MS patients.

Dr Marius de Klerk, a Chemical Pathologist, was a collaborator on Dr Fewster's project: he accompanied her on house visits to draw blood from the patients.

The results of this research project was published in the Journal of the Neurological Sciences in 1979. Fewster had found significantly higher measles antibody titers in the MS patients compared to controls, but no association with the HLA antigens. Fewster then accepted a position at the University of Cape Town (UCT), while De Klerk worked at Tygerberg until his retirement in 2008.

MS research at the FHS was revived in 1996 when Prof Maritha Kotze - then at Human Genetics - initiated a project on the relationship between iron deficiency and the genetics of porphyria and hemochromatosis in people diagnosed with MS. When she left the FHS, the project remained dormant until it was taken over by Van Rensburg, a medical scientist in Chemical Pathology.

Kotze has now returned to the FHS with the special task of establishing genetic research innovation, based in the Department of Pathology. One of her first projects was to rewrite the protocol for the MS project, together with Van Rensburg. The project, entitled "The development and commercialisation of a comprehensive gene-based, pathology supported intervention program for improved quality of life in patients diagnosed with multiple sclerosis (MS)", was approved by the Ethics committee in November 2007.

In the meantime, De Klerk has also returned to MS research as consulting clinician for the project which aims to integrate genetics and chemical pathology in MS diagnosis and treatment.

The MS project has been affiliated with the MS Society of the Western Cape for many years. In 2004 a community research study was conducted amongst members of the Society, involving clinical assessments, family history, blood measurements and life style factors such as diet. The study was co-ordinated by Sr Treska Botha, then director of the MS Society. Co-workers were Dr Dinie Hon, Profs Maritha Kotze and Susan van Rensburg.

The results of the study were published in Metabolic Brain Disease (van Rensburg et al. 2006). It was found that iron concentrations in the blood played a role in determining the neurological status of the patients. This confirmed the result previously published by Kotze in the American Journal of Medical Genetics (Rooney et al. 1999). Kotze was subsequently contacted by Dr Tracey Rouault of the National Institutes of Health (NIH) in the USA, who was interested in the similarity between the genetics of the patients in the study, and her own results involving an iron regulatory protein, IRP2.

A research 'first'

The role of iron deficiency in MS, as discovered by Kotze and Van Rensburg, was a 'first' in the in the field of MS research. Other workers in the field regard iron overload as a contributing factor for the disease. The aim of the study was to promote the concept of individualised treatments for patients through laboratory measurements of iron levels. Further research by Prof Johan Schoeman and Dr Ronald van Toorn of Paediatric Neurology, »

African universities join forces with Europe to promote health research

A comprehensive collaborative project that involves a multidisciplinary approach to evaluating health care and its effects on health was recently launched at the SU Faculty of Health Sciences.

A research capacity development project, known as the African Regional Capacity Development for Health Services and Systems Research (ARCADE HSSR) and funded the European Union FP7, held its first meeting at the Faculty of Health Sciences earlier this year.

The project is coordinated by Karolinska Institute in Sweden, with SU and the Makerere University in Uganda as hub institutions in Africa. It will focus on the development of an innovative approach to PhD programmes in Health Services and Systems Research (HSSR).

Prof Lilian Dudley as principal investigator of the project at the FHS, will lead a multidisciplinary team from SU to develop the joint PhD programme. Other partners include the Institute of Development Studies at Sussex University; Malawi University; Muhimbili University in Tanzania, and the Norwegian Knowledge Institute for Health Services.

The start-up meeting at the FHS was also attended by representatives of Eduardo Mondo University in Mozambique and the University of Zimbabwe, with whom the project hopes to share its outputs.

ARCADE aims to develop modules for PhD and Masters' programmes that can be delivered through a blended teaching and learning approach, using the rapidly developing ICT platforms in Africa.

According to Dudley, HSSR involves a multidisciplinary approach aimed at evaluating health care and its effects on health. "There are also synergies and common partners between this project and the African Doctoral Academy, and the project therefore intends to strengthen internal collaborations between the SU FHS and other faculties in the development of postgraduate training in HSSR," she says.

After being awarded the ARCADE (HSSR) grant, SU also participated in the successful submission of a similar collaborative proposal for an ARCADE project in Asia, which will focus on research capacity development around social determinants of health.

The Asia ARCADE is led by Tanjing Medical School in the Peoples Republic of China, and commenced in November 2011.

At the start-up meeting were representatives from Stellenbosch University, the Karolinksa Institute, Makerere University, the Institute of Development Studies at Sussex University, Malawi University, Muhimbili University in Tanzania, the Norwegian Knowledge Institute for Health Services, Eduardo Mondo University in Mozambique and the University of Zimbabwe.

« confirmed the importance of iron deficiency when they determined the iron concentration in two children diagnosed with MS. When iron supplements were prescribed, together with other nutrients that improved iron uptake and stimulate myelin production, the children recovered and have stayed in remission. These case studies were published in the Journal of Child Neurology (van Toorn et al. 2010). Following publication, Van Rensburg and Van Toorn were invited by the journal to write an editorial about the role of iron in MS (van Rensburg and van Toorn 2010).

The MS Project extended its community involvement in 2010. As part of Kotze's initiative to integrate genetics and chemical pathology in MS diagnosis and treatment, patients have been invited to provide blood samples to have their blood levels of vitamin D and iron tested. During the last few years, Vitamin D has been acknowledged as an environmental risk factor for MS which can be ameliorated with supplementation and sun exposure.

"It is our aim to put iron on the map in a similar way – to encourage clinicians to measure blood levels at diagnosis, and to improve the quality of life of their patients, to prescribe iron if blood levels are low.

"Part of the study also focuses on genetic tests to build a database to elucidate the involvement of specific genetic variations in MS. Several students have been trained in the MS project, including students from CPUT who are part of a collaborative project," Van Rensburg says.

Genoominligting prakties ingespan teen borskanker

Vroeë borskanker word vandag met groter sukses as ooit tevore opgespoor en behandel. In Amerika, byvoorbeeld, word meer as 90 persent van alle stadium 1-borskanker genees – danksy 'n kombinasie van mediese kundigheid en gesofistikeerde tegnologiese hulpmiddels. Twee aspekte van hierdie benadering wat toenemend in Suid-Afrika gebruik word is genetiese sifting en genetiese profilering van borskanker. Genetici en 'n borskankerspesialis wat albei aan die US verbonde is, neem hierdie benaderings onder die loep.

Vóór die ontrafeling van die menslike genoom in 2003, is genetika en genetiese toetse in kliniese praktyk hoofsaaklik ingespan om bekende oorerflike siektes soos sistiese fibrose en bloedstollingsabnormaliteite te help diagnoseer.

As patologie egter aangewend word om 'n brug te bou tussen genetika en kliniese praktyk, kan die genoominligting wat vandag tot ons beskikking is, ook meer doeltreffend gebruik word om genetiese, of genetiesverwante siektes vroegtydig op te spoor, optimaal te behandel en deur middel van voorkomingsmaatreëls, soos leefstylaanpassings en medikasie, onder beheer te hou, sê dr Maritha Kotze, navorser en dosent in die Departement Patologie, US Fakulteit Gesondheidswetenskappe (US FGW).

'n Goeie voorbeeld hiervan is borskanker, waar genetiese sifting vir borskanker, sowel as die tipering van gene wat in borskanker voorkom, 'n groeiende rol speel in die hantering van vroeë borskanker.

Kotze wys daarop dat borskanker veroorsaak word deur die interaksie van genetiese en omgewingsfaktore. KANSA ondersteun tans navorsing waar genetiese sifting gebruik word om geen kombinasies te identifiseer wat in samewerking met bepaalde omgewingsfaktore soos alkohol en die gebruik van hormoon-vervangingsterapie, die risiko vir borskanker verhoog.

Oorerflike borskanker

Dit is slegs 'n klein persentasie van borskanker (tussen vyf en tien persent) wat veroorsaak word deur oorerflike genetiese faktore. Twee van die belangrikste gene wat verband hou met oorerflike borskanker is BRCA1 (BReast CAncer geen 1) en BRCA2 (BReast CAncer geen 2). Almal – mans sowel as vroue - het elk twee BRCA1 en BRCA2 gene. Die doel van hierdie gene is om selskade te herstel en normale selgroei in die bors te bevorder. As daar egter foute, oftewel mutasies, in BRCA1 of BRCA2 is, funksioneer die gene nie normaal nie en gee dit aanleiding tot 'n verhoogde borskanker-risiko. Hierdie mutasies kan van een generasie na die volgende oorgedra word. Elke kind van 'n individu »

Veeldoelige genetiese toetsing vir oorerflike siektes

Benewens borskanker doen prof Maritha Kotze en US-navorsers in die Departement Patologie ook genetiese sifting in individue met 'n familiegeskiedenis van hartsiekte en ander kroniese siektes om ander subtipes van oorerflike siektes vroegtydig op te spoor sodat dit optimaal behandel of voorkom kan word.

"So, byvoorbeeld, kan oorerflike hemochromatose (ysteroorlading) met behulp van bloedlating onder beheer gehou word en is daar verskeie subtipes van familiële kardiovaskulêre siekte wat behandelbaar is, soos dislipidemie en trombofilie (diep-aar trombose)."

Sy sê daar is navorsing wat toon dat minstens 30% van kankers voorkom kan word deur risiko-verlagende faktore soos gesonde liggaamsgewig, fisiese aktiwiteit en dieet.

Daarom glo sy dat patologie-gesteunde genetiese toetse wat die genetiese profiel van 'n pasiënt korreleer met sy/haar mediese geskiedenis en patologie – bv biochemiese abnormaliteite – om geen-uitdrukking en behandelingsrespons te bepaal, integraal deel kan word van goeie kliniese praktyk en pasiëntesorg. Sy wys daarop dat dit vandag algemeen aanvaar word dat 'n pasiënt se familiegeskiedenis 'n sterk aanduider is van die siektes wat die pasiënt kan ontwikkel.

Hierdie benadering, wat genoomnavorsing na kliniese praktyk deurtrek (oftewel binne kliniese konteks 'vertaal'), word patologie-gesteunde genetiese toetsing genoem.

Kotze en haar kollegas is vir etlike jare reeds besig om die benadering onder gesondheidspraktisyns te bevorder en sodoende 'n groter bewustheid van die waarde van genetiese toetsing as 'n integrale deel van kliniese praktyk te kweek.

"Die grootste probleem wat ons egter geïdentifiseer het tov die toepassing daarvan is die gebrek aan gesondheidspraktisyns met kundigheid op die gebied van moderne menslike genetika. Dokters en ander gesondheidspraktisyns benadruk ook die tekort aan genetiese raadgewers wat noodsaaklik is om die proses te rugsteun."

Baie van die werk wat Kotze en haar kollegas oor die afgelope jare op hierdie gebied gedoen het, was daarop gerig om hierdie leemtes aan te spreek.

« met 'n BRCA1 of BRCA2 mutasie het 'n 50% kans om die mutasie te erf en dus 'n verhoogde risiko vir borskanker te hê.

Genetiese sifting

Genetiese sifting moet oorweeg word in die volgende gevalle:

- Verskeie gevalle van borskanker en/of ovariale kanker, op 'n vroeë ouderdom (<50) aan een kant van die familie.
- Vroue van Afrikaner- of Ashkenazi Joodse herkoms met 'n familiegeskiedenis van borskanker.
- Vroue wat op enige ouderdom borskanker in albei borste ontwikkel.
- Vroue wat op 'n vroeë ouderdom (veral voor 35 jaar) borskanker ontwikkel.
- Families waar bors- en ovariale kanker voorkom.

As die mutasie wat die borskanker veroorsaak het, geïdentifiseer kan word in 'n individu, is dit moontlik om ander familielede vir dieselfde mutasie te toets. Die beste manier om die borskanker risiko te hanteer kan dan bepaal word.

Me Mardelle Schoeman, 'n genetiese raadgewer verbonde aan die FGW en Tygerberghospitaal, wys daarop dat 'n persoon wat positief toets vir 'n BRCA1 of BRCA2 mutasie 'n kans van 50 tot amper 90 persent het om borskanker te ontwikkel, en ook 'n verhoogde kans het om ovariale kanker te ontwikkel. As die toets negatief is in 'n familie waar daar 'n mutasie geïdentifiseer is, daal die borskankerrisiko tot die gewone risiko van ongeveer 10 persent - oftewel een uit elke tien mense in 'n bevolking.

Genetiese berading speel 'n baie belangrike rol wanneer oorerflike borskanker in 'n familie vermoed word. 'n Genetiese raadgewer kan die risiko bereken van 'n BRCA mutasie vir die individu, asook vir ander familielede en advies gee oor die toepaslikheid van 'n genetiese toets. Daar is verskeie genetiese siftingsopsies en 'n genetiese raadgewer kan help om die beste opsie te identifiseer, asook die beperkinge van sifting, die implikasies van 'n positiewe of negatiewe resultaat, en die sielkundige en behandelings aspekte rondom sifting bespreek.

Implikasies van sifting vir borskanker

Toetse vir genetiese borskanker het sielkundige sowel as behandelingsimplikasies. Volgens prof Justus Apffelstaedt, hoof van Tygerberghospitaal se borskankerkliniek, kan dit tot die voordeel van 'n vrou wees as sy bewus is van borskanker in haar familie, want dit plaas haar in beheer van die siekte. Omdat die inligting dikwels 'n ontstellende uitwerking op 'n vrou het, kan dit egter lank neem om te besluit hoe sy die risiko wil hanteer.

Dit is juis in sulke situasies dat genetiese berading van groot hulp kan wees, sê Kotze – vóór, sowel as na afloop van die toets. 'n Positiewe sowel as 'n negatiewe uitslag moet oorweeg word in verhouding tot die behandelingsopsies, en die uitwerking wat dit op die individu en ander familielede kan hê. 'n Positiewe uitslag kan ook ernstige sielkundige implikasies hê, soos angs, depressie en woede. Genetiese berading kan jou voorberei vir die sielkundige gevolge soos hierdie, en help om dit te hanteer.

Kotze sê as 'n vrou borskanker ontwikkel, is dit tot haar voordeel om te weet wat haar BRCA1 of BRCA2-status is, indien genetiese sifting van pas is. "Byvoorbeeld, die identifisering van die mutasie kan die behandeling van die kanker beïnvloed. Dit »

Prof Maritha Kotze

In die eerste plek het hulle 'n Internet-instrument ontwikkel wat aan dokters makliker toegang gee tot genetiese beraders – spesifiek opgeleide genetici wat die nodige kennis en begrip het van genetiese siektes en behandeling het en/of nou saamwerk met mediese praktisyns wat hierin spesialiseer. Die instrument bestaan uit 'n beveiligde rekenaarprogram wat die dokter in staat stel om die familie- en mediese geskiedenis van pasiënte aanlyn te dokumenteer. Dit is ook geprogrammeer om die dokter behulpsaam te wees met die seleksie van die toetse wat gebruik moet word, en om outomaties motiverings vir mediese fondse te genereer tov betaling vir genetiese dienste.

"Behalwe dat die program omvattende patologie-gesteunde genetiese toetse met die genetiese profiel, mediese geskiedenis en patologie (soos biochemiese abnormaliteite), van 'n pasiënt korreleer, is genetiese berading 'n integrale deel van die instrument. Gebruik van die sisteem word gratis aan gesondheidspraktisyns beskikbaar gestel op die webwerf, https:www.gknowmix.com."

Kotze en haar kollegas gaan ook uit hulle pad om genetika en genetiese toetsing onder gesondheidspraktisyns te bevorder. Hulle bied vir etlike jare reeds opleidingswerkswinkels in genetika en genetiese sifting vir dokters en ander gesondheidspraktisyns aan. 'n Studie wat in die Patologie-departement gedoen is, dui daarop dokters wat die werkswinkels bygewoon het, 'n veel beter begrip het van nuwe ontwikkelings in molekulêre genetika, en dat baie van hulle genetiese toetsing toenemend deel maak van pasiëntesorg in hul praktyke.

Benewens borskanker, bied die Gnowmix databasis toegang tot genetiese toetse vir pasiënte met oorerflike hemochromatose (ysteroorlading). Hierdie siekte verhoog die risiko vir ander siektes soos kanker, hartsiektes, diabetes, artritis en infertiliteit, en hemochromatose is geklassifiseer as die mees algemene genetiese afwyking in die wêreld.

Kotze glo dat genetiese sifting toenemend 'n rol sal speel in kliniese praktyk. Daar is trouens 'n groeiende getal mediese praktisyns wat oortuig is van die nut van 'n veeldoelige genetiese toets wat daarop gerig is om behandelbare subtipes van komplekse siektes te diagnoseer; kumulatiewe risiko te voorkom en, op grond van 'n pasiënt se genetiese agtergrond, 'n intervensie – oftewel voorkomingsprogram – vir die pasiënt te formuleer in ooreenstemming met kliniese aanwysers. T

By die sesde Toegepaste Genetiese Werkswinkel, wat onlangs by die FGW gehou is, was vnlr: prof Manie de Klerk van die US Bestuurskool, terwyl dr Dawie van Velden, Me Sakia Spagni, (MMed student), dr Mike Urban, prof Maritha Kotze en prof Johann Schneider almal die FGW verteenwoordig het.

« kan eweneens tot die voordeel van ander familielede strek. Die wete dat jy die mutasie het, kan 'n baie belangrike rol speel in keuse van mediese behandeling, gesondheid- en leefstylbesluite." 'n Genetiese berader kan in sulke gevalle help om die risiko vir 'n BRCA mutasie in 'n spesifieke individu te bepaal en help met die besluitneming oor sifting.

Opsies vir die hantering van borskankermutasies

Wanneer daar gevind word dat 'n gesonde persoon 'n BRCA1 of BRCA2-mutasie het, het sy die keuse om meer gereelde siftingsondersoeke te ondergaan sodat enige tekens van kanker so vroeg as moontlik opgespoor en behandel kan word. Vroeë borskanker kan vandag baie effektief en minder ingrypend behandel en genees word. Omdat BRCA1 en BRCA2-mutasies egter so 'n hoë borskankerrisiko verteenwoordig, verkies baie vroue om profilaktiese risikoverlagende chirurgie te ondergaan. Die prosedure verminder die risiko vir borskanker met ongeveer 90 persent. Omdat dit tegnies nie moontlik is om al die borsweefsel te verwyder nie, bly daar 'n klein, residuele risiko vir borskanker.

Kotze en navorsers in die Departement Patologie is ook tans besig met navorsing om te bepaal of dit van kliniese waarde kan wees om leefstylaanpassings ten opsigte van gesonde liggaamsgewig, fisiese aktiwiteit en dieet, met genetiese sifting vir borskanker in 'n kliniese omgewing te kombineer.

Genetiese profilering

Diagnostiese genetiese siftings soos BRCA1 en BRCA2 siftings vir vroue met 'n geskiedenis van familiële borskanker kan ook gekombineer word met minder bekende toetse om die hantering van borskanker te optimaliseer, sê Kotze.

So, byvoorbeeld, word farmakogenetiese CYP2D6-genotipering tans gebruik om moontlike geneesmiddelmislukking agv tamoxifen-weerstandigheid in hormoon-positiewe borskankerpasiënte te identifiseer, terwyl genetiese profilering van tumorweefsel onnodige chemoterapie kan verhoed.

Navorsing wat gedoen is deur Me Nicole van der Merwe, 'n nagraadse student in Patologie, beklemtoon die belang van CYP2D6 genotipering in vroue wat tamoxifen, sowel as antidepressante soos paroxetine en fluoxetine vir depressie of warm gloede gebruik. Vrouens met 'n nie-funksionele ensiem put nie volle voordeel uit tamoxifenbehandeling nie, as gevolg van geen-geneesmiddel en geneesmiddel-geneesmiddel interaksies. CYP2D6-genotipering word derhalwe as deel van 'n gekombineerde navorsing- en roetine laboratoriumtoets aangebied om te verseker dat vroue wat tamoxifenbehandeling kry en antidepressante gebruik, die regte keuses maak in konsultasie met hul onkoloog, sodat hul behandeling nie in die wiele gery word nie. Die hoogste herhalingsrisiko is in BRCA2-positiewe borskankerpasiënte omdat hierdie tipe kanker gewoonlik estrogeen-positief is – vandaar die term patologie-gesteunde genetiese toetsing. Die frekwensie van BRCA2 mutasies word in die Suid-Afrikaanse bevolking verhoog as gevolg van 'n stigterseffek.

Kotze sê die sg MammaPrint-geenprofiel - wat 70 borskankergene insluit – word effektief gebruik om te help om die mees doeltreffende hormoon, chemoterapeutiese of biologiese behandeling vir 'n pasiënt met vroeë borskanker te bepaal.

Apffelstaedt beaam dat genetiese profilering van kankergewasse daartoe aanleiding gee dat ongeveer een uit elke drie borskankerlyers chemoterapie vryspring. "Omgekeerd is daar sowat een uit elke vier vroue vir wie chemoterapie nie nodig geag is nie, maar genetiese profilering baie aggressiewe behandeling aangedui het as gevolg van die aggressiwiteit van die kanker. Dit is 'n goeie voorbeeld van kankerbehandeling wat deur genetiese profilering verpersoonlik word," sê hy.

Genetiese profilering behels die verwydering van 'n klein stukkie van die kankergewas en 'n ondersoek van 70 van die gene wat in die gewas voorkom. "Dit kom daarop neer dat 'n mens as't ware in die brein van die kanker inkyk om die voornemens van die kanker te lees."

Apffelstaedt sê selfs stadium 1-kanker wat in die borsweefsel gelokaliseer is, kan versprei. As sekere gene binne die kanker aktief is, kan die kankerselle deur middel van die bloedsomloop uit die weefsel na 'n ander deel van die liggaam migreer waar dit dan 'n nuwe kolonie kankerselle vorm.

Genetiese profilering maak dit moontlik om vas te stel of die selle uit 'n gewas gaan versprei. "Dit beteken dat ons baie meer akkuraat kan vasstel of die kanker aggressief behandel moet word met chemoterapie. Vòòr die beskikbaarheid van genetiese profilering, is pasiënte wat dit nie werklik nodig gehad het nie, met chemoterapie behandel as voorsorgmaatreël teen die verspreiding van borskanker.

Volgens Kotze kan die MammaPrint-toets die gebruik van chemoterapie met sowat 'n derde verlaag in vroue met vroeë stadium-borskanker. Om hierdie rede betaal verskeie mediese fondse vir die toets as deel van onkologie voordele. ■

Die identifisering van die genetiese mutasie in borskanker kan behandeling beïnvloed

Fakulteit kry 'n eie

Sentrum vir Bewysgebaseerde Gesondheidsorg

"Bewysgebaseerde geneeskunde verteenwoordig 'n streng en deursigtige benadering wanneer gesondheidsbesluite geneem word – en dit is besig om wêreldwyd veld te wen."
- prof Jimmy Volmink

Bewysgebaseerde gesondheidsorg - wat beskryf word as die "ondersoek, diagnose en hantering van siektetoestande in terme van protokolle wat deur middel van wetenskaplik-gefundeerde modelle bepaal word – het vanaf die einde van die 19e eeu opgang in die Weste gemaak.

Hierdie metode is egter met die loop van tyd agterweë gelaat ten gunste van sg. 'kennersmenings' wat toenemend gebruik is om gesondheidsbesluite te neem, sê prof Jimmy Volmink, dekaan van die US Fakulteit Gesondheidswetenskappe (FGW),

"Navorsings in die laaste paar dekades het egter getoon dat hierdie kenners soms verkeerd was omdat hulle bewyse, wat hulle eie menings steun, selektief gebruik het en relevante inligting – wat nie daardie menings steun nie – geïgnoreer het."

Volgens Volmink gebeur dit ook dat die 'kenners' vooroordele in oorspronklike navorsing kan miskyk en derhalwe nie stappe neem om sulke vooroordele te verminder in metodes wat gebruik word vir die sintetisering van navorsing nie. "Bewysgebaseerde geneeskunde verteenwoordig 'n streng en deursigtige benadering wanneer gesondheidsbesluite geneem word – en dit is besig om wêreldwyd veld te wen."

In Suid-Afrika, wat 'n driedubbele gesondheidslas met beperkte bronne moet hanteer, word daar groeiende waarde geheg aan gesondheidsorg wat gebaseer is op die beste beskikbare inligting. Terselfdertyd is daar 'n groeiende vraag na betroubare inligting vanaf beleidsmakers en klinici.

Dit is teen hierdie agtergrond dat die US besluit het om die eerste volwaardige Sentrum vir Bewysgebaseerde Gesondheidsorg binne die FGW tot stand te bring.

Die belangrikste taak van hierdie Sentrum is om kapasiteit in bewysgebaseerde gesondheidsorg te bou en om stelselmatige navorsingsoorsigte en meta-analises te doen. Daarbenewens sal die Sentrum 'n aktiewe rol speel in navorsing.

By die opening van die Sentrum in September vanjaar, het die Wes-Kaapse Minister van Gesondheid, mnr Theuns Botha, gesê dat instansies soos die regering en die privaatsektor, sowel as algemene publiek, die media, professionele gesondheidswerkers en beleidmakers, voordeel kan trek uit die stigting van die nuwe sentrum.

As die eerste van sy soort by 'n akademiese inrigting in Suid-Afrika, kan die Sentrum beantwoord in die groeiende vraag na betroubare inligting, en sal bronne en ondersteuning aan professionele gesondheidswerkers bied om die hoogste standaarde van gesondheidsorg te handhaaf.

Die US-rektor, prof Russel Botman, het daarop gewys dat bewysgebaseerde gesondheidsorg dokters en ander voorsieners van gesondheidsorg leer hoe om te onderskei tussen goeie navorsing en navorsing van twyfelagtige gehalte – en deur dit te doen, ingeligte behandelingsbesluite te neem.

"Hierdie benadering is in ooreenstemming met die rol wat die US vir homself en vir die wetenskap, binne die samelewing sien – naamlik om die heelbeste wetenskap in diens van die samelewing te plaas.

"Die US se wetenskaplikes en akademici het nog altyd konsekwent daarin geslaag om nuttige navorsing en tegnologie te produseer. Ons belê baie energie in internasionale samewerking op die gebied van navorsing, en deur bande te smee met wetenskaplikes en instansies elders in Afrika en in ander dele van die wêreld. Die doel is om die stem van hierdie vasteland hoorbaar te maak ten einde die sindroom van afhanklikheid om te keer en hoër onderrig as 'n bron van ontwikkeling in Afrika te versterk."

Volgens Volmink sal akademici van die FGW bewysgebaseerde gesondheidsorg verstewig en deel maak van hul onderrig op voorgraadse en nagraadse vlak.

Dr Taryn Young, wat aangestel is as direkteur van die Sentrum, sê sy sal haar beywer vir samewerking met nasionale, streeks- en internasionale vennote, onder meer die Effective Health Care Research Consortium, wat die Britse Departement vir Internasionale Ontwikkeling befonds word, en die internasionale Cochrane Collaboration, waarvan die SA Cochrane Sentrum van die Mediese Navorsingsraad een van 13 soortgelyke sentrums in die wêreld is. T

Foto: Anton Jordaan, SFD

Van links op die foto: prof Jimmy Volmink, minister Theuns Botha, prof Russel Botman en dr Taryn Young by die opening van die Sentrum.

KERNKOMPETENSIES

die grondslag vir gesondheidswetenskappe opleiding in die 21ste eeu

Die gebreke wat gesondheidstelsels en die lewering van gesondheidsorg wêreldwyd kenmerk het opnuut die internasionale soeklig op die opleiding van dokters en professionele gesondheidswerkers gefokus.

Waar opleiding in Gesondheidswetenskappe tot dusver professioneel- en kennisgedrewe was, is daar tans internasionale konsensus dat dit deur die behoeftes van gemeenskappe gedryf moet word, sê die voormalige dekaan van die US se Fakulteit Gesondheidswetenskappe, prof Wynand van der Merwe.

Van der Merwe - wat 'n lid is van die voorgraadse onderwys- en opleidingsubkomitee van die Raad op Gesondheidsberoepe van Suid-Afrika se Geneeskundige en Tandheelkundige Beroepsraad - sê daar is internasionaal 'n dramatiese swaai in die benadering tot opleiding in die gesondheidswetenskappe. Waar opleiding in die verlede professie- en nuwe kennisgedrewe was, is daar vandag internasionale konsensus dat dit deur die behoeftes van mense en gemeenskappe gedryf moet word.

Hoewel Van der Merwe as lid van die subkomitee, veral betrokke is by 'n proses van nasionale herbesinning oor gesondheidswetenskappe opleiding in Suid-Afrika, beklemtoon hy dat dit nie net die gesondheidswetenskappe is wat in die nasionale spervuur staan nie.

"Daar word op beroeps- en regeringsvlak gekyk na 'n nuwe, meer konsekwente opleidingsbenadering tot hoër onderwys in die geheel in Suid-Afrika. So 'n benadering sal uit die aard van die saak ook gesondheidswetenskappe opleiding insluit. 'n Potensiële model wat tans onder die loep is, bepaal dat uitkomste in hoër onderwys gekoppel word aan kennis, soms vaardighede, en gesindhede – veral in die professies."

"Intern, binne die fakulteit, word hierdie elemente – kennis, vaardighede, gesindhede ensovoorts – nou in terme van kompetensies gedefinieer en moet ons bepaal wat ons met sulke kompetensies wil bereik."

Van der Merwe verduidelik dat die onderwys en opleidingsubkomitee waarop hy dien, vroeër vanjaar 'n werkswinkel oor die onderwerp aangebied het. 'n Model wat kompetensies inkorporeer en tans wêreldwyd gebruik word as basis vir kurrikula hervorming in die gesondheidswetenskappe, is die Kanadese CanMEDS-model. Hierdie model maak dit moontlik om die nodige kompetensies te interpreteer en vertolk in terme van die eiesoortige behoeftes van 'n bepaalde land en die gemeenskap wat hy dien.

Die kernkompetensies wat die US in sy gesondheidswetenskappe studente wil ontwikkel, sal na verwagting vroeg volgende jaar deur die Fakulteitsraad goedgekeur word en uiteindelik uitdrukking vind in die eienskappe wat 'n US Gesondheidswetenskappe Graduandus kenmerk.

"Daar sal derhalwe herbesin moet word oor die fakulteit se kurrikula om te verseker dat elkeen van ons graduandi volledig toegerus is met die kernkompetensies," sê Van der Merwe.

Hy wys daarop dat interprofessionele leer en onderrig 'n belangrike rol speel in die ontwikkeling van hierdie kompetensies, en so ook die interprofessionele spanbenadering.

Die volgende artikel in hierdie Onderrig- en Opleidingsafdeling van *Tygerland*, gebruik 'n spesifieke projek van die Sentrum vir Gesondheidswetenskappe Onderrig (SGWO) om te illustreer hoe die opleidingsmetodes wat deur hierdie projek benut word, die interaksie tussen 'n gemeenskap en gesondheidswerkers kan bevorder. T

Transforming education to strengthen health systems

"Glaring gaps and inequities in health persist both within and between countries, underscoring our collective failure to share the dramatic health advances [of the 20th century] equitably. At the same time, fresh health challenges loom. New infections, environmental, and behavioural risks, at a time of rapid demographic and epidemiological transitions, threaten health security of all. Health systems worldwide are struggling to keep up as they become more complex and costly, placing additional demands on health workers.

"Professional education has not kept pace with these challenges, largely because of fragmented, outdated and static curricula that produce ill-equipped graduates. The problems are systemic: mismatch of competencies to patient and population needs; poor teamwork; persistent gender stratification of professional status; narrow technical focus without broader contextual understanding; episodic encounters rather than continuous care; predominant hospital orientation at the expense of primary care; quantitative and qualitative imbalances in the professional labour market, and weak leadership to improve health system performance. Laudable efforts to adres these deficiencies have mostly floundered, partly because of the so-called tribalism of the professions – i.e. the tendency of various professions to act in isolation from or even in competition with each other.

"Redesign of professional health education is necessary and timely …"

Education of Health Professionals for the 21st Century: A Global Independent Commission, published in *The Lancet*, Vol. 276, Dec 4, 2010

Interprofessionele leer en onderrig
'n spanbenadering

Me Charlyn Goliath en dr Stefanus Snyman

Interprofessionele leer en onderrig (IPLO) is 'n sleutelelement wat die transformasie van gesondheidswetenskappe wêreldwyd kenmerk.

Dit behels span-gebaseerde onderrig wat ontwerp is om studente uit verskillende gesondheidswetenskappe dissiplines voor te berei om doeltreffend en in 'n samehorige groep saam te werk – ook wanneer hulle as gegradueerdes in die praktyk staan.

"Ons lei nie net mediese kundiges op nie; ons leer ons studente ook hoe verskillende kundiges – dokters, terapeute, dieetkundiges, verpleegsters en ander – kan saamwerk om die gesondheidstelsel beter te maak," sê dr Stefanus Snyman, bestuurder van Diensleer en Interprofessionele Leer en Onderrig in die FGW se Sentrum vir Gesondheidswetenskappe Onderrig.

Die US FGW gebruik verskillende strategieë om hierdie ideaal te realiseer: Interprofessionele opleiding; opleiding in die gemeenskap; die gebruik van innoverende tegnologie, asook taakverskuiwing en die deel van take.

"Opvoedkundiges in die fakulteit is tans besig om 'n lys op te stel van eienskappe, wat US graduandi in Gesondheidswetenskappe moet kenmerk. IPLO sal nie net by hierdie eienskappe geïntegreer word nie, maar ook by al die fakulteit se opleidingsprogramme," sê hy.

'n Spanbenadering tot vroeë kinderontwikkeling

Die IPLO-benadering word tans op die Ukwanda-platform in Hermanus, in samewerking met die nie-regeringsorganisasie, *Rainbow Trust*, binne die gemeenskap prakties getoets in 'n program wat gerig is op vroeë kinderontwikkeling. 'n Groep vierdejaar studente - wat MB,ChB-, Arbeidsterapie- en Dieetkundestudente insluit – is betrokke by die program, wat as *Parenting Worx* bekend staan.

"Ons het gaan kyk hoe ons, binne die Universiteit, kundiges bymekaar kan trek sodat ons saam met die Provinsiale Department van Sosiale Ontwikkeling en ander rolspelers, 'n raamwerk kan ontwikkel vir die vroeë ontwikkeling van die kind in sy/haar geheel," sê die projekleier, me Charlyn Goliath.

Die program fokus op werklose moeders met jong kinders - voorgeboortelik tot en met vyf jaar, verduidelik sy. "Die doel is om die ouers te bemagtig sodat hulle hulself kan bemagtig maar ook om te help met die normale ontwikkeling van hul kinders. Op hierdie wyse word die kind ook bemagtig."

Die studente vergader een keer per week saam met die ouers en by hierdie sessies word bepaalde programme aangebied wat die ouers bemagtig met kennis en vaardighede wat hulle kan help met die ontwikkeling van hul kinders.

"Die studente het as groep saamgewerk om die program te evalueer en toe sekere protokolle (prosesse) uitgewerk wat deel vorm van die model wat ons uiteindelik in plek gestel het. In die geheel is die pakket daarop gerig is om 'n sukses van die intervensie te maak en dit is in samewerking met die ouers/versorgers ontwikkel, sê Goliath.

Die benadering kom daarop neer dat 'n groep interprofessionele kundiges - in hierdie geval mediese studente, arbeidsterapeute en dieetkundiges - as 'n span saamwerk om in oorleg met mekaar, dienste te lewer tot voordeel van individue en die gemeenskap.

Goliath verduidelik hoe die studente in haar groep byvoorbeeld die probleem van vertraagde groei in die jong kinders in die gemeenskap in spanverband onder die loep sal neem. Die voedingkundiges kyk na die rol van voeding in vertraagde groei, terwyl die mediese studente kyk na die rol wat 'n knaende probleem soos gastro-enteritus speel en arbeidsterapeute kyk na die algehele ontwikkeling van die kind.

"So sal hulle, in noue samewerking met die ouers, probeer vasstel hoe gastro in die gemeenskap hanteer word en byvoorbeeld probeer vasstel wat die houdings en gebruike ten opsigte van die toediening van medikasie is.

"Is daar moontlik gebruike in die gemeenskap wat met westerse geneeskunde gekombineer kan word om 'n beter uitkoms te verseker?

"Wat kom in die gemeenskap voor wat moontlik die welsyn van die kind kan beïnvloed en hoe kan dit hanteer word?

"Met hierdie benadering kry die studente toegang tot inheemse kennis en leer hulle van ander kulture. Dit stimuleer ook wedersydse respek en samewerking, wat dit moontlik maak om meer doeltreffend diens aan individue en gemeenskappe te lewer."

Snyman sê hierdie manier van leer en onderrig is gerig op die kompetensies wat uiteindelik gesondheidswetenskappe studente sal kenmerk wanneer hulle gradueer. Dit is 'n gedissiplineerde benadering wat spesifieke gesondheidsprobleme uitwys. Dit identifiseer ook die spesifieke kompetensies wat van graduandi vereis word om doeltreffende werking van die gesondheidstelsel te verseker, sowel as die kurrikula-aanpassings wat gemaak moet word om die studente se kompetensies te evalueer en uitkomste te beoordeel. T

"For interprofessional education, health needs teamwork, and this necessity has grown in importance because of the transformation of health systems."

(Education of Health Professionals for the 21st century, The Lancet Commissions)

Taking the mentally ill out of institutions and reintegrating them into society

With research, education and training, and new initiatives at the community level, the SU Department of Psychiatry is making vital contributions to the transformation of mental health care in South Africa.

Ever since the transformation of health care in South Africa in the 1990's, academics, clinicians and researchers in SU's Department of Psychiatry have been working on the development of new programmes and initiatives to address the distressingly high incidence of mental disorders affecting South African society in general and the Western Cape in particular.

One area of psychiatric care that continues to pose vital challenges to health care professionals in South Africa is community psychiatry, especially in the public health sector.

As part of the move to primary health care, the country's Mental Health Care Act, no 17 of 2002 provided for the de-hospitalization of psychiatric patients and the development of community-based mental health services and support systems to promote the recovery of patients, as well as their reintegration into society. Where outpatient services are insufficient to meet the treatment needs of patients, the Act stipulates that institutional care should provide safe treatment and stabilization services for as short a period as is needed to enable the patient to return to community life.

Although South Africa's new Mental Health Care Act was only implemented in 2002, the transformation of psychiatric services – in South Africa and in other parts of the world - had already started in the 1980's with mental health policy worldwide supporting the de-institutionalization of mentally ill patients.

Thus at the SU Faculty of Health Sciences, Psychiatry became one of the first clinical departments to send registrars to community clinics and health care centres and today, the department has community outreach services built into its registrar training. Apart from education and training, activities such in-service training and other services to communities and community clinics in the Western Cape have increased exponentially over the years. At the same time, the Department has sought to address vital issues that have hampered mental health service delivery – mainly through research, but also through outreach activities and interaction with government departments and non-governmental organizations such as drug rehabilitation centres and organizations.

Tygerland recently spoke to staff and students of the Department of Psychiatry to find out more about the state of mental health care in South Africa and the Western Cape in particular, and to look at the contributions made by SU to support and strengthen the new system.

The acting head of the Psychiatry Department, Prof Soraya Seedat, two specialists involved in community care and a registrar in the department told *Tygerland* that de-hospitalisation of mental health patients has placed a heavy burden on the country's already over-burdened community health care services.

> *"It is expected of the hospitals to appoint psychiatry friendly doctors to deal with mental health patients. The mental health nurses at clinics are very good and most of them have advanced psychiatric training."*
>
> - Dr Helena Lategan

Confronting a lack of resources and other challenges

"Community psychiatric services in South Africa are based in primary health care institutions and have to contend with a lack or resources, particularly services offering residential care and psychosocial rehabilitation. In many cases these services still rely heavily on resources that are only accessible through hospital-based care," says Dr Ulla Botha who works at the coalface at Stikland Hospital where she heads the Psychiatry department's specialised outreach services programme.

She says high rates of unemployment, poor social circumstances and substance abuse contribute to the many challenges facing mental health services in South Africa.

Dr Helena Lategan is a community psychiatrist for the Metro East and Helderberg regions of the Western Cape, and a lecturer in the Psychiatry department. Her brief is to address the challenges at community level to ensure that mental health patients receive appropriate and adequate treatment in the public sector.

"Because the Mental Health Act requires patients to be treated within their own communities, like all other patients – and not in mental health institutions – I visit all district hospitals in the area to help doctors introduce psychiatry into communities."

Lategan conducts specialist clinics with the doctors, goes on ward rounds

with them and is involved in formal training at hospitals "It is expected of the hospitals to appoint psychiatry friendly doctors to deal with mental health patients. The mental health nurses at the clinics are very good and most of them have advanced psychiatric training," she says.

Talking to Dr Mpogi Mashile, a registrar in her final year of training, reveals some of the problems which mental health professionals have to contend with at the community level. These include the language and cultural difficulties encountered by psychiatrists in a country with a population as diverse as that of South Africa, as well as 11 official languages.

Mashile points out that language plays an important role in mental health care, especially when the psychiatrist has to explain details of psychiatric conditions to members of the patient's family. At the same time, cultural practices are a factor when the psychiatrist deals with black patients. "Most of these patients are initially treated by traditional healers, or sangomas, and we usually find that our work overlaps to some extent with that of a sangoma. Unfortunately, the reliance of patients on sangomas often causes delays in treatment-seeking and such patients can get severely ill before they seek help from a doctor," she says. "The situation is further exacerbated by the stigma attached to mental illness and South Africans with mental health problems are not as aware of treatment options as patients in high income countries."

Addressing the shortage of black psychiatrists

It is against this background that there is a dire need for more black psychiatrists in South Africa, especially in rural areas where the shortage is severe. There are also very few black psychiatrists in the Western Cape. Therefore the Psychiatry department has been going out of its way for many years to encourage the faculty's black students to consider psychiatry when they decide to specialise. At present, just under a third of the current crop of 21 SU Psychiatry registrars is black.

The department's undergraduate as well as postgraduates are exposed to community service throughout their training. Registrars are, for instance, required to spend a week at clinics and primary health care centres where they encounter the full range of mental health problems that affect South African communities. Here they are confronted with the full impact of the methamphetamine epidemic in the Western Cape which, together with other forms of substance abuse and substance-induced psychosis, exerts enormous pressure on in-patient services and results in a severe shortage of hospital beds.

At the same time, they learn to deal with the wide range of mental health issues that contribute to the burden of disease in South Africa. It has been estimated that neuropsychiatric conditions rank about third in their contribution of the overall burden of disease in the country. And the World Health Organisation's World Mental Health Survey Initiative, SASH, which was conducted between 2002 and 2004 with contributions from Stellenbosch University, released findings indicating that mental disorders were prevalent in South Africa - with many going untreated. These disorders range from neuropsychiatric problems associated with epilepsy and schizophrenia to the psychiatric aspects of the HIV epidemic, the emotional consequences of trauma, an inordinately high prevalence of other mood disorders and various others.

Nevertheless, South Africa's new Mental Health Act represents "a dramatic improvement in the provision of ethical and equitable health services to people with psychiatric problems – especially with regard to the protection of patients' rights," says Dr Ulla Botha.

"In the past, magistrates were involved in certifying mental health patients and there was nothing to compel them to place the patient under observation beforehand. Under the new act, a family member must apply for certification of a patient. The patient is then assessed by two mental health care practitioners, followed by an observation period of 72 hours during with the patient is assessed every 24 hours.

"This is much safer and fairer for patients," Botha says.

The Provincial Government in the Western Cape has also introduced new measures to address deficiencies in the care of psychiatric patients by introducing an assertive community treatment programme for each of the three regional psychiatric hospitals in the Cape Town area.

Assertive Community Treatment – a viable option for SA?

Assertive Community Treatment (ACT) is an international team treatment approach designed to address some of the repercussions of the dehospitalisation of psychiatric patients. ACT programmes are designed to provide comprehensive, community-based psychiatric treatment, rehabilitation, and support to persons with serious and persistent mental illness and whose symptoms result in severe functional difficulties that interfere with their »

SU Psychiatrists
(from the left) Drs Ulla Botha, Helena Lategan and Mpogi Mashile

« ability to achieve personally meaningful recovery goals in several major areas of life: working, having friends, living independently, and so forth. It has been argued that the intensive care and small caseloads that characterise assertive community treatment in high income countries may not be realistic or cost-effective in South Africa.

The assertive community treatment programme at Stikland is based on intensive care provided by a team consisting of a psychiatrist, a medical officer, a social worker and three senior psychiatric nurses.

Botha and researchers from SU, UCT and the Western Cape provincial government conducted a study at Stikland to evaluate and assess the efficacy of an assertive community-based treatment programme, modified for use in a local health care environment. It was the first study of its kind to be conducted in a developing country.

For the purposes of the study, the researchers randomised high frequency users of psychiatric services into two groups where the control group received standard community care while the other group received an assertive intervention based on a modified version of the international ACT model.

Their results, after 12 months, indicate that the assertive community intervention reduced the risk of readmission significantly, even in a setting with limited resources. "It costs approximately R1 000 per day to treat a patient in hospital. Our study has shown that the rate of readmission to hospital was 70% for patients in the control group and only 30% in the intervention group. The symptoms of patients in the intervention group were also better controlled and the treatment and support they received had a positive impact on their level of functioning.

"Standard community mental health services in developing countries often lack the necessary resources and funding to provide comprehensive care to severely ill patients. However, ways should be explored whereby traditional assertive models of care can be adapted within the financial constraints of limited budgets, while still retaining the core features necessary to bring about change," Botha says.

A unique day-care programme providing for the needs of patients

In addition to the assertive treatment programme at Stikland, Botha and her team have also established a day programme at the hospital to provide a place for patients from the community where they can socialise free of stigmatisation.

The day programme has gradually evolved into a fully fledged psychosocial rehabilitation programme that offers a wide range of activities, groups and interventions. "Because the service is situated at Stikland Hospital, it can also draw on the expertise of all members of the multi-disciplinary team," Botha says.

It is particularly suited to patients who need additional and ongoing specialised care to remain well and function optimally. The programme is collectively aimed at improving social skills, daily living skills, self-confidence and communication. "Patients with chronic mental illness often disengage from services and become non-compliant. This service facilitates ongoing engagement in a non-threatening manner, and it allows early detection of relapse and early intervention."

Botha has calculated that readmission of patients attending the service, and the number of days that they spend in hospital have been reduced significantly – more than 50% with regard to the number of days spent in hospital. "This translates into an amount of R 1 347 200 saved in 18 months or R 74 844 saved per month for the first 62 patients who made use of the service during this period."

However, the single, most serious problem that hampers attendance has been difficulties in providing transport for patients who cannot afford their own transport. "About 50% of the patients who attend, require help with transport. Very often their disability grants constitute their only income and simply cannot be spared for transport.

"We have found that when transport is provided, patient numbers double."

Botha says staff at the day care centre are involved in ongoing efforts to generate funds for transport, but the current resources at their disposal are not sufficient to offer a sustained transport service.

However, since the service is so much in line with provincial initiatives to reduce in-patient costs and enhance out-patient services, and since it has proven its effectiveness in improving the functioning of patients and keeping them well, she and her staff are determined to solve the transport problems – just as she and her SU colleagues have met so many of the challenges posed by the transformation of mental health care in South Africa. T

Nuwe middel kan help om die rookgewoonte hok te slaan

"Gesondheidswerkers in Suid-Afrika kan met behulp van berading en medikasie 'n groter rol speel om rokers te help om op te hou rook," sê prof Chris Bolliger wat wye kennis en ervaring het op die gebied van rookstaking.

Rook is die mees voorkombare oorsaak van siekte en veroorsaak die dood van 50% van alle langtermynrokers – en tog is daar geen nasionale program in Suid-Afrika wat dokters en verpleegsters toerus om hul pasiënte te help om op te hou rook nie.

"Dit is in skerp kontras met ander dele van die wêreld waar daar reuse pogings is om rookstaking as't ware te 'medikaliseer'," sê prof Chris Bolliger, direkteur van die Eenheid vir Respiratoriese Navorsing aan die US se Fakulteit Gesondheidswetenskappe.

Hoewel die land baie goeie wetgewing teen rook het, is dit volgens Bolliger nie genoeg om die rookgewoonte doeltreffend hok te slaan nie. Om dit te doen sal gesondheidswerkers in Suid-Afrika 'n groter rol moet speel. Programme wat rookstaking in die hand werk word informeel en sporadies aangebied, gewoonlik deur dokters wat nie die beradingsvaardighede het wat nodig is om mense te help om op te hou rook nie.

In terme van alle huidige riglyne word die beste resultate behaal met 'n kombinasie van berading en farmaseutiese hulpmiddels."Dit behels gewoonlik lae intensiteitsberading wat nie soseer gespesialiseerde kennis vereis nie, maar eerder tyd en toewyding, en dit is gebaseer op die beginsels van motiverende onderhoudsvoering," sê hy.

Daarmee saam is daar nou 'n aantal eerste linie-middels wat saam met berading gebruik kan word, naamlik nikotienvervangingsterapie - gewoonlik nikotienkougom, plakkers, ondertongse tablette of mondsproei; bupropien, 'n antidepressant wat in die handel as Zyban bekend staan, en nou ook 'n nuwe middel, vareniklien, wat in April vanjaar in Suid-Afrika bekend gestel is.

Van hierdie middels kan in kombinasie gebruik word. Vareniklien is egter die mees doeltreffende middel van die drie, sê Bolliger."Hierdie middel is spesifiek ontwerp om rokers te help om op te hou rook. Dit blokkeer die opname van nikotien in die belangrikste reseptor in die brein.

"Uit studies wat reeds gedoen is, blyk dit dat vareniklien die suksessyfer ten opsigte van rookstaking verdriedubbel, in teenstelling met die ander twee middels waar die suksessyfer verdubbel in vergelyking met 'n plasebo. Daar is gevind dat 20% van rokers wat nikotienvervangingsmiddels en bupropien in kombinasie gebruik het, na een jaar nie weer gerook het nie; in die geval van vareniklien was hierdie syfer meer as 30%.

Unieke, multi-sentrum studie

"'n Reuse multi-sentrum, ewekansige studie wat in Suid-Amerika, Afrika en die Midde-Ooste met die middel en 'n plasebo gedoen is, het egter die hoogste suksessyfers tot dusver gerapporteer: 39.74% van die mense wat die middel ontvang het, het ophou rook, in vergelyking met net 13.13% van diegene wat die plasebo ontvang het.

Bolliger self is aan die stuur van 'n groot multi-sentrum studie wat binnekort in Suid-Afrika begin om vareniklien te toets in kombinasie met nikotienplakkers. Bykans 500 rokers, wat bereid is om die gewoonte te staak, word landwyd gewerf om aan die studie deel te neem. Meer as 50% van die vereiste aantal deelnemers is reeds gewerf en Bolliger en sy medewerkers hoop om die studie teen die einde van September 2012 te voltooi.

"Deur die twee middels te kombineer, hoop ons om die simptome van rookontrekking verder te verminder. Dit is 'n eksklusiewe, navorsingsgedrewe Suid-Afrikaanse studie wat nog nie elders ter wêreld gedoen is nie. Vyf instansies in die Wes-Kaap, een in Johannesburg en een in Durban sal daaraan deelneem."

Mense rook omdat hulle verslaaf is, sê Bolliger. Die gewoonte gee aanleiding tot die afskeiding van dopamien in die brein, wat mense laat lekker voel en ontspan. Wanneer 'n persoon ophou rook, ervaar hy of sy angs, irritasie, slaperigheid, hardlywigheid, hoofpyn en ander onttrekkingsimptome.

Baie mense hou aan rook as gevolg van verslawing, daarom moet hulpmiddels ingespan word om hulle te help om op te hou.

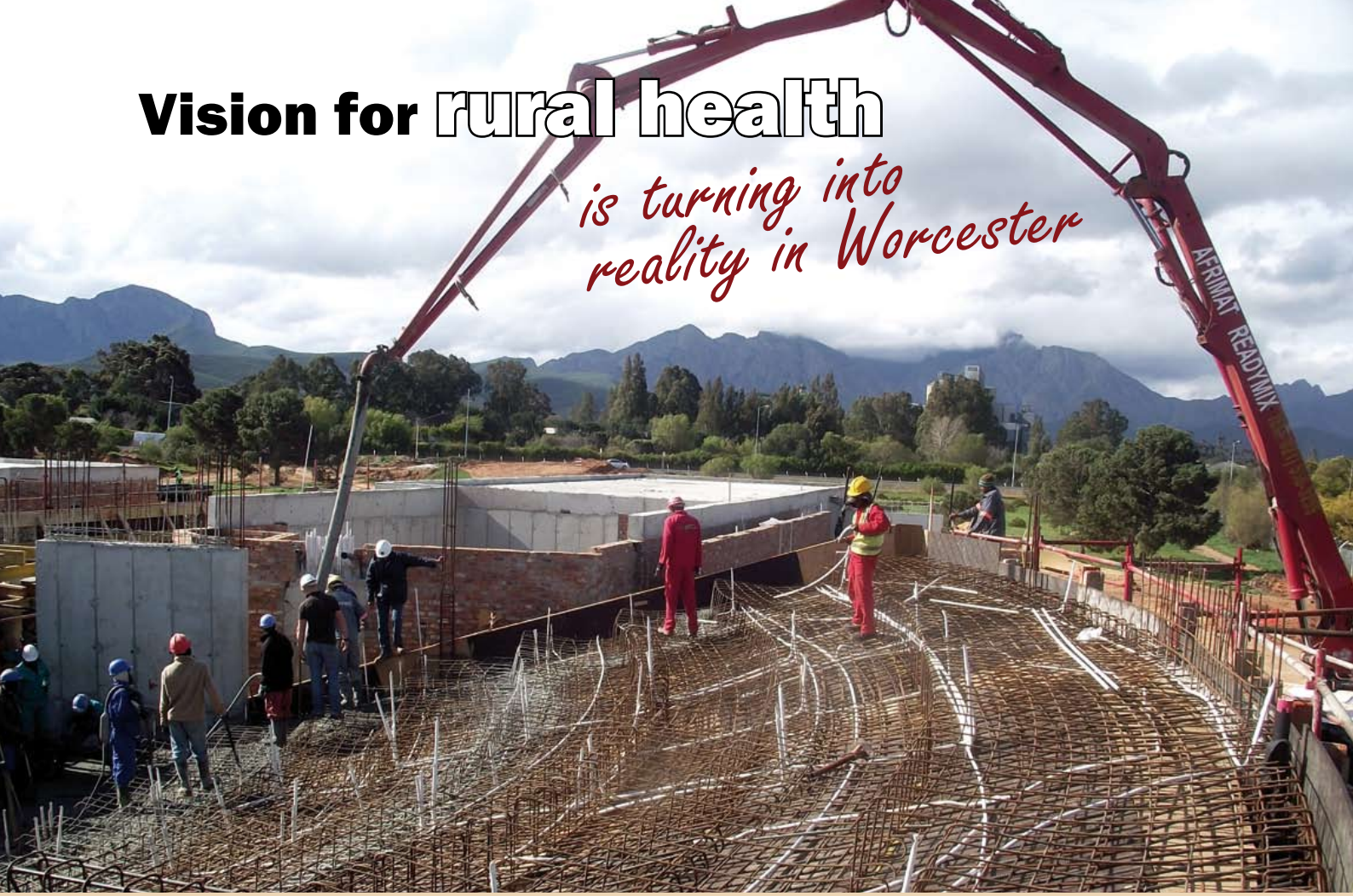
"Dit is nooit te laat om op te hou rook nie."

Volgens Bolliger glo baie mense dat hulle te lank gewag het om op te hou rook en dat dit nou te laat is.

"Dit is nie so nie. Binne tien jaar nadat 'n roker die gewoonte gestaak het, is sy of haar kans om longkanker te kry, gehalveer." T

Vision for rural health

is turning into reality in Worcester



While Stellenbosch University's Ukwanda Rural Clinical School in Worcester opened its doors to students at the beginning of this year, building work on an academic building and a hostel for students - started at the same time - are now nearing completion. The new complex, adjacent to the Worcester Regional Hospital, will be officially opened in 2012.

Recently, the first nine student volunteers have completed their MB,ChB VI-year on the rural platform – seven of them at the Worcester regional hospital where they rotated through the various specialist departments, but were exposed to primary care throughout the year. The other two trained at the district hospital in Ceres in terms of the so-called continuous longtitudinal clerkship (CLIC) model which means that the students trained under the mentorship of a Family Physician, but received regular inputs from visiting specialists.

A second MB,ChB VI-group, comprising 22 students, have accepted placement at the Rural Clinical School (RCS) in 2012 – 18 of them at Worcester, two at Robertson and two at Swellendam. The FHS hopes to eventually provide continuous, year-long rural training on an annual basis to at least 30 student interns, as well as students from the allied health professions, and thus contribute to health service delivery and greater access to quality care for the people of the communities of Worcester, Ceres, Robertson, Caledon, Hermanus and Swellendam, which form part of the SU rural health platform.

According to the director of the Ukwanda Centre for Rural Health at the SU FHS, Prof Hoffie Conradie, the establishment of an RCS as a satellite campus in a rural setting where undergraduate medical and allied health sciences students spend a significant part of their clinical training, is in line with world trends towards community oriented and socially responsible medical schools.

"Evidence shows that rural exposure during undergraduate training has a positive influence on rural recruitment and retention of health care workers in rural settings. The SU FHS is the first South African medical school to establish a RCS. The concept is well developed in Australia where 25% of undergraduate medical students spend a year of their training in a rural setting away from the tertiary academic hospital," Conradie said in a presentation at the Faculty's Annual Academic Day.

RSC in bricks and mortar

The RCS buildings that will constitute the rural infrastructure at Worcester include an academic building that should be completed by May next year, and a hostel that will accommodate about 40 students. The location of these facilities so close to the Worcester Regional Hospital means that it will be relatively safe for students to move between die hospital and hostel at night.

Worcester represents the hub of the Ukwanda rural health platform, which has spokes to district hospitals

The imminent completion of the buildings that will accommodate the Ukwanda Rural Clinical School in Worcester has moved Stellenbosch University one step closer towards an important goal of the HOPE project, namely truly sustainable development that will encompass many of the issues that affect human security in rural areas, ranging from health to the development of local skills and expertise to benefit the whole region.

The first student voluteers at the opening of the Student Learning Centre at the Worcester Day Hospital, fltr: Mikhail Barday, Prof Hoffie Conradie, Petula Davids, Profs Russel Botman and Wynand van der Merwe, Montenique Jeffries, Nicolas Fortuin and Johan Gebhardt.

in the five surrounding towns where the majority of SU health sciences undergraduates, as well as increasing numbers of postgraduates, do rotations throughout the academic year.

Since the RCS will not operate in isolation, but as part of a larger and truly sustainable rural development project of the SU, exploratory talks were held during the year with other faculties about joint research and training on the rural platform. These faculties include Engineering, specifically Bio-Medical and Industrial Engineering; Arts and Social Sciences, especially Psychology, Social Work and Linguistics; Law; Theology, Agri-Sciences and Education.

The Social Work department is already involved and has been sending five of their third year students to Worcester since the beginning of 2010 to collaborate with the Faculty's students in service learning, and in the spirit of interprofessional learning and teaching. The department furthermore surveyed 250 households in Avian Park in January 2011, and a report is expected early next year.

Further interfaculty interaction took place when the Faculty of Theology organized an international conference on Theology, Human Dignity and Disability as part of their HOPE Project in May this year, and the Centre for Rehabilitation Studies en the Department of Psychology participated.

The third day of the conference was held in Worcester and included a consultation process with the disability sector about the needs and expectations they have from the SU and a possible subunit for rural Rehabilitation Studies within the Ukwanda RCS. T

Gewortel in die *Verlede* Geposisioneer vir die *Toekoms*

In 1961, presies 50 jaar gelede, het die eerste arbeidsterapie-opleiding in die Kaap – en slegs die derde in die land – by 'n moderne, nuwe Karl Bremerhospitaal begin.

Destyds was Arbeidsterapie, soos die meeste aanvullende gesondheidsberoepe, feitlik tegnies van aard. Vandag, 'n half-eeu later het dit ontwikkel tot 'n volwaardige professionele akademiese beroep met 'n sterk navorsingskomponent en 'n kultuur van dienslewering aan die gemeenskap.

Hierdie ontwikkelings word veral weerspieël in die aanstelling van die eerste professor in Arbeidsterapie aan die US se Fakulteit Gesondheidswetenskappe en die bekendstelling van die eerste doktorale program in Arbeidsterapie wat vanaf 2012 aangebied word. En dit vind veral weerklank in die tema van die Afdeling se verjaardagvierings oor die afgelope jaar: 'Gewortel in die verlede en geposisioneer vir die toekoms'.

Die feesviering het op 14 Augustus afgeskop met 'n skemerkelk-funksie wat by die FGW gehou is. Vier van die Afdeling se eerste eertydse hoofde het die geleentheid bygewoon.

Nadat die dekaan, prof Jimmy Volmink, die gaste verwelkom het, het prof Usuf Chikte 'n oorsig gegee van die aktiwiteite van die Departement Interdissiplinêre Gesondheidswetenskappe terwyl die eerste hoof van Arbeidsterapie, die 85-jarige mev Betty Strydom gefokus het op die begindae van die dissipline aan die US. Die huidige hoof van die Afdeling, mev Susan Beukes, was die gasspreker van die aand.

Op die daaropvolgende Vrydag en Saterdag is 'n akadamiese program aangebied waar alumni voordragte gelewer het om Arbeidsterapie as beroep te vier. Tussendeur was daar 'n spogdinee by Skilpadsvlei waar studente die gaste vermaak het met die sing van die gewilde liedjies wat die afgelope vyf dekades gekenmerk het.

Die feesviering is afgesluit met 'n verjaardagfunksie en middagete saam met al die huidige studente in die program. Mev Beukes en die klasleiers van die vier jaargroepe het die verjaardagkerse aangesteek as simbool van die beroep wat voortgesit moet word vir die volgende 50 jaar.

Beplanning vir die feesvieringe het oor 18 maande gestrek en verskeie fondsinsamelingsgeleenthede is geloods. Die eerste was 'n muntlegging deur studente en dosente, terwyl daar ook 'n *Barnyard*-funksie en 'n kreatiwiteitsoggend wat aangebied is. T

Hulle het die Afdeling staangemaak. Van links is mev Betty Strydom, eerste hoof van die Afdeling vanaf 1960 tot 1962; die huidige hoof, mev Susan Beukes (sedert 1988); mev Ann O'Shea (1973 tot 1976), wat spesiaal uit Engeland gekom het vir die feesvierings, en prof Ruth Watson, wat van 1966 tot 1971 aan die stuur van sake was.

Feesvierings saam met die nuwe geslag Arbeidsterapie-studente. Van links is die Afdelingshoof, mev Susan Beukes saam met Arbeidsterapie se klasverteenwoordigers.

New *doctoral programme* in Occupational Therapy

The Occupational Therapy division will launch a new doctoral programme in 2012 to provide candidates with an opportunity to revisit the role occupational therapists should play in future to facilitate opportunities for participation in daily occupations that will sustain and/or improve health and wellness.

'Occupation' is broadly defined in Occupational Therapy terms: the word refers to the ordinary things that people do every day and the way they spend their time, energy, interests and skills in meeting their needs, says Prof Lana van Niekerk.

"The philosophical underpinning for the new programme is occupational science; a rapidly growing international discipline that concerns itself with 'the relationship between occupation and other phenomena such as health, quality of life, identity, social structures and policies', according to Hocking.

"It has furthermore been said that Occupational scientists study people's activities, tasks and roles across a broad spectrum of concerns such as 'politics, spirituality, education, social structures, science and technology, the media, work, growth, development and creativity, and health from an occupational perspective'.

"Candidates for the programme will have the opportunity to explore the occupational behaviour of people in context as interdependent, culturally defined, driven by need, meaning-filled and with the potential to facilitate social cohesion. Participation in the doctoral programme will require the consideration of the impact of broader based health and well being issues on the vulnerability of marginalised populations such as children, disabled people and women to reach their full potential through purposeful and meaningful occupational engagement. Countries such as South Africa, in which the participation of people has been restricted by factors at human, community and societal levels, will benefit from research produced with the view to better understand the inter-relatedness between 'what people do' on a day to day basis and their development, wellness and ability to meet personal, family and community needs.

"We therefore look forward to welcoming our first three doctoral candidates in 2012," she says. T

Entering the next half century with the first professor in the discipline

Stellenbosch University (SU) recently appointed Prof Lana van Niekerk as the first professor of Occupational Therapy at the Faculty of Health Sciences.

Van Niekerk completed her masters degree at the University of the Free State and started her career at the Lentegeur and Groote Schuur hospitals where she worked in Mental Health Services. She then joined the University of Cape Town, Division of Occupational Therapy, where she was later appointed associate professor and head of the Occupational Therapy Division – a position she filled for 17 years.

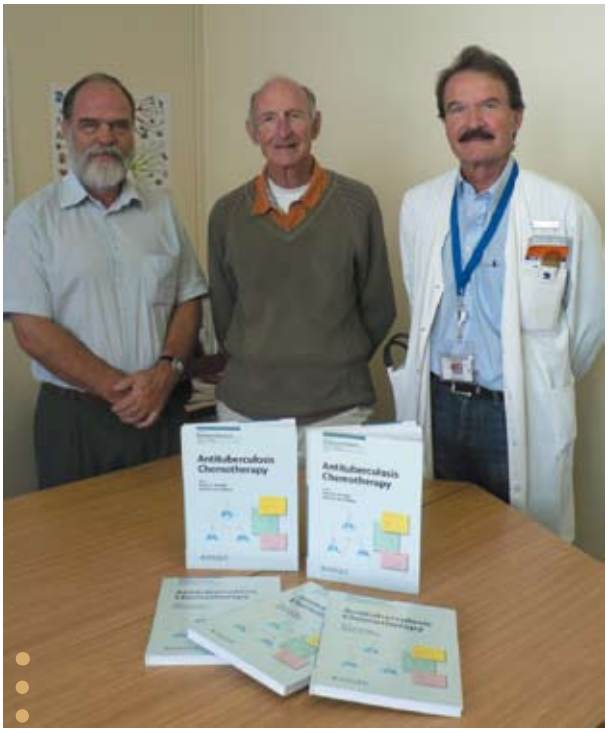
In January this year, Van Niekerk joined the SU Occupational Therapy division and now runs two established research projects that focus on supported employment as a strategy to integrate persons with disability in work, and the critical success factors of sustainable work creation projects. Funding for a another project involving collaborative qualitative research synthesis with five European partners, is currently under review.

Van Niekerk has extensive knowledge of qualitative research methodology and has taken a leading role to introduce and develop research within a qualitative paradigm in environments with a strong positivist tradition. Her current research projects include studies to determine the cost and utility of supported employment as a strategy to integrate persons with disability in work, and critical success factors of sustainable work creation projects.

Prof Lana van Niekerk, (left) first professor of Occupational Therapy with the head of the division, Mrs Susan Beukes.

As a leading health care professional in the Occupational Therapy field, Van Niekerk's holds a number of leadership positions. She currently serves as chair of the Education Committee of the Board of Occupational Therapy, Medical Orthotics and Prosthetics and Arts Therapy; president of the Occupational Therapy Association of South Africa and SA delegate to the World Federation of Occupational Therapy. She previously served as African representative on the International Society for Occupational Science from 2006 to 2011. T

TB treatment under the microscope in an international book series – a South African contribution



Profs Paul van Helden, Peter Donald and Chris Bolliger with the latest book in the series Progress in Respiratory Research.

Antituberculosis Chemotherapy, the latest volume in the acclaimed book series, *Progress in Respiratory Research* was recently published with two of Stellenbosch University's foremost TB-researchers – Profs Peter Donald and Paul van Helden – serving as co-editors.

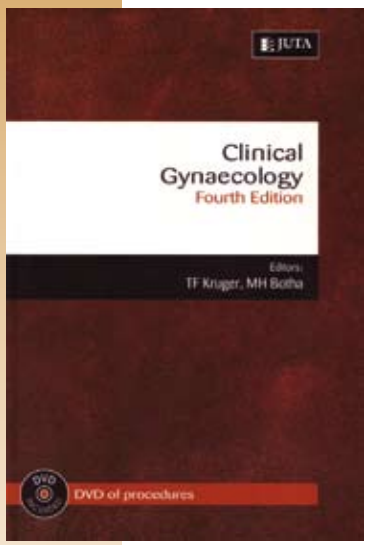
With contributions from international and South African researchers – many of them associated with the Centre of Excellence in TB Research at the SU Faculty of Health Sciences – the book focuses on the latest research on existing tuberculosis drugs, the development of new drugs, the assessment of new drugs in adults and children, as well as a wide range of other aspects regarding TB treatment.

Prof Chris Bolliger, editor-in-chief of the *Progress in Respiratory Research* book series and director of the Respiratory Disease Unit in the FHS, says Donald and Van Helden were asked to edit the volume because they are recognised as world leaders in TB research. He explains that the 47-year old book series focuses on respiratory disease in various disciplines, reporting the most recent findings from the literature in textbook format, with references from the same year. Experts from the FHS were also asked to contribute to previous volumes in the series, i.e. *Paediatric Bronchoscopy*, to which Prof Robert Gie and Dr Pierre Goussaard of the Department of Paediatrics and Child Health, contributed an important chapter on endobronchial tuberculosis. *Paediatric Bronchoscopy* recently received a special award when it was highly recommended by the British Medical Association.

This has been one of several international accolades that mark the volumes in this series. Since Bolliger was appointed as editor-in-chief in 1997, 15 books have been published in the series, starting with an edition on the tobacco epidemic which was followed by, amongst others, paediatric pulmonary function testing, clinical chest ultrasound, new drugs and drug targets for asthma and chronic obstructive pulmonary disease.

Some of the books are now in second editions while others have been reprinted. All of them are available in electronic format.

Bolliger was attached to the Basel University Hospital in Switzerland when he was first asked to become editor-in-chief of the series. Two years later, when he was recruited to the SU Faculty of Health Sciences, he was able to remain as editor thanks to modern information technology such as e-mail and the Internet. This has also helped him to maintain his involvement in various international organisations and other ventures. T



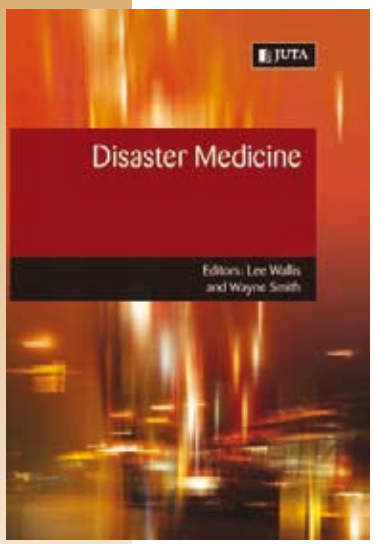
Clinical Gynaecology

now in a 4th edition

The textbook *Clinical Gynaecology*, published by Juta and now in its fourth edition, was launched at a function at the Faculty this year.

The book was first published in English during 1993 with most of the authors from Stellenbosch. With the current issue authors from all the medical schools in South Africa have contributed. It is accepted as the leading textbook in its subject area and has become well known throughout South Africa.

The content of the new edition has been completely revised and updated to include the latest research and continues to provide a comprehensive review of the field of gynaecology. The contents covers the full spectrum of gynaecological information (basic science, general gynaecology, endocrinology and reproductive medicine, contraception, uro-gynaecology, oncology and is applicable within southern Africa as well as internationally. The fourth edition includes six new chapters, a DVD that shows live techniques and procedures, and a quick-reference guide summarizing the salient points of each chapter. This book will be an invaluable resource for undergraduates, postgraduate students, and practicing doctors.



Disaster Medicine

Written by the head of *Emergency Medicine*, Prof Lee Wallis, and co-author, Dr Wayne Smith, Disaster Medicine covers all the critical aspects necessary to deal with any type of man-made or natural disaster.

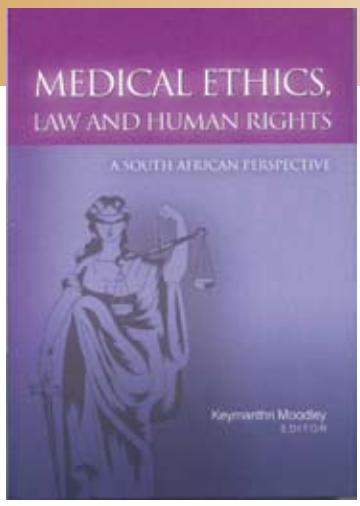
"Because disasters can strike anywhere in the world and can have devastating effects on the community, it is vitally important that different agencies, government departments and medical disciplines work together to draw up adequate mitigation plans," they write.

"It is also crucial that each agency is aware of its responsibilities and understands the chain of command in a disaster situation."

- The book is published by Juta and sold at R225.

Woordeboek vir die Gesondheidswetenskappe

Die eerste uitgawe van die *Woordeboek van Afrikaanse Geneeskundeterme,* soos hierdie woordeboek eers bekend gestaan het, het in 1979 verskyn. Die werk aan die nuwe bygewerkte en uitgebreide weergawe is onder leiding van prof Jan Lochner, voormalige dekaan van die US FGW, gedoen, met medewerking van deskundiges oor die hele spektrum van mediese dissiplines. Die woordeboek bevat sowat 10 000 meer inskrywings as die vorige uitgawe en ongeveer 8 000 terme is geherdefinieer. Die woordeboek is 'n publikasie van Pharos, 'n druknaam van die NB-uitgewers.



Medical Ethics

The head of the SU Health Sciences Centre for Medical Ethics and Law, Prof Keymanthri Moodley, is the editor of the Centre's first book in the field of medical ethics. With contributions from 11 authors of universities around South Africa, she compiled a book that is both comprehensive and practical. The first part of the book covers basic ethical theory while the second part focuses on specific topics such as HIV/AIDS, reproductive ethics, end of life issues, paediatric ethics and others. The book is a useful source of information for health sciences students, registrars/clinical assistants and clinicians in practice. It is available at Van Schaiks and Exclusive Books.

Dr Jack Meintjes, sr Surita Fitchat en dr Cecilia Roberts in die Baro- en Beroepsgeneeskunde-eenheid.

FGW gee pas aan in INTERNASIONALE BAROGENEESKUNDE

Duikmediese- en Hiperbariese Geneeskundekursusse wat deur dr Jack Meintjes en die US FGW se Afdeling Beroepsgeneeskunde ontwikkel is, word tans internasionaal deur eweknie instansies as maatstaf gebruik vir opleiding in hierdie nisgebiede.

Die internasionale opleidingsmodel is geskoei op die twee kursusse wat die Fakulteit reeds sedert 2005 aanbied, nl. BScMedScHons (Hiperbariese Geneeskunde) en MScMedScHons (Onderwater Geneeskunde).

Die *Diving Medical Advisory Committee* (DMAC) sowel as die *European Diving Technology Committee (EDTC)* is tans in onderhandeling met Meintjes - hoof van van die Baromedisyne en Beroepsgeneeskunde-eenheid van die Universiteit Stellenbosch - om op internasionale vlak as eksaminator op te tree. Meintjes is ook, ten opsigte van die model, in die finale stadium van onderhandeling met die *Undersea and Hyperbaric Medical Society* (UHMS) van die Verenigde State en 'n brief van voorneme is in Oktober in hierdie verband geteken.

Die praktiese opleiding van studente word by geakkrediteerde instansies op 'n internasionale platform gedoen terwyl die teoretiese opleiding dmv webstudies deur die US aangebied word.

As eerste stap in die internasionalisering van die US-kursusse is 'n aantal konsultante aangestel in onder meer die Verenigde Koninkryk, Italië, Poland, Swede, Noorweë, Australië en die VSA. Meintjes en drr Frans Cronjé en Cecilia Roberts by die Baromedisyne- en Beroepsgeneeskunde-eenheid vervul hierdie rol in Suider-Afrika.

Internasionale duikmediese programme word gereguleer deur wetgewende liggame en verskil van land tot land. In SA moet duikmediese programme by die Departement van Arbeid geregistreer word. "Ons word gesien as wêreldkenners in hierdie veld en tree in adviserende hoedanigheid op tydens die bepaling van riglyne," sê Meintjes.

Die opleidingsbehoeftes in die duikmediese veld word deur die industrie gedryf, met oliemaatskappye en die *International Marine Contrators Association* (IMCA) as die belangrikste drywers. Beroepsduikers moet jaarliks mediese ondersoeke ondergaan en die standaarde waarvolgends hulle medies gemeet word, word in die akademiese programme in detail behandel. Na opleiding kan die duikmediese dokter dan mediese dienste verskaf aan duikers en die maatskappye waarvoor hulle werk.

Die Onderwater- en Hiperbariese Geneeskunde Vereniging van Suid-Afrika het in Maart vanjaar die Internasionale Kongres in Hiperbariese Geneeskunde by die Kaapstadse Internasionale Konvensie Sentrum aangebied. Die internasionale opleidingsplatform, waar die FGW nou die leiding neem, is as deel van die kongres bespreek. T

Innovative new partnership to promote clinical science

As part of an innovative new partnership between Stellenbosch University and the pharmaceutical company, Novartis, the two institutions hosted their first annual clinical science workshop in August this year.

This first venture has set the tone for future workshops by bringing together postgraduate students, practicing clinicians and academic staff who are interested in the applicability of epidemiology, biostatistics, modelling and simulation, and the role of social media in providing health-related information.

The collaboration between SU and Novartis was launched at the end of 2010 and involves study grants to 30 postgraduate medical students throughout Africa, over a period of three years, to complete a Master's Degree in Clinical Epidemiology at SU. The University offers an MSc Programme in Clinical Epidemiology, with an emphasis on evidence-based medicine, which provides health professionals with the necessary skills to generate and apply reliable, up-to-date evidence in clinical practice.

The workshop, held at the Wallenberg Research Centre (STIAS) in Stellenbosch was a three-day event where participants could learn the application of epidemiology through a demonstration of the drug development process. They were also introduced to targeted drug therapy and the role of modelling and simulation plays in the development of new medicines. The workshop taught delegates how to interpret the results of clinical research and how this evidence can support sound clinical decision-making in day-to-day clinical practice. T

National recognition for

BASIC ENDOCRINE LAB

Dr William Ferris

Since the revival of the basic science research laboratory in the Department of Medicine, scientists in the laboratory are not only playing a vital role in the introduction of clinicians to research – they are also making valuable contributions to endocrinology, metabolism and diabetes research in the country.

Known as the Basic Endocrine Laboratory, the lab is one of only a few in South Africa working on stem cells. "We are looking at the molecular mechanisms involved in this process. If we are successful, this work could be of great clinical benefit for people with osteoporosis, a disease that affects fifty percent of women and one in three men. A patient's own fat could be used to make cells that could repopulate bone, increasing bone density and strength. This research also has implications for diabetes, where some anti-diabetic drugs tend to lower bone density," the the head of the laboratory, Dr William Ferris says.

The research conducted by Ferris and his team – Dr Hanél Sadie-Van Gijsen, a post-doctoral research scientist, and four PhD-students – has found national recognition in areas such as endocrinology and diabetes. In 2010, Ferris was elected onto thee xecutove committee of the Society of Endocrinology, Metabolism and Diabetes of South Africa (SEMDSA). At the same time Sadie-Van Gijsen received the Society's award for the best oral presentation in the basic science category at their national conference.

This year, Ferris was not only elected as vice-chairman of SEMDSA, but he also won the prize for the best basic science paper published during 2010 in diabetes. At the same time, Sadie-Van Gijsen won the prize for the best basic science paper published during 2010 in endocrinology, while one of their students, Ms Martine van den Heever, won the SEMDSA Travel Award of R30 000 which will allow her to pay a short visit to collaborators in the UK to further her studies.

Contributing to the 'genomic feast'

Prof Eileen Hoal's contributions to research on the human genome was recognised by the prestigious journal, *Science*, when she was asked to contribute a short vignette on her work in this field for publication in the journal as part of a series of articles celebrate the publication of the first peer-reviewed reports of the sequence of the human genome.

It carried short commentaries by "a cross-section of insightful individuals – representing many viewpoints – to look at what it has meant to them or their communities to have access to human genome sequences".

The article by Hoal, a distinguished researcher in the Department of Biomedical Sciences, was published in February this year under the title, *Famine in the presence of the genomic data feast.*

In the article, she writes that graduate students today cannot conceive of the world before the human genome was available for their daily practical tasks.

"In Africa, the shortage of resources (in terms of scientists, equipment, and operating funds) for data acquisition has made the publicly available data particularly valuable."

She points out, however, that the sheer volume of accessible data in this field is a drawback. "We have been made acutely aware of our shortage of computational tools and expertise, exacerbated by the brain drain through emigration of those who acquire these scarce skills. For complex analyses such as admixture mapping or copy-number variation, we often now have the data spread out in a tantalising buffet, but are left feeling as though we are looking into the dining room window, our noses pressed to the glass".

According to Hoal, the solution to this problem is North-South collaboration and the formation of consortia to maximise the promise of the information still locked in the rich variety of African genomes.

Preparing for world congress

Prof Bernd Rosenkranz, head of the Division of Pharmacology in the Department of Medicine was elected as vice president of the South African Society for Basic and Clinical Pharmacology (SASBCP) for a term of three years. In this capacity, one of his key responsibilities comprises preparations for the 17th World Congress of Basic and Clinical Pharmacology which will be organised by the Society and held in Cape Town in July 2014.

Unit for Anxiety and Stress Disorders

Prof Christine Lochner of the MRC Unit for Anxiety and Stress Disorders has been selected as one of the Young Affiliates for the Academy of Sciences of the Developing World (TWAS) from the sub-Saharan region, on the basis of the quality of her scientific research. She was the only candidate selected from 11 nominations submitted by SU. As an affiliate of TWAS, Lochner will have access for five years to various benefits offered by the organisation. She was also inaugurated as one of the founding members of the SA Young Academy of Science, an initiative that will create a forum to help develop and support young SA scientists.

Oogheelkunde presteer

Twee kliniese assistente in die Afdeling Oogheelkunde het in die loop van die jaar uitsonderlik gepresteer. Dr Robyn Rautenbach (regs op die foto) het die Oftalmologiese Vereniging van Suid-Afrika se prys gewen vir die beste referaat deur 'n kliniese assistent tydens die Vereniging se jaarlikse kongres wat in Maart in Port Elizabeth gehou is. En tydens die onlangse kongres van die SA Glaucoma Society (SAGS) op Stellenbosch, het 'n plakkaat van dr Debbie Laaks die prys gewen vir die beste plakkaat deur 'n kliniese assistent. Albei pryse is baie gesog en behels volledig-geborgde besoeke aan 'n internasionale kongres van die wenners se eie keuse.

Making inroads in Africa

Prof Rajiv Erasmus of the Division of Chemical Pathology, received funding under the SA/Kenya Bilateral Programme. This funding is in line with the division's vision to develop close research ties with African countries. It will also promote diabetes research between SA and Kenya/ Uganda/ Tanzania and the supervision of two students. At the same time, the UK Royal College of Pathologists invited Erasmus in his capacity as the vice president of the newly formed College of Pathologists of East, Central and Southern Africa (COPECSA) to lead the COPECSA delegation to study how the RCPath operates. COPECSA involves more than 10 countries in the region and its formation is strongly supported by the Royal College. In keeping with the Departments' strategic vision as well as that of NHLS and SU, Erasmus has made great inroads into Africa, particularly East, Central Africa and Nigeria.

He was also the only chosen delegate from Africa to participate in a course organised by the International Federation of Clinical Chemistry and the Africa Federation of Clinical Chemistry on Laboratory Quality.

Psychiatry represented in international arena

Dr Laila Asmal was selected to attend a prestigious workshop of the InterAcademy Medical Panel for Young Physician Leaders and the World Health Summit in Berlin 20 – 26 October 2011. Prof Soraya Seedat was invited as one of only two SA speakers at the summit.

Ortopediese Chirurgie

Drr R King en C Ansley van die Afdeling Ortopediese Chirurgie het die pryse vir die beste navorsingsprojek en beste referaat gewen by die SA Hand Chirurgie kongres 2011. Die Afdeling het groot lof ontvang vir die kwaliteit van hulle referate.

Reproductive research

The head of the Medical Physiology division, Prof Stefan du Plessis was honoured with the Sijo Parekattil Award for Excellence in Reproductive Research at the annual awards ceremony of the Center for Reproductive Medicine in the Glickman Urological & Kidney Institute of the Cleveland Clinic, Cleveland, Ohio, USA.

Fellowship in Infectious diseases

Dr Angela Dramowski of the Department of Paediatrics and Child Health,

was awarded a fellowship of the Federation of Infectious Diseases Societies of Southern Africa, valued at R100 000.

Dramowski will work with Prof Shaheen Mehtar, head of Infection Prevention and Control in the SU FHS and Tygerberg Hospital, and with Dr Helena Rabie and Prof Mark Cotton to study non-vertical HIV transmission in children. Dramowski has just completed a subspeciality in Paediatric Infectious Diseases.

NIH Appointment

Prof Anneke Hesseling was appointed chairperson of a newly formed committee on Tuberculosis of the NIH Paediatric HIV Trials Network (IMPAACT).

Mees aangehaalde artikel

'n Artikel met die titel "*Clinical significance of the low normal sperm morphology value as proposed in the fifth edition of the WHO Laboratory Manual for the Examination and Processing of Human Semen*" deur prof Roelf Menkveld van die Departement Verloskunde en Ginekologie was in 2011 heel bo-aan die lys van 15 mees aangehaalde artikels van die *Asian Journal of Andrology*.

Studente Prestasies

Medical Physiology

Members of staff and students from the Division of Medical Physiology participated extensively at the 39th Conference of the Physiology Society of Southern Africa, held at the University of the Western Cape in August. Some 200 delegates from more than 16 universities and institutions attended, making it the largest conference of its kind in Sub-Sahara Africa. SU Medical Physiology participated in one plenary presentation, 10 oral presentations and 12 poster presentations. The SU students, Margot Flint (MSc), Liehet Burger (Hons), Amanda Genis (PhD) and Corli Westcott (PhD) walked away with 4 out of the 6 possible prizes. Another PhD student, Dr James Fan (PhD student) received a special award for the most active conference participant.

Verloskunde en Ginekologie

Drr Judy Kluge (2009) en Elbie Viljoen (2010) het in Oktober Daubenton-medaljes ontvang as die beste Deel2-kandidate in die finale eksamens van die Kollege vir Verloskundiges en Ginekoloë tydens hul onderskeie studiejare.

Family Medicine

Rev Rachel Mash, wife of the head of Family Medicine and Primary Care, Prof Bob Mash, has just finished her PhD on *Agents of Change – a peer education programme for youth in the Anglican Church* focused on reducing their risk of HIV. This probably makes them the only married couple in Africa both with PhDs in Family Medicine.

Urology

Dr Amir Zarabi, ook van Urologie, het die Rektorstoekenning vir die beste MMed-student in die FGW ontvang.

PhD student wins Novartis Internship

Ms Stefanie Malan, a PhD student in Psychiatry, and working in the MagicLab in the Department of Biomedical Sciences had won the prestigious Novartis Internship in Drug Discovery and Clinical Research. She spent several months at Novartis in Basel, Switzerland, focusing on gene expression and epigenetics in non-human primates to facilitate work on her PhD. Malan's research is supervised by Dr Sian Hemmings and Prof Soraya Seedat.

Urology

Dr Pedro Fernandez of the Urology division was awarded a 'beginning investigation' award of $25 000 for his study entitled *Confirming and extending prostate cancer genome-wide association studies in South African men*. This grant comprises funds donated by AORTIC and the Office of HIV and AIDS related malignancies of the National Cancer Institute, USA. He was also one of five collaborators who received an innovator grant, awarded by the Landon Foundation and the American Cancer Association, to Dr Timothy Rebbeck of the University of Pennsylvania, as co-ordinator.

Patologie

Me Nicole van der Merwe, 'n MSc-student in Anatomiese Patologie, het die prys vir die beste plakkaat gewen het by die Biologiese Psigiatriekongres. Die titel was: "*CYP2D6 genotyping in South African patients with breast cancer: Clinical implications with use of antidepressants.*"

In Memoriam

Dr Mark Roos, acting head of the Division of Haematopathology between 2008 to 2009, and a respected teacher and mentor for his colleagues, died in 2011 after a year-long battle with cancer. Born in October 1967 in Kerksdorp, Mark studied Medicine at the University of Pretoria, specialised in Haematological Pathology at the University of the Free State and was appointed specialist in the Division, Haematopathology NHLS.

Prof Abraham Aucamp, wat voorheen betrokke was by Farmakologie en die Tygerberg Gifinligtingsentrum, is ook in 2011 oorlede. Prof Aucamp het, tot en met sy dood, vyfdejaar studente op praktiese saalrondtes by die Stellenbosch-hospitaal geneem.

Dr Rowena Keyser, a talented young scientist who had graduated with a PhD in human genetics from the University of Stellenbosch in March this year, died in May 2012. She had been awarded a prestigious NRF NPPD Fellowship and was doing postdoctoral research on the genetic causes of Parkinson's disease at the time of her death. As a testament to her abilities, during her brief academic career she published eight papers in international journals, four as first author.

Ms Culpurnia Viljoen, of the Division of Medical Virology suddenly passed away in July 2011. Culpurnia had worked at Tygerberg Virology, NHLS, as student medical technologist from December 2007. After qualifying in March 2009 she went to Port Elizabeth to work as a medical technologist at Dora Nginza Hospital laboratory. Culpurnia returned to Tygerberg in January 2011 to pursue a BSc Honours in Medical Virology. Her research project was the development of a new molecular diagnostic assay for HIV drug resistance.

Dr Senzosenkosi Mkhize, an alumnus of the SU Faculty of Health Sciences, died in June after he was attacked by a patient at the Middelburg Hospital in Mpumalanga. Dr Mkhize, originally from KwaZulu-Natal, completed his MB,ChB degree at SU in 2008 and was busy with his community service year. He was a member of the Tygerberg Student Council from 2006 to 2007 and a resident of the Hippokrates residence on campus.

Navorsingstoekennings/Research grants

The National Institutes of Health (NIH) in the United States have renewed their funding for the Prenatal Alcohol in Sudden Death Infant Death syndrome and Stillbirth (PASS) project with a further research grant to the value of $5.6 million. The project is headed by **Prof Hein Odendaal.**

SU's **Desmond Tutu TB Centre** will share in an award of $37 million to Prof Richard Hayes at the London School of Hygiene and Tropical Medicine for an innovative combination of strategies to prevent HIV in African countries. The project, Population ART (PopART), will test the impact of a combination prevention strategy that combines community-wide house-to-house voluntary testing for HIV, offer of medical circumcision to men who test HIV-negative, and offer of immediate initiation of antiretroviral therapy (ART) for all those testing HIV-positive. Other partners include the Imperial College, London and the Zambia AIDS Related Tuberculosis Project.

Prof Nulda Beyers head of the Desmond Tutu TB Centre, and **Ms Sue-Ann Meehan** also received PEPFAR/CDC funding of almost a million US dollars for community centres aimed at the prevention of HIV while **Prof Mark Cotton** en **Dr Steve Innis** received an NIH grant of more than $78 000 US dollars to support Fogarty international clinical researchers.

Prof Gerhard Walzl of Molecular Biology and Human Genetics Gerhard Walzl was awarded a Gates Foundation Grant to the amount of $646 815 for one year from September 2011 for the project on the discovery of biomarkers for response to TB treatment.

Dr Gerhard Sissolak of Internal Medicine received funding of $37500 from Columbia University for the Columbia-South Africa Training Program for Research on HIV-associated Malignancies.

Prof Mariana Kruger, head of Paediatrics and Child Health received 49,236 Euros from the EDCTP for the project *Network of Southern Africa Research Ethics Committee, Chairpersons and the Development of a Review Textbook for African REC members (SAREN Southern African Research Ethics Network).*

Prof Anneke Hesseling of Paediatrics and Child Health received funding of $21,560.00 from the CRDF for the project *Measuring the impact of IPT policy and practice in TB-HIV co-infected children in a high burden setting: a cost-effectiveness analysis.*

Dr Taryn Young of the Community Health division received funding of £890,975.00 from the Liverpool School of Tropical Medicine for the project *Evidence Building and Synthesis Research - Effective Health Care Research Consortium*. Consortium partners include individuals from Africa, India, China, Norway and the UK.

Dr Gert van Zyl, van die Afdeling Mediese Virologie, het navorsingsbefondsing ter waarde van $43,200 vir die Sentrum vir Vigsnavorsing ontvang.

A role model for future generations

Dalene de Swardt

Dalene de Swardt, who is currently completing a doctoral degree in Medical Virology, is one of ten women who have been named as winners of the 2011 L'Oréal-UNESCO Regional Fellowships for Women in Science in sub-Saharan Africa.

The winners - three of them Stellenbosch University students - were awarded fellowships of US$20 000 each.

Dalene, who completed her undergraduate and postgraduate studies at SU, says: "I chose to study science as I had a great interest in the world invisible to the naked eye, such as disease-causing organisms, and I wanted to be part of the research that aims to develop treatments and vaccines. Science brings with it an incredibly stimulating environment with many exciting opportunities."

In 2010, the first time that the L'Oréal-UNESCO Fellowships had been extended on a regional basis to include sub-Saharan Africa, five female scientists were recognised and rewarded with fellowships of US$20 000 towards the completion of their PhD research projects. Based on the extraordinary success of the programme, and as part of the continued efforts of the L'Oréal Corporate Foundation to support women in science, the Foundation doubled the number of Fellowships awarded in 2011.

One of the aims of the fellowship programme is to increase the representation of women in global scientific circles, creating role models for future female generations. In 2009, two previous programme laureates were awarded Nobel Prizes in chemistry and medicine, bearing testimony to the impact of the foundation's influence on scientific research. T

International prize for burns doctor – *Elbie van der Merwe*

Dr Elbie van der Merwe's humanitarian approach to the management of burn victims has won her the annual Guiseppe Whitaker International Burns Prize of 20 000 Euros.

As a SU academic in the Surgery division and head of Burns Unit at Tygerberg Hospital, Van der Merwe's contributions to burn therapy is internationally recognised.

In 1998 she was appointed African Representative at the International Society for Burn Injuries and in 2004 she became the founder president of the Pan African Burns Society and hosted the first Pan African Burns Society conference in Cape Town in 2004.

Van der Merwe's research on burn risks in the poorer settlements, together with her interactions with parliament and manufacturers, has made burn prevention obligatory by law in South Africa, while her integrated approach between accident surgery and burn therapy, and her pocket handbook on trauma became part of the medical curricula in South Africa.

She is only the second woman to win this prestigious prize.

Khulile Dyamara, Tygerberg Hospital

"This is a wonderful thing, and I hope that it makes South Africans see that while we have some of the worst burn cases in the world, there is a lot that this country can still do," van der Merwe told Sapa. T

Beloved teachers Profs Arderne Forder and Hans Strijdom

Prof Arderne Forder

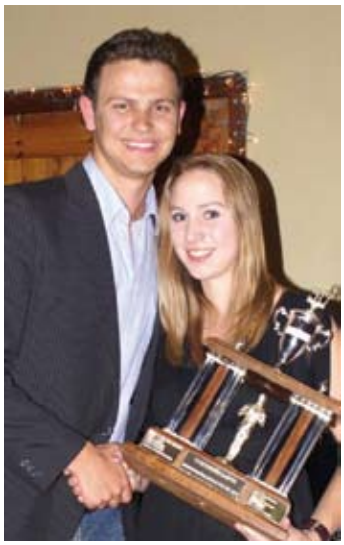
Remarkable and inspiring! This seems to be the consensus about two of the faculty's most popular teachers.

Prof Arderne Forder, part-time consultant and lecturer in the Medical Microbiology division and teacher *par excellence* of undergraduate and postgraduate students of the SU FHS, was voted 'most influential lecturer contributing to my success' for the third consecutive year by the Faculty's first year medical students!

The 78-year old Forder joined the department on a part-time basis after his retirement as professor and head of Microbiology and deputy dean of the Faculty of Medicine, University of Cape Town in 1997. Although he teaches only two days a week, he is a firm favourite of both undergraduate and postgraduate students of the Faculty.

Following closely in Forder's footsteps was Prof Hans Strijdom of Medical Physiology who shared in the 2011 honours when he too was voted 'most influential lecturer' by the first years. This was his second nomination by the students. T

2010 se top sportsterre



Kobus Wiese en Elene Lourens

Die Tygerbergsportkantoor gee jaarliks erkenning aan al die sportpresteerders tydens die sportdinee. Prof Julian Smit, viserektor en self 'n kranige rugbyspeler in sy jong dae, het hierdie jaar as gasspreker opgetree.

Tygerberg het vanjaar met 22 spanne in 15 sportkodes deelgeneem. Die studente wen elke jaar minstens 75% van hul koshuiswedstryde en indien hulle meer tyd kon afstaan om in Stellenbosch te oefen, sou daar beslis baie kwalifiseer vir provinsiale en nasionale kleure.

Kobus Wiese is aangewys as die sportman van 2010. Hy het vanaf 2005 tot 2010 WP-kleure in sport en fiksheid verwerf. Kobus was ook vir vyf jaar 'n provinsiale afrigter in Hip-hop, wat wêreldwyd as nuwe Olimpiese Sport erken word, en het dié sport op die kampus en in voorheen benadeelde gemeenskappe bevorder. Twee van sy spanne het 1ste en 2de plekke by die wêreldkampioenskappe behaal.

Elene Lourens is as die sportvrou van die jaar gekroon. Elene is 'n student in haar 2de jaar en haar atletiekprestasies sluit in provinsiale en nasionale kleure in langafstande oor die afgelope paar jaar. Sy verteenwoordig SA in Kanada en Botswana en word ook aangewys as die senior SA-kampioen in die 1 500m en 5 000m vir 2010.

Pain is Temporarily - Pride is forever!

"The sign along the road that made me finish."

Ms Hillary Lane and her two guides, her son Matthew Lane (left) and Nombuso Gumbi, from KwaZulu-Natal, exhausted, but triumphant at the finish line.

Thanks to motion analysis and the work done by Prof Quinette Louw and a Physiotherapy team in the SU Faculty of Health Sciences, a woman who could barely walk a mile one year ago, recently completed the prestigious 42km New York City marathon in 10 hours and seven seconds.

Ms Hillary Lane, CEO of the Western Cape Cerebal Palsy Association and a CP who could not walk until she was five years old, told Tygerland that she was approached in January and asked if she would like to 'walk' the marathon. "My gut reaction was: Hell no! I have a disabled driver sticker on my car and I don't normally walk further than I have to."

But it did not take much pursuasion to get her to seriously consider the offer and that's when she was referred to the Physiotherapy and Motion Analysis Centre, established by Prof Quinette Louw and her team in the Division of Physiotherapy.

Mr Dominic Fisher, one the physiotherapists in the Centre, agreed to help Hillary to prepare for the marathon. After a series of tests she started her training.

"The first time I went for a walk, back in February, I could hardly make it around the block – just over 1km. But as the weeks went by, I found that I could walk further and that I was beginning to feel good physically. Now I am able to walk considerable distances, up to 15km on a Sunday, with no problems. Where I normally suffer from back pain, this walking has certainly banished much of the pain."

Hillary's son, Matthew, who lives in London, accompanied her as a volunteer during the marathon.

According to Louw, the principal investigator of the groundbreaking Cerebral Palsy Gateway Analysis Study in the Motion Analysis Clinic, the research is primarily aimed at children with cerebral palsy.

She points out that physiotherapists traditionally made diagnoses based only on what they viewed with the eyes. Now the high tech cameras in the Centre allow doctors and physiotherapists to watch postural and movement disabilities simultaneously, which enables them to suggest the most appropriate interventions with surgery and rehabilitation.

As the only centre in Africa with the Vicon motion analysis system, Louw and her team work with patients referred by Tygerberg Hospital and the private health sector, mostly by orthopaedic surgeons working with kids with CP.

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Contact details

Tel: 021 938 9667
E-mail:
jennyduplooy@sun.ac.za.
Address:
Division of Physiotherapy
Faculty of Health Sciences
Stellenbosch University
P O Box 19063, Tygerberg, 7505
Room 1006, First Floor,
Teaching Block

Mankadan Herberg

Selfsorgeenhede sentraal geleë op die Tygerbergkampus. Verblyf vir besigheid en vakansies teen billike tariewe. Besoek ons webtuiste by www.sun.ac.za/mankadan vir u bespreking of kontak Marjorie van Rooy by 021 938 9183

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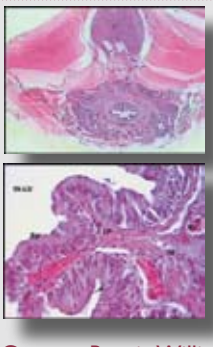

Contact: Reggie Williams Tel: 021-938-9425 / 021-938-9397
E-mail: rwilliams@sun.ac.za

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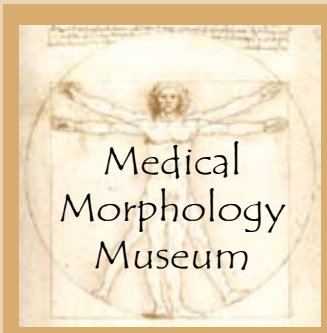

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