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## Research Report by Person By Department

### Central Analytical Facility : 2020

#### BRAND DJ

##### Journal Articles (subsidised)

MASIKE K, DE VILLIERS AJ, HOFFMAN EW, BRAND DJ, CAUSON T, STANDER MA. Detailed phenolic characterization of *Protea* pure and hybrid cultivars by liquid chromatography-ion mobility-high resolution mass spectrometry (LC-IM-HR-MS). *Journal of Agricultural and Food Chemistry* 2020; **68**(2):485-502.

MASIKE K, DE VILLIERS AJ, HOFFMAN EW, BRAND DJ, CAUSON T, STANDER MA. Detailed Phenolic Characterization of *Protea* Pure and Hybrid Cultivars by Liquid Chromatography–Ion Mobility–High Resolution Mass Spectrometry (LC-IM-HR-MS). *Journal of Agricultural and Food Chemistry* 2020; **68**:485-502.

#### COCKCROFT SJ

BERNER K, COCKCROFT SJ, LOUW QA. Kinematics and temporospatial parameters during gait from inertial motion capture in adults with and without HIV: a validity and reliability study. *Biomedical Engineering Online* 2020; **19**:57, 25 pages.

BERNER K, COCKCROFT SJ, MORRIS LD, LOUW QA. Concurrent validity and within-session reliability of gait kinematics measured using an inertial motion capture system with repeated calibration. *Journal of Bodywork and Movement Therapies* 2020; **24**(4):251-260.

LEHMANN T, BUCHEL D, COCKCROFT SJ, LOUW QA, BAUMEISTER J. Modulations of inter-hemispherical phase coupling in human single leg stance. *NEUROSCIENCE* 2020; **430**:63-72.

MOORE K, COCKCROFT SJ, LOUW QA, BRINK Y. Single leg hopping in children with fetal alcohol spectrum disorder: Dynamic postural stability and kinematics. *Journal of Bodywork and Movement Therapies* 2020; **24**(4):303-315.

#### DORUYTER AGG

JOOMA JA, WARWICK JM, DORUYTER AGG. Is progressive accumulation of radiolabelled white cells a valid positive criterion in suspected vascular graft/endo-graft infections?. *EUROPEAN JOURNAL OF VASCULAR AND ENDOVASCULAR SURGERY* 2020; **1**(1):1-5.

MALHERBE ST, KANT IMJ, CHEN RY, DUPONT P, KRIEL M, LOXTON AG, SMITH B, BELTRAN C, VAN ZYL S, ABRAHAMS CE, MAASDORP E, DORUYTER AGG, VIA LE, BARRY CE, ALLAND D. Quantitative 18F-FDG PET-CT scan characteristics correlate with tuberculosis treatment response. *EJNMMI Research* 2020; **10**(8):1-15.

MEKONNEN BW, JANSEN-NIENABER K, RAZACK R, DORUYTER AGG, PITCHER RD. Syphilitic pancreatitis: A rare mimicker of our time. *SAMJ South African Medical Journal* 2020; **110**(7):642-645.

SEBIKALI MJ, WARWICK JM, DORUYTER AGG. Combined versus subtraction-only technique in parathyroid scintigraphy: effect on scan interpretation. *NUCLEAR MEDICINE COMMUNICATIONS* 2020; **41**(9):883-887.

#### DU PLESSIS A

BROKENSHA R, LANDSCHOFF J, DU PLESSIS A, GRIFFITHS CL. Redescription and notes on the ecology of *Pagurapseudes dentatus* (Brown, 1956)(Peracarida: Tanaidacea), a shell-inhabiting tanaid from South Africa. *Journal of Crustacean Biology* 2020; **1**(10):10 pages.

LOZANOVSKI B, DOWNING D, TINO R, DU PLESSIS A, TRAN P, JAKEMAN J, SHIDID D, EMMELMANN C, QIAN M, CHOONG P, BRANDT M, LEARY M. Non-destructive simulation of node defects in additively manufactured lattice structures. *Additive Manufacturing* 2020; **36**:1-19.

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## JOUBERT L

ALAWODE AO, AMIANDAMHEN SO, JOUBERT L, MEINCKEN M, TYHODA L. Performance evaluation of a natural based adhesive derived from Irvingia wood species kernel extracts on wood panel production. *JOURNAL OF ADHESION SCIENCE AND TECHNOLOGY* 2020; **34**(9):1-18.

## LE ROUX SG

CHISAMBI JJ, VON DER HEYDEN BP, TSHIBALANGANDA M, LE ROUX SG. Gold exploration in two and three dimensions: improved and correlative insights from microscopy and X-Ray computed tomography. *Minerals* 2020; **10**(5):476 20pp.

CLEMENS JD, STEVENS G, LE ROUX SG, WALLIS GL. Mafic schlieren, crystal accumulation and differentiation in granitic magmas: an integrated case study. *Contributions to Mineralogy and Petrology* 2020; **175**:51 21 pages.

DU PLESSIS A, ELS J, LE ROUX SG, TSHIBALANGANDA M, PRETORIUS T. Data for 3D printing enlarged museum specimens for the visually impaired. *GigaScience* 2020; **3**:1-7.

DU PLESSIS A, TSHIBALANGANDA M, LE ROUX SG. Not all scans are equal: X-ray tomography image quality evaluation. *Materials Today Communications* 2020; **22**:100792.

## MOKWENA LM

MDITSHWA A, FAWOLE OA, MOKWENA LM, VRIES F, VAN DER MERWE K, CROUCH EM, OPARA UL. Effect of dynamic controlled atmospheres on volatile compound production in 'Granny Smith' apples. *Acta Horticulturae* 2020; **1275**:23-30.

## SLABBERT E

BRINK CJ, POSTMA A, SLABBERT E, POSTMA F, MUASYA AM, JACOBS K. Bacterial communities associated with natural and commercially grown rooibos (*Aspalathus linearis*). *PEDOSPHERE* 2020; **30**(6):778-790.

## STANDER MA

ADAMS KT, DONALD PR, ABULFATHI AA, DIACON AH, STANDER MA, REUTER H. Pharmacokinetics of Para-Aminosalicylic Acid and Its 2 Major Metabolites: A Potential Relationship to the Development of Gastrointestinal Intolerance. *JOURNAL OF CLINICAL PHARMACOLOGY* 2020; **604**(4):489-494.

DU TOIT T, VAN ROOYEN D, STANDER MA, ATKIN SL, SWART AC. Analysis of 52 C<sub>19</sub> and C<sub>21</sub> steroids by UPC<sup>2</sup>-MS/MS: Characterising the C<sub>11</sub>-oxy steroid metabolome in serum. *JOURNAL OF CHROMATOGRAPHY B-ANALYTICAL TECHNOLOGIES IN THE BIOMEDICAL AND LIFE SCIENCES* 2020; **1152**:art no. 122243, 20 pages.

HUNTER EW, STANDER MA, KOSSMANN JM, CHAKRABORTY S, PRINCE S, PETERS SW, LOEDOLFF B. Toward the identification of a phytocannabinoid-like compound in the flowers of a South African medicinal plant (*Leonotis leonurus*). *BMC Research Notes* 2020; **13**(522):1-6.

MASIKE K, DE VILLIERS AJ, HOFFMAN EW, BRAND DJ, CAUSON T, STANDER MA. Detailed Phenolic Characterization of Protea Pure and Hybrid Cultivars by Liquid Chromatography–Ion Mobility–High Resolution Mass Spectrometry (LC-IM-HR-MS). *Journal of Agricultural and Food Chemistry* 2020; **68**:485-502.

ZONYANE S, FAWOLE OA, LA GRANGE C, STANDER MA, OPARA UL, MAKUNGA NP. The implication of chemotypic variation on the anti-oxidant and anti-cancer activities of sutherlandia frutescens (L.) R.Br. (fabaceae) from different geographic locations. *Antioxidants* 2020; **9**(2):Article number 152.

## Journal Articles (NON-subsidised)

XONTI A, HUNTER EW, KULU NN, MABOEI PM, STANDER MA, KOSSMANN JM, PETERS SW, LOEDOLFF B. Diversification of health-promoting phytochemicals in radish (*Raphanus*

raphanistrum) and kale (*Brassica oleracea*) micro-greens using high light bio-fortification. *Functional Foods in Health and Disease* 2020; **10**(2):65-81.

## TAYLOR MJC

### Journal Articles (subsidised)

KAIGONGI MM, LUKHOBWA CW, OCHIENG PJ, TAYLOR MJC, YENESEW A, MAKUNGA NP. LC-MS-Based Metabolomics for the Chemosystematics of Kenyan *Dodonaea viscosa* Jacq (Sapindaceae) Populations. *Molecules* 2020; **25**(18):Article number 4130.

## TSHIBALANGANDA M

DU PLESSIS A, ELS J, LE ROUX SG, TSHIBALANGANDA M, PRETORIUS T. Data for 3D printing enlarged museum specimens for the visually impaired. *GigaScience* 2020; **3**:1-7.

DU PLESSIS A, TSHIBALANGANDA M, LE ROUX SG. Not all scans are equal: X-ray tomography image quality evaluation. *Materials Today Communications* 2020; **22**:100792.

LYONS C L, TSHIBALANGANDA M, DU PLESSIS A. Using CT-scanning technology to quantify damage of the stem-boring beetle, *Aphanasium australe*, a biocontrol agent of *Hakea sericea* in South Africa. *Biocontrol Science and Technology* 2020; **30**(1):33-41.

## VAN HEERDEN CJ

AKURUGU WA, VAN HEERDEN CJ, MULDER N, ZÖLLNER EWA. Hypothalamic-pituitary-adrenal axis suppression in asthma: A glucocorticoid receptor polymorphism may protect. *PEDIATRIC ALLERGY AND IMMUNOLOGY* 2020; **0**(0):0.

BELAY ZA, OLUWAFEMI J.C., VORSTER AA, VAN HEERDEN CJ, OPARA UL. Transcriptomic changes associated with husk scald incidence on pomegranate fruit peel during cold storage. *Food Research International* 2020; **135**(109285):1-12.

MISHRA AM, MISHRA H, CHEGOU NN, TROMP GC, VAN HEERDEN CJ, PIETERSEN RD, LEISCHING GR, BAKER B. Distinct host-immune response toward species related intracellular mycobacterial killing: A transcriptomic study. *Virulence* 2020; **11**(1):170-182.

## VLOK NM

LE ROUX ML, BURGER NFV, VLOK NM, KUNERT K, CULLIS CA, OBERHOLSTER A. Wheat Line "RYNO3936" Is Associated With Delayed Water Stress-Induced Leaf Senescence and Rapid Water-Deficit Stress Recovery. *Frontiers in Plant Science* 2020; **11**:fpls.2020.01053, 21 pages.

LUKMAN V, ODEYEMI SW, ROTH RL, MBABALA L, TSHILILO NO, VLOK NM, DEWAR MJB, KENYON CP. Novel kinase platform for the validation of the anti-tubercular activities of *Pelargonium sidoides* (Geraniaceae). *BMC BIOTECHNOLOGY* 2020; **20**(50):1-11.

## VORSTER AA

BELAY ZA, OLUWAFEMI J.C., VORSTER AA, VAN HEERDEN CJ, OPARA UL. Transcriptomic changes associated with husk scald incidence on pomegranate fruit peel during cold storage. *Food Research International* 2020; **135**(109285):1-12.

OLUWOLE OG, KUIVANIEMI SH, ABRAHAMS S, HAYLETT WL, VORSTER AA, ET AL, CARR JA, ET AL. Targeted next-generation sequencing identifies novel variants in candidate genes for Parkinson's disease in Black South African and Nigerian patients. *BMC Medical Genetics* 2020; **21**(23):1-11.

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