



UNIVERSITY OF MELBOURNE

Report of Federal Awards in Accordance with the OMB Uniform Guidance

Provisions for the year ended 31 December 2016

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1. SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

1.1 Independent Auditor's Report

To the Members of the Council of the University of Melbourne,

Report on the Schedule of Expenditures of Federal Awards

We have audited the accompanying schedule of expenditures of federal awards ("the Schedule") for the Research and Development Program Cluster ("the Federal Programs") funded by the United States of America Federal Awards to the University of Melbourne ("the University") for the year ended 31 December 2016.

Management's Responsibility for the Schedule of Expenditures of Federal Awards

Management is responsible for the preparation and fair presentation of the Schedule that presents fairly the expenditures under the Federal Programs funded by United States of America Federal Awards, by applying generally accepted accounting rules and principles of Australia.

Auditor's Responsibility

Our responsibility is to express an opinion of this Schedule based on our audit. We conducted our audit in accordance with the auditing standards applicable to financial audits contained in the *Government Auditing Standards* issued by the Comptroller General of the United States, except for continuing education program and peer review, as discussed in the paragraphs below, and in accordance with the program audit provisions contained in Title 2 U.S. *Code of Federal Regulation* Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* ("OMB Uniform Guidance"). Those standards, and the program audit provisions of OMB Uniform Guidance, require that we plan and perform the audit to obtain reasonable assurance about whether the Schedule is free of material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the Schedule. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the Schedule, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the University's preparation and fair presentation of the Schedule in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the Schedule. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Personnel of RSM Australia Pty Ltd ("RSM") do not participate in a continuing education program that fully satisfies the requirements set forth in Chapter 3, paragraph 3.6 of *Government Auditing Standards*. However, RSM does participate in continuing education programs applicable in Australia.

Further, RSM did not have an external quality review by an unaffiliated audit organisation, as required by Chapter 3, paragraph 3.33 of *Government Auditing Standards*. However, RSM does participate in the RSM International internal control review program, which requires our offices to be periodically subjected to an extensive quality control review by partners and managers from other RSM International affiliated firms.

Opinion

In our opinion, the schedule of expenditures of federal awards presents fairly, in all material respects, the expenditures for the research and development program cluster funded by United States of America Federal Awards, by applying generally accepted accounting rules and principles of Australia.

RSM AUSTRALIA PTY LTD



W SPARGO

Director

Melbourne, VIC

27 October 2017

1. SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS (CONT.)

1.2 Schedule of Expenditures of Federal Awards for the year ended 31 December 2016

Federal Grantor / Pass-Through Grantor / Program or Cluster Title	Federal CFDA Number	Pass-Through Entity Identifying Number	Federal Expenditures (U.S. Dollars)	Passed Through to Sub-recipients (U.S. Dollars)
Research and Development Cluster				
United States Department Of Agriculture				
Snap Impact On Food Supply	10.253		\$51,900.83	
Subtotal CFDA	10.253		\$51,900.83	
United States Department Of Agriculture				
Passed through USDA Agricultural Research Service livestock Behavior Research Unit				
A Novel Two-Step Gas System To Allow For Humane On-Farm Euthanasia	10.310	720564834	\$70,784.53	
Subtotal CFDA	10.310		\$70,784.53	
Office Of Naval Research Global				
NICOP - The Role Of Inlet Perturbations On Superstructures Of Turbulent Boundary Layers - Toward Global Flow Control	12.300		\$49,488.99	
Brassington, Dr Gary	12.300		\$26,240.72	
Subtotal CFDA	12.300		\$75,729.72	
United States Department Of Defense				
Tau And Beta-Amyloid Deposition, Microhemorrhage And Brain Function After Traumatic Brain Injury In War Veterans	12.420		\$535,032.02	
Cyclin E1 As A Therapeutic Target In Women With High-Grade Serious Ovarian Cancer And Primary Treatment Failure	12.420		\$49,307.84	
The Role Of An Aggrecan 32mer Fragment In Post Traumatic Osteoarthritis	12.420		\$50,568.70	
Subtotal CFDA	12.420		\$634,908.56	

Federal Grantor / Pass-Through Grantor / Program or Cluster Title	Federal CFDA Number	Pass-Through Entity Identifying	Federal Expenditures (U.S. Dollars)	Passed Through to Sub-recipients (U.S. Dollars)
Research and Development Cluster (Cont.)				
US Army Research Office				
Enzyme Mimics: New Advanced Materials	12.431		\$84,328.82	
Passed through University of New South Wales				
Solid State Quantum Computer In Silicon	12.431	980501479	\$258,440.70	
Subtotal CFDA	12.431		\$342,769.52	
United States Department Of The Air Force				
Dissemination Of Opinions And Ideas Via Complex Contagion On Social Networks	12.800		\$898.51	
High Temperature Superconductivity In Diamond	12.800		\$141,021.18	
Asian Office of Aerospace Research & Development				
Tractable Computational Methods For Optimal Control	12.800		\$0.00	
Directing Transmission Patterns In Granular Materials From The Grain Scale	12.800		\$0.00	
Subtotal CFDA	12.800		\$141,919.70	
US Navy Research Office				
Passed through Carnegie Mellon University				
Low Resource Languages For Emergent Incidents (Lorelei) Program	12.910	250969449	\$142,889.54	
Defense Advanced Research Projects				
Ong Wave Infrared (LWIR) Photodetectors Based On Nan-Optics And Two Dimensional Materials	12.910		\$222,841.89	\$11,349.57
Passed through Florey Neurosciences Institutes				
Vagal Neuromodulation For The Treatment Of Inflammatory Bowel Disease	12.910	DUNS755995573	\$178,776.54	
Subtotal CFDA	12.910		\$544,507.97	\$11,349.57

Federal Grantor / Pass-Through Grantor / Program or Cluster Title	Federal CFDA Number	Pass-Through Entity Identifying	Federal Expenditures (U.S. Dollars)	Passed Through to Sub-recipients (U.S. Dollars)
Research and Development Cluster (Cont.)				
National Science Foundation				
Passed through Western Michigan University				
Formative Assessment Systems For Advanced Technological Education (ATE) Program	40.076	382138856	\$16,099.55	
Subtotal CFDA	40.076		\$16,099.55	
National Institute of Health				
Establishing The Maximum Safe Stimulation Parameters For Platinum Cochlear Implant Electrode Arrays.	93.173		\$371,339.62	
Subtotal CFDA	93.173		\$371,339.62	
National Institute of Health				
1/2 A Randomized Trial Of Internet Based Interventions For Bipolar Disorder	93.242		\$63,644.81	\$41,865.70
Subtotal CFDA	93.242		\$63,644.81	\$41,865.70
National Institute of Health				
Understanding Functional Connectivity Of Sensory And Motor Pathways To Specific Regions Of The Lower Urinary Tract.	93.310		\$0.00	
Understanding Functional Connectivity Of Sensory And Motor Pathways To Specific Regions Of The Lower Urinary Tract.	93.310		\$34,924.48	
Mapping Stomach Autonomic Circuitry And Function For Neuromodulation Of Gastric Disorders	93.310		\$51,209.74	
Passed through University Of Toledo				
Anatomical-Functional Mapping Of Enteric Neural Circuits	93.310	346401483	\$18,602.88	
Subtotal CFDA	93.310		\$104,737.11	
National Institute of Health				
Passed through Cancer Prevention Institute Of California				
Breast Cancer Family Registry Cohort	93.393	237427232	\$522,226.90	
Breast Cancer Family Registry Cohort	93.393	237427232	\$132,934.86	

Federal Grantor / Pass-Through Grantor / Program or Cluster Title	Federal CFDA Number	Pass-Through Entity Identifying	Federal Expenditures (U.S. Dollars)	Passed Through to Sub-recipients (U.S. Dollars)
Research and Development Cluster (Cont.)				
Passed through Columbia University				
Genes, Environment And Breast Cancer Risk: The 15 Year Follow Up Of The Prof-Sc	93.393	135598093	\$49,695.14	
Genes, Environment And Breast Cancer Risk: The 15 Year Follow Up Of The Prof-Sc	93.393	135598093	\$6,312.26	
Passed through Kaiser Permanente				
Mammographic Density And Prognosis Among Breast Cancer Intrinsic Subtypes.	93.393	1841105628A1	\$3,990.67	
Passed through Mayo Clinic				
Risk And Penetrance Of Mutations From Breast Cancer Testing Panels	93.393	416011702	\$8,793.43	
Passed through Stanford University				
Colon Cancer Family Registry Cohort	93.393	941156365A1	\$503,616.90	
Colon Cancer Family Registry Cohort	93.393	941156365A1	\$155,736.66	
Passed through University Of New South Wales				
Identifying Prognostic Markers And Therapeutic Targets For Serious Ovarian Cancer	93.393	980501479	\$0.00	
Passed through University Of Southern California				
Genome-Wide Association Study Of Breast Cancer In High-Risk Women.	93.393	951642394	\$10,429.84	
Genome-Wide Association Study Of Breast Cancer In High-Risk Women.	93.393	951642394	\$39,912.55	
Passed through University Of Utah				
A Comprehensive Approach To Breast Cancer Susceptibility Across The Risk Spectrum	93.393	1876000525A1	\$0.00	
Passed through Washington University				
A Cross-Country Comparison Of Evidence-Based Prevention Of Cancer	93.393	430653816	\$29,645.08	
Subtotal CFDA	93.393		\$1,463,294.29	

Federal Grantor / Pass-Through Grantor / Program or Cluster Title	Federal CFDA Number	Pass-Through Entity Identifying	Federal Expenditures (U.S. Dollars)	Passed Through to Sub-recipients (U.S. Dollars)
Research and Development Cluster (Cont.)				
National Institute of Health				
Passed through University Of Wisconsin - Madison				
Rhinovirus Infections And Asthma In Children And Adolescents (Coast)	93.838	391805963	\$97,604.19	
Rhinovirus Infections And Asthma In Children And Adolescents (Coast)	93.838	391805963	\$0.00	
Subtotal CFDA	93.838		\$97,604.19	
National Institute of Health				
High Resolution Mapping Of Lower Urinary Tract Innervation During Development	93.847		\$168,542.49	
New Players In Urethral Closure; Defining The Role Of A Novel Long Noncoding RNA	93.847		\$30,433.22	\$29,834.09
Passed through Harvard School Of Public Health				
Reducing Disparities In Diabetes Through Expanded Insurance Coverage	93.847	1042103580A6	\$0.00	
Passed through University Of California				
Genetic Modifiers Of Iron Status In Hemochromatosis HFE C282Y Homozygotes	93.847	946036493	\$30,846.34	
Passed through University Of Utah				
High Resolution Mapping Of Lower Urinary Tract Innervation During Development	93.847	1876000525A1	\$34,961.87	
Subtotal CFDA	93.847		\$264,783.92	\$29,834.09
National Institute of Health				
5 Of 7 EPI4K: Multiplex Families & Pairs Project	93.853		\$105,003.71	\$105,003.71
Passed through Columbia University				
1 Of 7 EPI4K: Gene Discovery In 4,000 Epilepsy Genomes Administrative Core	93.853	135598093	\$8,420.63	
Passed through University Of California				
EPI4K-Phenotyping And Clinical Informatics Core	93.853	946036494	\$26,820.93	
Subtotal CFDA	93.853		\$140,245.27	\$105,003.71

Federal Grantor / Pass-Through Grantor / Program or Cluster Title	Federal CFDA Number	Pass-Through Entity Identifying	Federal Expenditures (U.S. Dollars)	Passed Through to Sub-recipients (U.S. Dollars)
Research and Development Cluster (Cont.)				
National Institute of Health				
P.Falciparum Var Gene Diversity And Malaria Control	93.855		\$100,967.86	
Passed through Case Western Reserve University				
Fetal Immunity Of Malaria	93.855	1341018992A1	\$3,552.42	
Passed through Duke University				
Host Genetic Variation Regulating Salmonella Invasion And Disease Susceptibility	93.855	560532129	\$6,562.98	
Passed through The Regents of the University of California				
Characterising Reservoirs Of HIV-1 In The CNS	93.855	946036493A6	\$84,323.66	\$54,344.69
Dare: Lewin Core C Supplement	93.855	946036493	\$3,843.33	
Passed through University Of California San Francisco				
Delaney Aids Research Enterprise To Cure HIV (2016-2021) - Subaward 7 - Lewin	93.855	946036493	\$8,056.14	
Delaney Aids Research Enterprise To Cure HIV - Dare - M&O (2016-2021) - Subaward 10-Lewin	93.855	946036493	\$0.00	
Timing Of Art And Homeostasis Of The Persistent HIV Reservoir In The Adult	93.855	946036493	\$83,605.73	
Project 7	93.855	946036493	\$35,848.83	
MHC And KIR Region Genomics In Psoriasis	93.855	946036493	\$0.00	
Passed through University of North Carolina				
Subcontract For "Care Martin Delaney Collaboratory: Towards An HIV-1 Cure"	93.855	1566001393A-1	\$46,349.25	
Passed through University of Washington				
Severe Chronic Neutropenia International Registry	93.855	916001537	\$13,736.89	
Subtotal CFDA	93.855		\$386,847.09	\$54,344.69

Federal Grantor / Pass-Through Grantor / Program or Cluster Title	Federal CFDA Number	Pass-Through Entity Identifying	Federal Expenditures (U.S. Dollars)	Passed Through to Sub-recipients (U.S. Dollars)
Research and Development Cluster (Cont.)				
National Institute of Health				
Passed through University of California				
Evolution Of Interactions Between Wolbachia And Its Hosts: Drosophila Model Systems	93.859	946036493	\$117,221.58	
Subtotal CFDA	93.859		\$117,221.58	
National Institute of Health				
Passed through University of Chicago				
Impact Of Seasonality And Vector Contract On Population Structure Of P.Falciparum (R01-TW009670)	93.989	1362177139AI	\$213,497.21	
Subtotal CFDA	93.989		\$213,497.21	
Grant Total			\$5,101,835.47	\$242,397.76

1. SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS (CONT.)

1.3 Notes to the Schedule of Expenditures of Federal Awards

1.3.1 Company Description

The University of Melbourne (the “University”) has been a centre of learning since 1853. It is a leading research University, widely renowned for its teaching, research achievements and social and economic contributions.

The University is ranked among the top 50 Universities in the world, and is rated number 1 nationally. The University earns the highest level of research grants and allocations in Australia. The University has active researchers across a number of research fields, and partner with a number of world class affiliated research institutes for major programs of work.

The University has established a long-term plan to strengthen its research capacity and reputation, as well as transform its provision of undergraduate and graduate education. The “Melbourne Curriculum” has created six broadly based undergraduate degrees, followed by a professional graduate degree, or a research higher degree. These undergraduate degrees are: Arts, Biomedicine, Commerce, Environments, Music and Science.

1.3.2 Basis of presentation

The accompanying schedule of expenditures of federal awards (the “Schedule”) includes federal grant activity for the Federal Program and has been prepared using the Australian accounting rules and principles; it is presented on the accrual basis of accounting. The information in the Schedule is presented in accordance with the program audit provisions in Title 2 U.S. *Code of Federal Regulation* Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards*. Because the Schedule presents only a selected portion of activities of the University, it is not intended to and does not present the financial position, results of operations and cash flows of the University in conformity with accounting principles generally accepted in Australia. Expenses in Australian dollars are translated into US dollars based on spot rates.

1.3.3 Summary of Significant Accounting Policies

Basis of accounting: The accompanying schedule has been prepared on the accrual basis of accounting and as described below.

Expenses: Expenses for federal awards of the University are determined using the cost accounting principles and procedures set forth the cost principles contained in the Uniform Guidance. Under these cost principles, certain expenses are not allowable or are limited as to reimbursement. Pass-through entity identifying numbers are present where available.

Expenses also include indirect costs, relating primarily to facilities operation and maintenance, and general, divisional, departmental administration services, which are allocated to direct cost objectives (including federal awards) based on negotiated formulas referred to as indirect cost rates. Indirect costs allocated to awards are generally based on provisional rates negotiated with the cognizant federal agency. When funding for indirect costs is restricted based on specific agreement provisions or by total program funding requirements, a lower rate may be used, which is reflected in the Schedule. In such instances, the University is electing to not bill or collect the full provisional rate for these specific awards. The University did not elect to use the 10% de minimis cost rate as covered in §200.414 Indirect (F&A) costs of Title 2 U.S. *Code of Federal Regulation* Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards*.

2. COMPLIANCE AND INTERNAL CONTROLS

2.1 Independent Auditor's Report on Compliance with Requirements That Could Have a Direct and Material Effect on Each Major Program and on Internal Control over Compliance in Accordance with the OMB Uniform Guidance

To the Members of the Council of the University of Melbourne,

Report on Compliance for the Research and Development Cluster

We have audited University of Melbourne's (the "University") compliance with the types of compliance requirements described in the *OMB Compliance Supplement* that could have a direct and material effect on its Research and Development Cluster ("the Federal Program") for the year ended 31 December 2016.

Management's Responsibility

Management is responsible for compliance with the requirements of laws, regulations, contracts and grants applicable to its Federal Program.

Auditor's Responsibility

Our responsibility is to express an opinion on compliance for the University's Federal Program based on the types of compliance requirements referred to above.

We conducted our audit of compliance in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States; and Title 2 U.S. *Code of Federal Regulation* Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* ("OMB Uniform Guidance"), except as noted in the paragraphs below. Those standards and OMB Uniform Guidance require that we plan and perform the audit to obtain reasonable assurance about whether non-compliance with the types of compliance requirements referred to above that could have a direct and material effect on the Federal Program occurred. An audit includes examining, on a test basis, evidence about the University's compliance with those requirements and performing such other procedures as we considered necessary in the circumstances.

We believe that our audit provides a reasonable basis for our opinion on compliance for the University Federal Program. However, our audit does not provide a legal determination of the University's compliance.

Personnel of RSM Australia Pty Ltd ("RSM") do not participate in a continuing education program that fully satisfies the requirements set forth in Chapter 3, paragraph 3.6 of *Government Auditing Standards*. However, RSM does participate in continuing education programs applicable in Australia.

Further, RSM did not have an external quality review by an unaffiliated audit organisation as required by Chapter 3, paragraph 3.33 of *Government Auditing Standards*. However, RSM does participate in the RSM International internal control review program which requires our offices to be periodically subjected to an extensive quality control review by partners and managers from other RSM International affiliated firms.

Opinion on Compliance the Federal Program

In our opinion, the University complied, in all material respects, with the types of compliance requirements referred to above that could have a direct and material effect on the Federal Programs for the year ended 31 December 2016.

2. COMPLIANCE AND INTERNAL CONTROLS (CONT.)

2.1 Independent Auditor's Report (Cont.)

Report on Internal Control over Compliance

Management of the University is responsible for establishing and maintaining effective internal control over compliance with the types of compliance requirements referred to above. In planning and performing our audit of compliance, we considered the University's internal control over compliance with the types of requirements that could have a direct and material effect on its Federal Program to determine the auditing procedures that are appropriate in the circumstances for the purpose of expressing an opinion on compliance for its Federal Program and to test and report on internal control over compliance in accordance with the Uniform Guidance, but not for the purpose of expressing an opinion on the effectiveness of internal control over compliance. Accordingly, we do not express an opinion on the effectiveness of University's internal control over compliance.

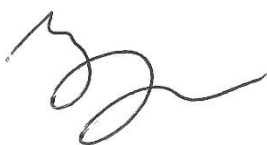
A *deficiency in internal control over compliance* exists when the design or operation of a control over compliance does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, noncompliance with a type of compliance requirement of a federal program on a timely basis. A *material weakness in internal control over compliance* is a deficiency, or combination of deficiencies in internal control over compliance, such that there is a reasonable possibility that material noncompliance with a type of compliance requirement of a federal program will not be prevented, or detected and corrected, on a timely basis. A *significant deficiency in internal control over compliance* is a deficiency, or a combination of deficiencies, in internal control over compliance with a type of compliance requirement of a federal program that is less severe than a material weakness in internal control over compliance, yet important enough to merit attention by those charged with governance.

Our consideration of internal control over compliance was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control over compliance that might be material weaknesses or significant deficiencies. We did not identify any deficiencies in internal control over compliance that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

The purpose of this report on internal control over compliance is solely to describe the scope of our testing of internal control over compliance and the results of that testing based on the requirements of the Uniform Guidance. Accordingly, this report is not suitable for any other purpose.



RSM AUSTRALIA PTY LTD



W SPARGO

Director

Melbourne, VIC

27 October 2017

3. SCHEDULE OF FINDINGS AND QUESTIONED COSTS

3.1 Section I: Summary of Auditors' Results

Federal Awards

Internal control over major programs

- | | |
|--|---------------|
| • Material weakness/es identified? | No |
| • Significant deficiency/ies identified not considered to be material weaknesses? | None reported |
| • Types of auditor's report issued on compliance for major programs. | Unmodified |
| • Any audit findings disclosed that are required to be reported in accordance with 2 CFR 200.516(s)? | No |

Identification of major programs:

- Research and development cluster

Dollar threshold used to distinguish between Type A and Type B programs:	\$750,000
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Auditee is a low-risk auditee.	Yes
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3.2 Section II: Federal Award Findings and Questioned Costs

There are no findings related to the University's federal award that are required to be reported.

3.3 Section III: Prior-Year Findings

There are no prior-year findings relating to the University.

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Each member of the RSM network is an independent accounting and consulting firm each of which practices in its own right. The RSM network is not itself a separate legal entity of any description in any jurisdiction.

The RSM network is administered by RSM International Limited, a company registered in England and Wales (company number 4040598) whose registered office is at 11 Old Jewry, London EC2R 8DU.

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