

## PROGRAM

### THURSDAY 2 FEBRUARY 2017

#### Registration Opens

11.30am – 6.45pm Mantra Lorne Lobby

#### Mass Spectrometry '101' Tutorial Series

12.30pm - 3.30pm Heritage Ballroom

Chair. Nicholas Williamson

#### Mass Spectrometry '202' Tutorial Series

12.30pm - 3.30pm Heritage 2

Chair. Gavin Reid

#### Welcome Address

4.00pm - 4.10pm Heritage Ballroom

Chair. Stuart Cordwell, President

#### The Simpson Lecture

4.10pm - 5.00pm Heritage Ballroom

Chair. Stuart Cordwell

The Symposium acknowledges the sponsorship of



#### Bernhard Küster

Chemical proteomics reveals the target landscape of clinical kinase inhibitors *abs# 1*

#### Ken Mitchelhill Young Investigator Award Lecture

5.00pm - 5.40pm Heritage Ballroom

Chair: Stuart Cordwell

The Symposium acknowledges the sponsorship of



#### Laura F Dagley

CIS is a potent checkpoint in NK cell-mediated tumor immunity *abs# 2*

#### Symposium One: Students of the APS (SoAPS)

5.40pm - 6.55pm Heritage Ballroom

Chair: Nichollas Scott

#### 5.40pm: Joshua J. Hamey

Mass spectrometry-based characterisation of protein methyltransferase substrate recognition motifs *abs# 3*

#### 5.55pm: Fiona Bicknell

Function of Reelin and GM1 gangliosidase during neuronal differentiation of stem cells *abs# 4*

#### 6.10pm: Elise J Needham

Phosphoproteomic screen of exercise mimetics reveals extensive drug interactions and signalling networks *abs# 5*

## THURSDAY 2 FEBRUARY 2017

### 6.25pm: Amber E Boyatzis

*In vivo* application of a novel proteomic method for identifying protein targets of oxidative stress. Protein thiol oxidation in the mdx mouse model of Duchenne Muscular Dystrophy *abs# 6*

### 6.40pm: Daniel Bucio Noble

Understanding anti-inflammatory properties of dried sugarcane extracts by proteomics *abs# 7*

## Welcome Reception

7.00pm - 10.00pm

Exhibition Hall

The Symposium acknowledges the sponsorship of



## FRIDAY 3 FEBRUARY 2017

## Registration Opens

6.45am - 7.00pm

Mantra Lorne Lobby

## Breakfast Workshop (SCIEX)

7.15am - 8.45am

Heritage Ballroom

### Title: SWATH™ for Beginners

Date: Friday 3 February 2017

Time: 7.15am - 8.45am

Location: Heritage Ballroom, Mantra Lorne

Breakfast. from 7.00am

- Dr James Broadbent (Field Applications Specialist, SCIEX ANZ)
- Katie Glenn (Field Applications Specialist, SCIEX ANZ)
- Madeleine Otway (PhD Candidate, Children's Medical Research Institute)

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## FRIDAY 3 FEBRUARY 2017

### Breakfast Workshop (Thermo Fisher)

7.15am - 8.45am

Heritage 2

**Title 1: Proteome Discoverer 2.1: New features and outlook**

**Title 2: Practical guidelines for robust, accurate and meaningful quantitative proteomics**

Date: Friday 3 February 2017

Time: 7.15am - 8.45am

Location: Heritage 2, Mantra Lorne

- Dr Bernard Delanghe (Product and Marketing Manager of Omics software Thermo Fisher Scientific)
- Dr Xiaoyue Jiang (Senior Strategic Marketing Specialist Thermo Fisher Scientific)

The Symposium acknowledges the sponsorship of

**ThermoFisher**  
S C I E N T I F I C

### Symposium Two: Clinical Proteomics

9.00am - 10.30am

Heritage Ballroom

Chair: Michelle Hill

**9.00am: Jennifer Van Eyk**

Changing medicine. Proteome centric precision health *abs# 8*

**9.30am: Chester Drum**

Digestion-free targeted LC-MS quantification of circulating Thymosin beta 4 in heart failure *abs# 9*

**9.50am: Giuseppe Infusini**

Quantitative proteomics reveals novel diagnostic markers of Parkinson's disease *abs# 10*

**10.10am: Patricia Illing**

An immunoproteomics approach for the identification of novel influenza B T cell epitopes. *abs# 11*

### Morning Tea

10.30am - 11.00am

Exhibition Hall

### Symposium Three: Post-Translational Modifications and Signalling

11.00am - 12.30pm

Heritage Ballroom

Chair: Mark Molloy

**11.00am: Albert Sickmann**

What Proteomics can tell us about Platelets! *abs# 12*

**11.30am: Nestor Solis**

A combination of omics strategies to elucidate the proteolytic networks in macrophage differentiation *abs# 13*

**11.50am: Samantha Emery**

Lysine acetylation throughout axenic culture in the early-branching eukaryotic parasite, *Giardia duodenalis* *abs# 14*

## FRIDAY 3 FEBRUARY 2017

### 12.10pm: Evan Ingley

Signalling networks in the regulation of red blood cell integrity and survival. *abs# 15*

### Lightning Talks One

12.30pm - 1.00pm

Heritage Ballroom

Chair: Andrew Webb

#### 1<sup>st</sup> Amanda Woon

A proteogenomic approach to understanding adaptive immunity in bats *abs# 16*

#### 2<sup>nd</sup> Vineet Vaibhav

A proteomic investigation of diseases of Sydney rock oysters. A step towards breeding better oysters *abs# 17*

#### 3<sup>rd</sup> Lok Man

Characterisation of the *Campylobacter jejuni* Cj0025c nutrient transporter using a multi-omics approach *abs# 18*

#### 4<sup>th</sup> Erin Sykes

Biomarker Signatures in Melanoma *abs# 19*

#### 5<sup>th</sup> Martin Whitham

Quantitative proteomic analysis of the exercise-induced extracellular vesicle proteome *abs# 20*

#### 6<sup>th</sup> Oliver Thomas

The protein landscape of the inner ear of a native fish *abs# 21*

### Lunch/Poster Session One (Abstracts 101 - 126)

1.00pm - 2.30pm

Exhibition Hall

### Free Time

2.30pm - 5.00pm

### Afternoon Workshop (SCIEX)

2.45pm - 4.45pm

Heritage Ballroom

### Title: Towards Precision Medicine; the SCIEX Clinical Proteomics Workshop

Date: Friday 3 February 2017

Time: 2.45pm - 4.45pm

Location: Heritage Ballroom, Mantra Lorne

- Professor Jennifer van Eyk (Cedars-Sinai Medical Center, USA)
- Dr Christie Hunter (Director of Global Technical Marketing, SCIEX USA)
- Dr James Broadbent (Field Applications Specialist, SCIEX ANZ)

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## FRIDAY 3 FEBRUARY 2017

### Afternoon Workshop (Thermo Fisher)

2.45pm - 4.45pm

Heritage 2

**Title: Building Proteome Tools based on a complete synthetic human proteome**

Date: Friday 3 February 2017

Time: 2.45pm - 4.45pm

Location: Heritage 2, Mantra Lorne

- Prof Bernhard Küster (Chair of proteomics and bioanalytics, Technical University of Munich (TUM) School of Life Sciences Weihenstephan)

The Symposium acknowledges the sponsorship of

**ThermoFisher**  
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### Symposium Four: Glycomics and Glycoproteomics

5.00pm - 6.25pm

Heritage Ballroom

Chair: Morten Thaysen-Andersen

**5.00pm: Ben Schulz**

Glycoproteomics for analysis of the regulation and evolution of protein glycosylation *abs# 22*

**5.25pm: Daniel Kolarich**

Developing a glycoproteomics tool kit using synthetic *N*-glycopeptides *abs# 23*

**5.45pm: Christopher Ashwood**

Revealing glycan structural epitopes using a simplified LC-MS/MS data acquisition and analysis platform for glycomics *abs# 24*

**6.05pm: Joel A Cain**

Evaluating the relationship between *N*-Glycosylation and protein stability in *Campylobacter jejuni* *abs# 25*

### APS Conference Dinner

7.30pm - 10.30pm

Lorne Surf Club

**Date:** Friday 3 February 2017

**Time:** 7.30pm - 10.30pm

**Location:** Lorne Surf Life Saving Club

The APS Conference Dinner is without a doubt the social highlight of the conference. This is an event not to miss.

## SATURDAY 4 FEBRUARY 2017

### Registration Opens

6.45am - 7.00pm

Mantra Lorne Lobby

### Breakfast Workshop (Waters)

7.15am - 8.45am

Heritage Ballroom

**Title: Introduction to microfluidics coupled with mass spectrometry for quantitation of low level circulating peptide Biomarkers: Tips and tricks**

Date: Saturday 4 February 2017

Time: 7.15am - 8.45am

Location: Heritage Ballroom, Mantra Lorne

Breakfast: from 7.00am

- Dr Jose Castro-Perez (Waters Corp USA)

The Symposium acknowledges the sponsorship of



### Symposium Five: Model Organisms and Microbes

9.00am - 10.30am

Heritage Ballroom

Chair: Steven Djordjevic

#### 9.00am: Bronwyn J. Barkla

Cell-type specific profiling of specialized trichomes from the salt-tolerant plant *Mesembryanthemum crystallinum* reveals insight into their development and role in plant salt tolerance *abs# 26*

#### 9.25am: Gene Hart-Smith

Protein correlation profiling and the dynamics of the *Saccharomyces cerevisiae* intracellular methylation network *abs# 27*

#### 9.50am: Nichollas E Scott

Substrates and kinetics of Arg-GlcNAcylation by the NleB/SseK family of bacterial type III secretion system (T3SS) effectors *abs# 28*

#### 10.10am: Nathan P Croft

Quantitative shift in MHC epitope abundance during the two major pathways of antigen presentation following virus infection. implications for the induction of antiviral immunity *abs# 29*

### Morning Tea

10.30am - 11.00am

Exhibition Hall

### Symposium Six: New Technology

11.00am - 12.45pm

Heritage Ballroom

Chair: Marc Wilkins

#### 11.00am: W. Alexander Donald

Ultraviolet photodissociation and ion-electron reactivity of extremely supercharged protein ions *abs# 30*

#### 11.25am: Arthur Moseley

Biomedical applications of SONAR - a novel data independent acquisition method for quantitative and qualitative analyses *abs# 31*

## SATURDAY 4 FEBRUARY 2017

### 11.45am: Yue Xuan

MS1 based quantification optimization on DIA methods on a quadrupole-Orbitrap mass spectrometer *abs# 32*

### 12.05pm: Christie Hunter

Proteome-wide drug dose-response of prostate cancer cell lines exposed to androgen receptor antagonists by microflow-LC SWATH MS analysis *abs# 33*

### 12.25pm: Mark Larance

Mapping the Liver Interactome *abs# 34*

## Lightning Talks Two

12.50pm - 1.05pm

Heritage Ballroom

Chair: Ben Crossett

### 1<sup>st</sup> Daniela-Lee Smith

Investigating protein-protein interactions by crosslinking mass spectrometry *abs# 35*

### 2<sup>nd</sup> Lucia F Zacchi

Dissecting the subcellular secretory glycoproteome *abs# 36*

### 3<sup>rd</sup> Joel Steele

Using proteomic analysis to uncover the mechanisms of non-protein amino acids attributed to neurological diseases *abs# 37*

### 4<sup>th</sup> Daniel A Broszczak

Variable selection and biological characterisation of chronic wounds using wound fluid proteomics and mass spectrometry *abs# 38*

### 5<sup>th</sup> Madeleine J Otway

How low can you go? The relationship between sample loading and protein quantification in SWATH-MS *abs# 39*

## Lunch/Poster Session Two (Abstracts 201 - 229)

1.05pm - 2.30pm

Exhibition Hall

## Annual General Meeting

2.30pm - 3.30pm

Exhibition Hall

## Free Time

2.30pm - 4.00pm

## Symposium Seven: Environmental and Plant Proteomics

4.00pm - 5.25pm

Heritage Ballroom

Chair: Michelle Colgrave

### 4.00pm: Melissa Fitzgerald

Combining metabolomics and genomics to dissect rice quality, and provide robust and trait-relevant tools to rice breeders. *abs# 40*

### 4.25pm: Michelle Colgrave

MS-guided plant breeding *abs# 41*

### 4.45pm: Kris Ford

Towards the complete PTM map of CSLF6 *abs# 42*

### 5.05pm: Priya Ghodasara

Next generation proteomics to detect biomarkers of pain and inflammation. *abs# 43*

## SATURDAY 4 FEBRUARY 2017

### Symposium Eight: Disease Proteomics

5.25pm - 7.25pm

Heritage Ballroom

Chair: Anthony Purcell

**5.25pm: Vera Ignjatovic**

Developmental proteomics. unravelling age specific differences in the human proteome *abs# 44*

**5.45pm: David Stroud**

Coupling of gene-editing and proteomics to dissect the assembly and function of human mitochondrial complex I *abs# 45*

**6.05pm: Benjamin Parker**

Quantification of the exercise-regulated peptidome and the chemical modification of bioactive peptides *abs# 46*

**6.25pm: Richard Wilson**

Application of metabolomics and proteomics for biomarker discovery and development of therapies for the transmissible cancer, Tasmanian Devil Facial Tumour Disease *abs# 47*

**6.45pm: Garry Corthals**

Proteome analysis of endometriosis patient tissues leads to development of screening assays in sera *abs# 48*

**7.05pm: Ed Nice**

Towards Personalised Medicine. The Road Ahead *abs# 49*

### SoAPS Speakers Meet & Greet

7.30pm - 8.30pm

Seagrass Lawn

### APS Trivia Night

7.30pm - 10.30pm

Seagrass Lawn

## SUNDAY 5 FEBRUARY 2017

### Registration Opens

8.00am - 2.30pm

Mantra Lorne Lobby

### Symposium Nine: Integrated Omics

9.00am - 10.30am

Heritage Ballroom

Chair: Gavin Reid

**9.00am: HoJeong Kwon**

Chemical proteomics based target identification of bioactive small molecules *abs# 50*

**9.30am: Michelle M Hill**

Finding cancer fats through integrated proteomics and lipidomics *abs# 51*

**9.50am: Erin Shammel Baker**

Ion mobility spectrometry for enhanced omic analyses *abs# 52*



## SUNDAY 5 FEBRUARY 2017

### 10.10am: Eileen Ryan

Comprehensive analysis of polyunsaturated fatty acid-derived lipid mediators in human plasma pre- and post-ingestion of aspirin. A pilot study *abs# 53*

### Morning Tea

10.30am - 11.00am

Exhibition Hall

### Symposium Ten: Clinical MS Imaging

11.00am - 12.15pm

Heritage Ballroom

Chair: Angus Grey

### 11.00am: Babar Vaqas

Mass Spectrometry. a platform for personalised medicine *abs# 54*

### 11.30am: Hartmut Schlüter

Tissue homogenization with the picosecond infrared laser for proteomics *abs# 55*

### 11.55am: Andrew Palmer

Large Scale Analytics of Metabolite Annotations from Imaging Mass Spectrometry *abs# 56*

### Closing Keynote Lecture

12.15pm - 1.00pm

Heritage Ballroom

Chair: Peter Hoffmann

### Carol Robinson

When proteomics meets lipidomics *abs# 57*

### Closing Ceremony/Award Presentation

1.00pm - 1.30pm

Heritage Ballroom

Chair. Stuart Cordwell

### Buses Depart – 2.15pm SHARP

2.00pm - 2.15pm

Mantra Lorne Lobby