Pangborn 2019 | 13th Pangborn Sensory Science Symposium

28 July – 1 August 2019 • Edinburgh International Conference Centre (EICC) • Edinburgh, Scotland

Sunday, 28 July, 2019	
09:00-19:30	**Registration** *Room: Strathblane Hall*
10:00-13:00	**ECR Seminar** Please see separate programme for the details of this seminar *Room: Moorfoot*
11:30-14:00	**Walking tours of city**
What will the future look like and how do we rise to the challenge?	
14:30-15:00	**Opening session of 13th Pangborn Sensory Science Symposium** Conference co-chairs: Joanne Hort, Massey University, New Zealand David Lyon, Firmenich, UK Cindy Beeren, Leatherhead Food Research UK *Room: Pentland Suite*
15:00-16:00	**[K01]** **Collective learning: Sharing insights for innovation** Mikel Cirkus, Firmenich, USA *Room: Pentland Suite*
16:00-16:40	**Refreshment break** *Room: Lennox Suite*
16:40-17:40	**[K02]** **What does the future look like for sensory and consumer science: the opinion of experts in the field** Nathalie Martin, Nestle, Switzerland *Room: Pentland Suite*
17:40-17:50	**Welcome to Scotland** David Thomson, MMR, UK *Room: Pentland Suite*
17:50-19:30	**Welcome reception** *Room: Lennox Suite*
Monday, 29 July 2019 **What generational, lifestyle, cultural issues are we facing?**	
	Session chair: Sara Jaegar, Plant & Food Research Ltd, New Zealand
08:30-09:15	**[PLN01]** **Effects of neurodegenerative disease on sensory function in the brain: Focus on Alzheimer's disease and Down syndrome** Claire Murphy, San Diego State University, USA *Room: Pentland Suite*
09:15-10:00	**[PLN02]** **What's in a need?** Maduran Wikneshwaran, Dyson, UK *Room: Pentland Suite*
10.00-10.40	**Refreshment break** *Room: Lennox Suite*

10:40-12:40	Session 1 Emotions	Session 2 Lifestages	Workshop 1 Sensory science as the bridge between consumer behaviour, nutrition and health	Workshop 2 Sensing future packaging	Learnshop 1 Demystifying qualitative sensory research
	Room: Pentland	*Room: Sidlaw*	*Room: Fintry*	*Room: Tinto*	*Room: Lowther*
	Session chairs: Gaston Ares, Universidad de la Repulica, Uraguay Sophie Raviot, Coty Geneva Sarl Versoix, Switzerland	**Session chairs:** Lisa Methven, University of Reading, UK Sylvie Issanchou, INRA, France			
10:40-11:00	O1.1 **Sensory drivers of product-elicited emotions: Insights from 11 studies using different methodological approaches** S. Jaeger*[1], S. Spinelli[2], G. Ares[3], E. Monteleone[2], *[1]The New Zealand Institute for Plant & Food Research Ltd, New Zealand, [2]University of Florence, Italy, [3]Universidad de la República, Uruguay*	O2.1 **Food texture versus eating capability: What drives oral processing and difficulty perception in older adults?** L. Laguna[1,2], M. Hetherington[1], A. Sarkar*[1], *[1]University of Leeds, United Kingdom, [2]Institute of Agrochemistry and Food Technology (IATA, CSIC), Spain*	C. Forde*[1], K. DeGraaf*[2], N. Pagidas*[3], R. Dando*[4], *[1]Clinical Nutrition Research Center, Singapore Institute for Clinical Sciences / National University of Singapore, Singapore, Singapore, [2]Wageningen University, Wageningen, Netherlands, [3]Kerry Taste and Nutrition (Europe and Russia), Naas Co. Kildare, Ireland, [4]Cornell University, Ithaca, USA*	Q. Yang*[1,2,3], C. Raithatha*[4,2,3], O. Sim*[1], G. Simmonds*[5], S. Patel*[6], S. Lignou[2,7], C. Barnagaud*[2,8], *[1]University of Nottingham, United Kingdom, [2]Institute of Food Science and Technology (IFST) Sensory Science Group (SSG), United Kingdom, [3]Society of Chemical Industry (SCI) Food Group, United Kingdom, [4]Carol Raithatha Limited, United Kingdom, [5]Sainsbury's Supermarkets, United Kingdom, [6]The Packaging Collective, United Kingdom,*	D. Hall*[1], N. Peper[2], C. Dus*[3], R. Teratanavat*[4], *[1]Research Vibe, LLC, Nashville, USA, [2]McCormick & Co., Inc., Baltimore, USA, [3]Sensory Spectrum, Inc., New Providence, USA, [4]Takasago International Corp., USA*
11:00-11:20	O1.2 **Use of different test conditions to better understand the emotional responses to samples provided from consumers** T. Worch*[1], F. Sinesio[2], E.	O2.2 **Application of the Check-All-That-Apply (CATA) method to explore sensory perception in children with different degrees of food neophobia** P. Sandvik[1], V. L. Almli[2], B. Alfaro*[3], H.			

	Monetta[2], S. Abbà[3], L. Dreyfuss[4], J. McEwan[5], C. Porcherot-Lassallette[6], [1]*Qi Statistics Ltd, United Kingdom, [2]CREA - Research Centre for Food and Nutrition, Italy, [3]Adacta International, Italy, [4]Biofortis, France, [5]Jean A McEwan Consulting, United Kingdom, [6]Firmenich, Switzerland*	Jilani[4,5], M. Laureati[6], L. Methven[7], M. Sandell[8], M. Wallner[9], G. Zeinstra[10], [1]*Uppsala University, Sweden, [2]Nofima, Norway, [3]AZTI, Spain, [4]Leibniz-Institute for Prevention Research and Epidemiology – BIPS, Germany, [5]University of Bremen, Germany, [6]University of Milan, Italy, [7]University of Reading, United Kingdom, [8]University of Turku, Finland, [9]University of Applied Sciences, Austria, [10]Wageningen Food & Biobased Research, Netherlands*		[7]*University of Reading, na, United Kingdom, [8]MMR Research Worldwide, United Kingdom*	
11:20-11:40	**O1.3** **Facial expressions and food preference** J. Bult*[1], J. Tangelder[2], R. Ruijschop[3], T. Heffelaar[4], T. den Uyl[2], A. Spink[4], [1]*Applegg, Netherlands, [2]VicarVision, Netherlands, [3]NIZO, Netherlands, [4]Noldus Information Technology, Netherlands*	**O2.3** **Ageing, multi-sensory impairment and food behaviour in Italian samples** M. Concas[1], A. Robino [1], E. Catamo[1], G. Girotto[2], M. Brumat[2], M. Mezzavilla[1], P. Gasparini*[1,2], [1]*Institute for Maternal and Child Health – IRCCS ''Burlo Garofolo'', Italy, [2]University of Trieste, Italy*			
11:40-12:00	**O1.4** **"App-take" influence in emotions during wine purchasing** L. Laguna*, A. Rizo, A. Bartú, A. Tárrega,	**O2.4** **School children cooking and eating insects as part of a teaching program - effects of cooking, insect type, exposure and food neophobia**			

	Institute of Agrochemistry and Food Technology (IATA, CSIC), Spain	M. Frøst, R. Rizki Riantiningtyas, M. Frøst*, *University of Copenhagen, Denmark*		
12:00-12:20	O1.5 **Comparative study on the role of mixed reality on affective drivers of tea break snack choices** J. Low*[1], V. Li[2], L. Yeon[2], J. Hort[1], *[1]Massey University, New Zealand, [2]Singapore Institute of Technology, Singapore*	O2.5 **Correlates of bitter, sweet, salty and umami taste thresholds in European children: Role of sex, age, country and weight status - the IDEFICS Study** H. Jilani*[1,2], T. Intemann[1,2], K. Buchecker[3], H. Charalambos[4], F. Gianfagna[5], S. De Henauw[6], F. Lauria[7], D. Molnar[8], L. Moreno[9], A. Hebestreit[1], *[1]Leibniz-Institute for Prevention Research and Epidemiology - BIPS, Germany, [2]University of Bremen, Germany, [3]TTZ, Germany, [4]Research and Education Institute of Child Health, Cyprus, [5]IRCCS Istituto Neurologico Mediterraneo NEUROMED, Italy, [6]Ghent University, Belgium, [7]National Research Council, Italy, [8]University of Pécs, Hungary, [9]University of Zaragoza, Spain*		
12:20-12:40	O1.6	O2.6		

	Do you trust your bank? Olfactory priming affects trust in a bank service M. Pinelli*[1], C. Cuny[1], J. Grobert[2], M. Fornerino[1], *[1]Grenoble Ecole de Management , France, [2]Toulouse Ecole de management, France*	**Does the temporal in-mouth texture quality of African indigenous/locally available complementary porridge samples match the oromotor readiness of infants and young children?** J. Makame*, N. Emmambux, T. Cronje, R. Dekock, *University of Pretoria, South Africa*			
12.40-14.10	**Lunch** *Room: Cromdale Hall* Note: An Elsevier author workshop will be held from 13:30-14:00. All interested delegates are welcome to attend *Room: Tinto*				
14:10-16:10	**Session 3 Health, lifestyle and wellbeing**	**Session 4 Cross-cultures**	**Flash posters I**	**Workshop 3 The person in the place: Exploring the eating experience**	**Learnshop 2 Free the spirit: How to bring the foundational role of sensory into successful brand building – A case study on single malt scotch whiskies**
	Room: Pentland	*Room: Sidlaw*	*Room: Fintry*	*Room: Tinto*	*Room: Lowther*
	Session chairs: Betina Piqueras-Fisman, Wageningen University, Netherlands Riette DeKock, University of Pretoria, South Africa	**Session chairs:** Anne Goldman, ACCE International, Canada Martha Skinner, University of Nottingham, UK	**Session chair:** Pascal Schlich, INRA, France		
14:10-14:30	O3.1 **Well-being and feeling good:exploring consumers' associations across different cultures**	O4.1 **A pilot study on Chinese taste vocabulary and its comparison to European languages: Culture differences of**		J. Delwiche*[1,2], C. Simons*[3], C. Findlay*[4], *[1]Brock University, St. Catherines, Canada, [2]Tasting Science LLC,*	D. Thomson*[1,2], J. Rogerson *[2], J. Goyder[3], T. Coates*[3], C. Barnagaud*[4], V. Mialon*[5], *[1]MMR Research, Oxford, United Kingdom,*

	and product markets C. Sulmont-Rossé[1], A. Hasted[2], V. L. Almli[3], H. L. de Kock[4], J. A McEwan[5], M. Kern*[6], H. van Zyl[7], [1]AgroSup Dijon, France, [2]Qi-Statistics Penhales House, United Kingdom, [3]Nofima AS, Norway, [4]University of Pretoria, South Africa, [5]Jean A McEwan Consulting, United Kingdom, [6]Eurofins SAM Sensory and Marketing International , Germany, [7]Heineken Supply Chain, Netherlands	**sweet as an example** J. Nuessli Guth*[1], M. Runte[2], [1]ETH Zurich, Switzerland, [2]ZHAW, Switzerland		Levittown, USA, [3]Ohio State University, Columbus, USA, [4]Compusense, Toronto, Canada	[2]Annandale Distillery, Annan, United Kingdom, [3]HUXLY Global, Oxford, United Kingdom, [4]MMR Research, Oxford, United Kingdom, [5]MMR Research, New York, USA
14:30-14:50	O3.2 **Cooking a meal at home: The impact of contextual elements in culinary decision** S. Bastien*[1,2], M. Sicard[2], J. Boutaud[1], C. Hugol-Gential[1], [1]Université de Bourgogne, France, [2]Food Science SEB Group, France	O4.2 **Cross-cultural differences of oral tactile acuity, PROP sensitivity and fungiform papillae density among Chinese and Danish consumers** J. Liu*[1], C. Cattaneo [2], A. Bech[3], W. Bredie[1], [1]University of Copenhagen, Denmark, [2]University of Milan, Italy, [3]Arla Foods, Denmark			
14:50-15:10	O3.3 **Link gustatory sensitivities to consumption of hedonic food by**	O4.3 **Examining global texture and flavor preference segments**			

	fitting bi-directional psychometric functions R. Ginieis*[1], R. Keast[2], T. Perry[1], I. Oey[1], M. Peng[1], *[1]University of Otago , New Zealand, [2]Deakin University, Australia*	J. Pool*, *Pepsico, USA*		
15:10-15:30	O3.4 **Using sensory cues to optimise the satiety value of a reduced-calorie "Healthier Choice" product** K. McCrickerd*, P. Tay, C. Tang, C. Forde, *A*STAR , Singapore*	O4.4 **Harmonizing sensory programs around the world: Strategies for balancing structure and flexibility in a global environment** A. Krogmann, B. Baron, L. Stapleton, C. Dus*, K. Osdoba, *Sensory Spectrum, USA*		
15:30-15:50	O3.5 **Individual differences underlying satiation, food intake, and liking in semisolid foods** P. Varela*[1], A. Mosca[2], Q. Nguyen[1], A. Hasted[3], J. McEwan[4], I. Berget[1], *[1]Nofima, Norway, [2]Wageningen University, Netherlands, [3]QI Statistics Ltd, United Kingdom, [4]Jean A McEwan Consulting, United Kingdom*	O4.5 **Mental representation and unfamiliar food: Influence of regional culture and geographical distances** A. Bisconsin-Junior*[1,2], H. Rodrigues[1], R. Deliza[3], J. Behrens[1], L. Mariutti[1], *[1]University of Campinas, Brazil, [2]Federal Institute of Rondônia, Brazil, [3]EMBRAPA Agroindústria de Alimentos, Brazil*		
15:50-16:10	O3.6 **Food acceptance and taste sensitivity in children with**	O4.6 **A gritty story: Explaining variability in detection**		

cancer A. Olsen[1,2], I. Taarnby[1,2], K. Kok[2], C. Mølgaard[1], A. Olsen*[1], *[1]University of Copenhagen, Denmark, [2]The Nutrition Unit, Denmark*	**thresholds of microscopic particles by food properties and consumer characteristics** M. Santagiuliana*[1], I. Sampedro Marigómez[1], L. Broers[1], J. Hayes[2], B. Piqueras-Fiszman[1], E. Scholten[1], M. Stieger[1], *[1]Wageningen University & Research, Netherlands, [2]Pennsylvania State University, USA*			
16:10-18:00	**Poster session I and refreshments** *Room: Lennox Suite*			

<table>
<tr><td colspan="6" align="center">Tuesday, 30 July 2019
What does the future mean for our fundamental understanding of perception?</td></tr>
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	Session chair: Connor Delahunty, Symrise, Singapore				
08:30-09:15	**[PLN03]** **Augmented and virtual flavours** Nimesha Ranainghe, University of Maine, USA *Room: Pentland Suite*				
09:15-10:00	**[PLN04]** **From perception to motivation** Betina Piqueras-Fiszman, Wageningen University & Research, Netherlands *Room: Pentland Suite*				
10:00-10:45	**[PLN05]** **The role of the gut in the development of flavour preferences** Maria Veldhuizen, Yale University, USA *Room: Pentland Suite*				
10:45-11:25	**Refreshments** *Room: Lennox Suite*				
11:25-13:05	**Session 5** **Digital opportunities and big data**	**Session 6** **Fundamentals of perception I**	**Workshop 4** **Context in product evaluation**	**Workshop 5** **Revisiting the paired comparisons test**	**Learnshop 3** **Sensechecking – new approaches for measuring tactile acuity**
	Room: Pentland	*Room: Sidlaw*	*Room: Fintry*	*Room: Tinto*	*Room: Lowther*
	Session chairs: David Lyon, Firmenich UK Ltd, UK	**Session chairs:** Jeanine Delwiche, Tasting Science, USA			

	Thierry Worch, Qi Statistics, UK	Sara Spinelli, Universita Degli Studi Firenze, Italy			
11:25-11:45	**O5.1** **The Digital Era……how it's changed the way we don't think about things and how this has changed research!** D. Thomson*, *MMR Research Worldwide, United Kingdom*	**O6.1** **Are all thermal tasters created equal?** M. Thibodeau*[1], M. Bajec[2], A. Saliba[3,4], G. Pickering[1,5,3,6], *[1]Brock University, Canada, [2]Applied Consumer and Clinical Evaluations International, Canada, [3]Charles Sturt University, Australia, [4]Graham Centre for Agricultural Innovation, Australia, [5]Cool Climate Oenology and Viticulture Institute, Canada, [6]University of the Sunshine Coast, Australia*	H. Meiselman*[1], S. Jaeger*[2], D. Giacalone*[3], B. Piqueras-Fiszman*[4], A. Giboreau*[5], C. Hartmann*[6], D. Thomson*[7], *[1]Herb Meiselman Training and Consulting, Rockport, USA, [2]Plant and Food Research, Auckland, New Zealand, [3]University of Southern Denmark, Odense, Denmark, [4]Wageningen University, Wageningen, Netherlands, [5]Institute Paul Bocuse, Ecully, France, [6]ETH, Zurich, Switzerland, [7]MMR, Oxford, United Kingdom*	P. Courcoux*[1], S. Lê*[2], M. le tertre*[3], P. Pachot*[4], E. Mehinagic[4], J. Rogues*[4], *[1]ONIRIS, Nantes, France, [2]AGROCAMPUS OUEST, Rennes, France, [3]L'OREAL, paris, France, [4]DIANA PETFOOD, elven, France*	S. Waehrens*[1], L. Methven*[2], R. Keast*[3], R. Ford*[4], W. Bredie*[1], *[1]University of Copenhagen, Frederiksberg C, Denmark, [2]University of Reading, Reading, United Kingdom, [3]Deakin University, Burwood, Australia, [4]University of Nottingham, Nr Loughborough, United Kingdom*
11:45-12:05	**O5.2** **Fast and automated sensory analysis: Using natural language processing for descriptive lexicon development** L. Hamilton*, J. Lahne, *Virginia Polytechnic Institute and State University, USA*	**O6.2** **Greater grey matter volume and cortical thickness is associated with thermal taster phenotype** S. Eldeghaidy*[1], M. Skinner[1], T. Giesbrecht[2], A. Thomas[2], J. Hort[3], S. Francis[1], *[1]University of Nottingham, United Kingdom, [2]Unilever Research and Development, United Kingdom, [3]Massey University, New Zealand*			
12:05-12:25	O5.3	O6.3			

	Sharing a flavor experience in social media: Exploring attitudes and motivations to consume plant-based products G. Paiosin[1], C. Gómez-Corona*[2], H. NGUYEN[3], *[1]Firmenich SA, Brazil, [2]Firmenich SA, Mexico, [3]Firmenich SA, Switzerland*	**Sweet Liking Status and PROP Taster Status impact emotional response to sweetened beverage** Q. Yang*[1], M. Kraft[1], Y. Shen[1], H. Macfie[2,1], R. Ford[1], *[1]University of Nottingham, United Kingdom, [2]Hal MacFie Sensory Training Ltd, United Kingdom*		
12:25-12:45	O5.4 **Pairing flavors in social media. Why an Instagram image worth more than a thousand twitter words** A. Arellano-Covarrubias*[1], C. Gómez-Corona[2], P. Varela[3], H. Escalona-Buendía[1], *[1]Universidad Autónoma Metropolitana, Mexico, [2]XOC estudio, Mexico, [3]NOFIMA, Norway*	O6.4 **Temporal perception of basic tastes in coffee and correlation of the interaction of polyphenols with human salivary proteins and bitter taste receptors** R. Costa Lima*[1], C. Rocha[1,2], S. Soares[2], E. Brandão[2], J. Ribeiro[1,2], N. Mateus[2], V. de Freitas[2], L. Miguel Cunha[2], *[1]Sense Test Lda., Portugal, [2]University of Porto, Portugal*		
12:45-13:05	O5.5 **Straight from the mouth of people: creating a platform to deepen 'little' data and enhance big data** J. Beckley*[1], G. Whittemore[2], M. Jeltema[3], J. Vahalik[4], *[1]The Understanding & Insight Group LLC,*	O6.5 **Electrophysiological recordings from the tongue as an objective evaluation of the gustatory sensitivity** M. Melis*[1], G. Sollai[1], D. Pani[1], P. Cosseddu[1], A. Bonfiglio[1], R. Crnjar[1], B. Tepper[2], I. Tamassini Barbarossa[1],		

USA, [2]Whittemore Consulting LLC, USA, [3]M. Jeltema Consulting, USA, [4]U&I Collaboration LLC, USA	[1]Cagliari University, Italy, [2]Rutgers University, USA			

13:05-14:15	**Lunch** *Room: Cromdale Hall*

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FREE AFTERNOON

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Wednesday, 31 July 2019 What's new in terms of methodology and how are we adapting?				
Session chair: Cindy Beeren, Leatherhead Food Research, UK				
08:30-09:15	**[PLN06]** **Where are we with sensory methods and where do we go?** Gaston Ares, Universidad de la Republica Uruguay, Uruguay *Room: Pentland Suite*				
09:15-10:00	**[PLN07]** **The future is now: A call to action on the mutation of consumer research** Ludovic Depoortere, Haystack, Belgium *Room: Pentland Suite*				
10:00-10:40	**Refreshment break** *Room: Lennox Suite*				
10:40-12:40	**Session 7** **Emerging methods I**	**Session 8** **Sensometrics**	**Workshop 6** **ESN interactive workshop: Effect of context on perfume elicited emotions**	**Workshop 7** **The battle for consumer truth: how consumer and sensory research is facing disruption**	**Learnshop 4** **Re-imagining sensory quality assurance: New techniques and technologies**
	Room: Pentland	*Room: Sidlaw*	*Room: Fintry*	*Room: Tinto*	*Room: Lowther*
	Session chairs: Louise Hewson, Pepsico, UK John Hayes, Pennsylvania State University, USA	**Session chairs:** Chris Findlay, Compusense Inc, Canada Carolina Chaya, Universidad Politecnica de Madrid, Spain			
10:40-11:00	O7.1 **An innovation process fit for the modern world – rapid, consumer-centric and impactful** C. Withers*, M. Lintern, *MMR Research Worldwide, United Kingdom*	O8.1 **Meta-analysis of sensory and consumer data** B. Carr*[1,2], R. Lesniauskas[1], *[1]Carr Consulting, USA, [2]Charles Sturt University, Australia*	C. Porcherot*[1], S. Raviot-Derrien*[2], L. Dreyfuss[3], S. Deplanque[4], S. Henneberg[5], M. Niedziela[6], J. A McEwan[7], *[1]Firmenich SA, Geneva, Switzerland, [2]Coty inc., Geneva, Switzerland, [3]Mérieux NutriSciences, France, [4]University of	E. Gubisch*, D. Fenning*[1], M. Herd*[2] *[1]Leatherhead Food Research, Epsom, United Kingdom, [2]Sagentia, United Kingdom*	L. Barr*[1], B. Bell*[2], B. Bleibaum*[3,4], M. Conyer*[5], *[1]DraughtLab, LLC, Fort Collins, Colorado, USA, [2]Goose Island, USA, [3]UC Davis Division of Continuing and Professional Education, Davis, California, USA, [4]Dragonfly SCI, Inc., Santa Rosa, California, USA, [5]DraughtLab, LLC,*
11:00-11:20	O7.2 **Does automated analysis of open comments from consumers allow**	O8.2 **Investigating perception dynamics and uncertainty in**			

	us to get relevant results to understand their preference ? P. Rebenaque*, H. Ghorbel, F. Albertetti, L. Van Gysel, E. Danthe, P. Deneulin, *HES-SO University of Applied Sciences and Arts Western Switzerland, Switzerland*	temporal sensory data via independent components analysis (ICA) J. Castura*[1], D. Rutledge[2], A. Baker[3], C. Ross[3], *[1]Compusense Inc., Canada, [2]AgroParisTech, France, [3]Washington State University, USA*	*Geneva, Switzerland, [5]isi GmbH, Germany, [6]HCD Research, USA, [7]Consulting, United Kingdom*		*Rochester, New York, USA*
11:20-11:40	O7.3 **Simultaneous scoring of sensory difference and liking: Assessing the validity of a 2-D projective map method using relative scoring** M. Adjei*[1], A. Oduro[1], A. Saliba[2], B. Carr[3], J. Hardie[4], H. Heymann[5], *[1]University of Ghana, Ghana, [2]Charles Sturt University, Australia, [3]Carr Consulting, USA, [4]Ecovina, Australia, [5]University of California, USA*	O8.3 **Segmentation of the subjects in a CATA experiment while setting aside atypical subjects** F. Llobell*[1,2], V. Cariou[1], D. Giacalone[3], A. Labenne[2], E. Qannari[1], E. Vigneau[1], *[1]StatSC, ONIRIS, INRA, France, [2]Addinsoft, XLSTAT, France, [3]Universiy of Southern Denmark, Denmark*			
11:40-12:00	O7.4 **Transforming local descriptive panels to a G-local panel network** M. Lozano Dieck*[1], A.	O8.4 **Psychometric assessment and consumer segmentation with the Rasch model: Applying the Partial Credit**			

	Dyakonova[2], K. Mclean [3], S. Lowenstein[4], E. Gates[4], J. Berchotteau[5], *[1]PepsiCo , Mexico, [2]PepsiCo , Russian Federation, [3]PepsiCo, USA, [4]PepsiCo , USA, [5]PepsiCo , United Kingdom*	**Rasch model to the 12-item Food and Beverage Need for Uniqueness (FBNFU) Scale** P. Ho*[1], S. Jaeger[2], A. Cardello[3], *[1]University of Leeds, United Kingdom, [2]The New Zealand Institute for Plant and Food Research Limited, New Zealand, [3]A.V. Cardello Consulting and Editing Services, USA*			
12:00-12:20	O7.5 **Using advanced text analytics tool for deeper insights in big data - A longitudinal analysis of Pangborn presentation content from 2011 to 2017** K. Speight[1], R. Teratanavat*[1], D. Paredes[1], N. Peladeau[2], *[1]Takasago International Corporation, USA, [2]Provalis Research, Canada*	O8.5 **Characterizing consumer segmentation using machine learning** W. Russ*, J. Ennis, *The Institute for Perception, USA*			
12:20-12:40	O7.6 **Towards digitization of taste** M. Niv*,	O8.6 **"I can see clearly now": Even more effective ways to present sensory science data**			

	The Hebrew University, Israel	L. Rogers*, *Freelance Sensory Scientist, United Kingdom*			
12:40-14:10	**Lunch** *Room: Cromdale Hall* Note: The African Network for Sensory Evaluation Research (ANSWER) will hold a meeting from 13:00-14:10. All interested delegates are welcome to attend *Room: Ochil*				
14:10-16:10	**Session 9 Technology led methods**	**Session 10 Emerging methods II**	**Flash posters II**	**Workshop 8 Social media in sensory and consumer research: What do we know so far and how can we shape the future?**	**Learnshop 5 Consumer relevance of sensory measurements**
	Room: Pentland	*Room: Sidlaw*	*Room: Fintry*	*Room: Tinto*	*Room: Lowther*
	Session chairs: Ludovic Depoortere, Haystack, Belgium Lauren Rogers, Consultant, UK	**Session chairs:** Paula Varela, Nofima, Norway Anne Churchill, Givaudan, France	**Session chair:** Nathalie Martin, Nestle, Switzerland		
14:10-14:30	**O9.1** **I see what I like – using a genetic algorithm to explain eye-tracking data in a food choice task** M. Peng*, J. Cahayadi, T. Wang, *University of Otago, New Zealand*	**O10.1** **Hedonext® a review of its evolution and use in cosmetic science** N. Wantz*[1], E. Loescher[1], G. Gazano[1], J. Sieffermann[2], *[1]LVMH Recherche, France, [2]Université Paris-Saclay, France*		C. Gomez-Corona*[1], G. Ares*[2], S. Spinelli*[3], N. Veflen*[4], N. Stathopoulou*[5], *[1]Firmenich SA, Mexico City, Mexico, [2]Universidad de la Republica, Montevideo, Uruguay, [3]University of Florence, Florence, Italy, [4]BI-Norwegian Business School, Oslo, Norway, [5]Firmenich SA, United Kingdom*	B. Rousseau*[1], J. Prescott*[2,3], H. Lee*[4], C. Kasamatsu*[5], *[1]The Institute for Perception, Richmond, USA, [2]TasteMatters Research and Consulting, Sydney, Australia, [3]Università degli Studi di Firenze, Florence, Italy, [4]Ewha Womans University, Seoul, Korea, Republic of, [5]Ajinomoto Co. Inc., Kawasaki, Japan*
14:30-14:50	**O9.2** **Reliability of consumer tests conducted with 360° VR immersion; reproducibility,**	**O10.2** **Hedonext® - a case study with extra virgin olive oil** J. Guinard*[1], E. Menezes[2], E.			

	discrimination and environment impact. C. Porcherot*[1], M. Vignon-Mares[1], I. Goisbault[2], [1]*Firmenich SA, Switzerland,* [2]*Strategir, France*	Loescher[3], J. Sieffermann[4], [1]*University of California, USA,* [2]*Universidade Federal do Estado do Rio de Janeiro, Brazil,* [3]*LVMH Recherche, France,* [4]*AgroParis Tech, France*		
14:50-15:10	O9.3 **Two worlds colliding: Exploring the use of augmented reality in consumer testing** L. Hewson*, S. O'Connor, M. Cullingworth, *PepsiCo, United Kingdom*	O10.3 **How do pastry and culinary chefs design sensory complexity?** J. Palczak*[1,2], A. Giboreau[3], C. Patois[3], M. Rogeaux[1], J. Delarue[2], [1]*Danone Research, France,* [2]*Université Paris-Saclay, France,* [3]*Institut Paul Bocuse Research Center, France*		
15:10-15:30	O9.4 **Immersive sensory-booths to capture context-wise consumers' perception of desserts** O. Lefebvre[1], A. Brasset[2], B. Lunel[2], F. Abiven[2], J. Delarue*[1,3,4], [1]*AgroParisTech, France,* [2]*Repères, France,* [3]*INRA, France,* [4]*Université Paris Saclay, France*	O10.4 **Situational appropriateness as a predictor of food choice** D. Giacalone*[1], S. Jaeger[2], [1]*University of Southern Denmark, Denmark,* [2]*The New Zealand Institute for Plant & Food Research Limited, New Zealand*		
15:30-15:50	O9.5 **The impact of using virtual**	O10.5 **Humpback whale feeding calls: New**		

	reality as a context evocation method on product differentiation, participant engagement and participant behaviour M. Nijman*[1], Q. Yang[1], C. Hidrio[2], R. Ford[1], *[1]The University of Nottingham, United Kingdom, [2]Anheuser-Busch InBev, Belgium*	**sensory measures to improve individual whale identification** B. Margoshes*[1], H. MacFie[2], F. Sharpe[3], A. Szabo[3], *[1]Margoshes-Miller Consulting, USA, [2]Hal MacFie Training Services, United Kingdom, [3]Alaska Whale Foundation, USA*		
15:50-16:10	O9.6 **Being informed of technology when eating a supposedly 3D-printed waffle biscuit improves consumers' attitudes towards the 3D-printing technology in food** F. Götze*, C. Denkel, T. Brunner, *Bern University of Applied Sciences, Switzerland*	O10.6 **Scoring artifacts inherent in the traditional ANOVA analysis for the 9-point hedonic scale, reduce its power: two studies illustrate how a new and simple alternative analysis solves the problem** M. O'Mahony*[1,2], E. Cubero[3], X. Zhang[2], F. Jara-Solis[3], Y. Araya-Quesada[3], J. Halim[2], *[1]University of California, USA, [2]Davis Sensory Institute, USA, [3]University of Costa Rica, Costa Rica*		
16:10-18:00	**Poster session II and refreshments** *Room: Lennox Suite*			
19:30-00:00	**Gala dinner (Ticketed event) – National Museum Scotland**			
	Thursday, 1 August 2019			

	What are our resource challenges?				
08:30-10:30	**Session 11 Global resource challenges**	**Session 12 Fundamentals of perception II**	**Workshop 9 Big data and data-driven modeling: New ways to speed up time-to-market and improve product performance in food and sensory R&D**	**Workshop 10 Sensory priming (the hidden marketing tool)**	**Learnshop 6 Incorporating modes of thinking into your sensory and consumer studies**
	Room : Pentland	*Room : Sidlaw*	*Room: Fintry*	*Room: Tinto*	*Room: Lowther*
	Session chairs: Liisa Lahteenmaki, Aarhus University, Denmark Rosires Deliza, Embrapa Food Technology, Brazilian Agricultural Research Corporation, Brazil	**Session chairs:** Ciaran Forde, Singapore Institute for Clinical Sciences, Singapore Rebecca Ford, University of Nottingham, UK			
08:30-08:50	O11.1 **How to measure knowledge about food sustainability?** C. Hartmann*[1], G. Lazzarini[2], M. Siegrist[1], *[1]ETH Zurich, Switzerland, [2]FiBL, Switzerland*	O12.1 **"Odor Image" perception of brief puffs of key odorant mixtures from potato chips and almond milk headspace** T. Acree*[1], X. Zeng[2], K. Ding[1], X. Wang[3], Q. Tang[1], *[1]Cornell University, USA, [2]Kerry Inc., USA, [3]China Agriculture University, China*	L. Depoortere*[1], K. Vladislavleva*[2], *[1]Haystack International, Heverlee, Belgium, [2]Datastories International, Turnhout, Belgium*	A. Churchill*[1], C. Jordan[1], I. Kontaris*[1], D. Thomson[2], G. Dijksterhuis[3] *[1]Givaudan UK Ltd, United Kingdom. [2]MMR Research Worldwide, United Kingdom. [3]Wageningen University and Research, Netherlands*	D. Lundahl*[1], C. Simmons*[2], G. Stucky*[1], N. Janin*[3], C. Withers[4], C. Chaya[5], S. Kirkmeyer*[1], R. Salas*[6], M. Hannum*[2] *[1]InsightsNow, Corvallis, OR, USA, [2]Ohio State University, Columbus, OH, USA, [3]Fonterra, New Zealand, [4]MMR, United Kingdom, [5]Universidad Politécnica, Spain, [6]International Flavors & Fragrances, USA*
08:50-09:10	O11.2 **Impact of on-pack visual cues on household premeditated food waste** A. Janssen*, H.	O12.2 **In-mouth volatile production from brassica vegetables during oral processing and links to liking**			

	Bos-Brouwers, S. Schnabel, R. de Wijk, S. Tromp, *Wageningen University & Research, Netherlands*	D. Frank*, U. Piyasiri, N. Archer, J. Heffernan, A. Poelman, *CSIRO, Australia*			
09:10-09:30	O11.3 **Sustainable well-tasting meat products – substituting meat with texturized vegetable protein** U. Kehlet, L. Hofer, T. Hansen, M. Aaslyng*, *Danish Technological Institute, Denmark*	O12.3 **Exploring oral tactile sensitivity** B. Miles, S. Ricci, K. Berkowitz, M. Whitecotton, K. Van Simaeys, S. Ang, C. Simons*, *The Ohio State University, USA*			
09:30-09:50	O11.4 **Sustainable Hops: Sensory characterisation of flavour preparations for brewing** C. Dietz*[1], D. Cook[1], R. Marriott[2], C. Wilson[2], R. Ford[1], *[1]University of Nottingham, United Kingdom, [2]Totally Natural Solutions Ltd, United Kingdom*	O12.4 **Application of ultrasound for comprehending the texture perceptions resulting from the mechanical breakdown of food on the tongue surface** R. Srivastava*, M. Mantelet, A. Saint-Eve, I. Souchon, V. Mathieu, *INRA-AgroParisTech-Université Paris Saclay, France*			
09:50-10:10	O11.5 **Turning icky stuff into delicious food -Creating sustainable future food with the help of sensory science and influencer co-**	O12.5 **The application of perceptual load theory to eating behaviour: A framework for overeating** J. Morris*, S. Forster, M.			

	creation L. Forsman*, S. Lundén, A. Hopia, M. Sandell, *University of Turku, Finland*	Yeomans, *University of Sussex, United Kingdom*			
10:10-10:30	O11.6 **Re-wiring sensory & consumer science education - thoughts and discussion on educational and training needs for our next generation** R. Bleibaum*[1,2,3], J. Beckley[4,5,3], *[1]UC Davis Continuing and Professional Education, USA, [2]Dragonfly SCI, Inc., USA, [3]UC Davis Food Science & Technology Leadership Board, USA, [4]UC Davis, School of Agriculture and Environmental Sciences Advisory Council, USA, [5]The Understanding & Insight Group LLC, USA*	O12.6 **Implicit and physiological methods to study the influence of personality traits on emotional responses to tastes** A. De Toffoli*, S. Spinelli, C. Dinnella, L. Pierguidi, H. Agovi, E. Mani, E. Monteleone, *University of Florence, Italy*			
10:30-11:10	**Refreshment break** *Room: Lennox Suite*				
	Session Chair: John Prescot, TasteMatters Research & Consulting, Australia				
11.10-11.35	**Food Quality and Preference awards** Presentation by the award winner *Room: Pentland Suite*				
	Session chair: Joanne Hort, Massey University, New Zealand				
11:35-12:20	**[PLN08]** **Move over Big data; the rise of useful data** Trevor Davis, Trevor Davis & Associates Ltd, UK				

	Room: Pentland Suite
12:20-13:05	**[K03]** **Sensory challenges in the final frontier – Developing space exploration food systems** Grace Douglas, NASA, USA *Room: Pentland Suite*
13:05-13:15	**Closing remarks/Announcement of 2021 Meeting** *Room: Pentland Suite*
13:15	**End of conference**