BioIron 2023 – Draft Program

Time	Presentation title	Presenter
SUNDAY AUGUST 27		
8.00am-8.30am	**Arrival and registration**	
8.30am-4.00pm	**Introductory Course**	
8.30am-10.30am	***Introductory Course - Session 1 – Basic Principles***	
8.30am-9.00am	The biochemistry of iron in cells	Caroline Philpott
9.00am-9.30am	Intestinal iron absorption	Jamie Collins
9.30am-10.00am	Regulation of cellular iron homeostasis	Esthi Meyron-Holtz
10.00am-10.30am	Mechanisms of systemic iron homeostasis	Martina Muckenthaler
10.30am-11.00am	***Coffee break***	
11.00am-1.00pm	***Introductory Course - Session 2 - Iron insufficiency and iron excess***	
11.00am-11.30am	Nutritional anaemia and its global impact	Sant-Rayn Pasricha
11.30am-12.00noon	Diagnosis and management of haemochromatosis	Edouard Bardou-Jacquet
12.00noon-12.30pm	Iron loading anaemias	Laura Silvestri
12.30pm-1.00pm	Diagnosing and treating iron disorders	Yelena Ginzburg
1.00pm-2.00pm	***Lunch***	
2.00pm-4.00pm	***Introductory Course - Session 3 – Iron and Disease***	
2.00pm-2.30pm	Iron and chronic liver disease	Darrell Crawford
2.30pm-3.00pm	Iron and neurodegeneration	Scott Ayton
3.00pm-3.30pm	Iron, ferroptosis and cancer	Shinya Toyokuni
3.30pm-4.00pm	Iron and infection/COVID	Hal Drakesmith
4.00pm-4.30pm	***Coffee break and registration***	
4.30pm-5.00pm	**Opening and welcome ceremony**	

5.00pm-6.00pm	**Keynote Lecture I: Lawrie Powell Oration**	
5.00pm-6.00pm	TBA	Paul Adams
6.00pm-6.30pm	***Board buses for welcome reception***	
6.30pm-9.30pm	**Welcome Reception**	
MONDAY AUGUST 28		
8.00am-9.00am	**Meet the Experts I – Ferroptosis for beginners**	
9.00am-10.30am	**Plenary Session I: New discoveries, novel targets and therapies**	
9.00am-9.30am	*Plenary Lecture I – Title TBA*	Rafael Rodriguez
9.30am-9.45am	Iron excess exacerbates and pharmacological iron restriction improves the pathophysiology of transfusion independent myelodysplastic syndromes	Francesca Vinchi
9.45am-10.00am	Germline Transferrin Receptor 2 deletion improves the bone phenotype in a murine model of chronic kidney disease	Antonella Nai
10.00am-10.15am	Identification of a new regulator of hepcidin and iron metabolism during the recovery from hemorrhage-induced anemia	Leon Kautz
10.15am-10.30am	BMP5 contributes to hepcidin regulation and systemic iron homeostasis	Xia Xiao
10.30am-11.00am	***Coffee break***	
11.00am-12.00noon	**Keynote Lecture II**	
11.00am-12.00noon	Ferroptosis: From basic mechanisms to therapeutic opportunities	Marcus Conrad
1.00pm-2.00pm	***Lunch***	
1.00pm-2.30pm	**Concurrent Session I: Structure/function of iron proteins**	
1.00pm-1.15pm	Osteoblast-selective Erfe deletion confirms cell-autonomous role of ERFE in the bone loss phenotype of global Erfe knockout mice	Yelena Ginzburg
1.15pm-1.30pm	PPP1R1B is a new Iron Regulatory Protein target mRNA that controls cellular iron homeostasis	Mayka Sanchez Fernandez
1.30pm-1.45pm	Nuclear Iron Regulatory Protein 1: Where to go from here?	Kirst King-jones
1.45pm-2.00pm	FKBP12 partners in BMP-SMAD pathway and hepcidin modulation	Laura Silvestri
2.00pm-2.15pm	H-Ferritin is an inflammatory signalling molecule in liver disease	Michael Pearen
2.15pm-2.30pm	IRP1 deficiency triggers metabolic reprograming, increases insulin sensitivity and protects mice against high -fat diet-induced hyperglycemia	Kostas Pantopoulos
1.00pm-2.30pm	**Concurrent Session II: Iron in global health and infection**	

1.00pm-1.15pm	What is the best way to take oral iron supplements?	Nicole Stoffel
1.15pm-1.30pm	Cell-autonomous osteoclast iron deficiency causes osteopenia	Tiago Carvalho Oliveira
1.30pm-1.45pm	Molecular mechanisms of hypophosphatemia after intravenous iron therapy	Sonja Astrid Wagner
1.45pm-2.00pm	Iron deficiency reduces risk of Plasmodium parasitaemia: clinical, pre-clinical and in vitro evidence	Danielle Clucas
2.00pm-2.15pm	Impaired iron homeostasis can modulate the course of uropathogenic E. coli (UPEC)- induced epididymo-orchitis in different directions.	Esther Meyron-Holtz
2.15pm-2.30pm	Impact of iron-folic acid on neonatal mortality risk of different types of vulnerable newborns in rural Bangladesh: the Shonjibon Trial	Michael Dibley
2.30pm-3.00pm	***Coffee break***	
3.00pm-4.30pm	**Concurrent Session III: Iron and heme transport and regulation**	
3.00pm-3.15pm	Apo- and holo-Tf differentially interact with hephaestin and ferroportin to regulate cellular iron release	Stephanie Baringer
3.15pm-3.30pm	Hepatic neogenin induction of hepcidin expression requires not only its hemojuvelin-binding domain but also all other domains of neogenin	An-sheng Zhang
3.30pm-3.45pm	PCBP1 and BolA2 in the nucleus: Fe-S trafficking meets genome maintenance	Caroline Philpott
3.45pm-4.00pm	Structural basis for ferritin-NCOA4 interactions	Gabriel Frank
4.00pm-4.15pm	Ablation of Na+/H+ exchanger-3 prevents tissue iron loading in the Hfe mouse model of hereditary hemochromatosis	Bryan Mackenzie
4.15pm-4.30pm	HIV-1 replication in humanized mice is inhibited by phenyl-1-pyridin-2yl-ethanone-based iron chelator PPYeT by modulating restriction factors	Namita Kumari
3.00pm-4.30pm	**Concurrent Session IV: Iron and the CNS**	
3.00pm-3.15pm	Hemochromatosis-related parkinsonism in an Hfe-/- xTfr2mut mouse model with brain iron elevation that increases with age	Dan Johnstone
3.15pm-3.30pm	Significant change in biometal distribution in brains of Alzheimer´s Disease (TGSWDI) mice	Torben Moos
3.30pm-3.45pm	Neurodegeneration in aceruloplasminemia and carriers of heterozygous ceruloplasmin variants: Brain atrophy or iron toxicity?	Marlene Panzer
3.45pm-4.00pm	Complex mechanistic relationships of brain iron homeostasis, iron-rich ‘ferriglia’ and hemochromatosis with Alzheimer’s amyloidosis and cerebrovascular amyloid angiopathy.	Liz Milward
4.00pm-4.15pm	H-ferritin and Tf-bound iron transport to the brain are selectively altered by age and sex during diet-induced iron deficiency	Kondaiah Palsa
4.15pm-4.30pm	Increased levels of soluble Aβ peptide species in a model of Alzheimer’s amyloidosis with hemochromatosis-related brain iron elevation	Qiao-Xin Li
4.30pm-6.30pm	**Poster Walk I**	
TUESDAY AUGUST 29		

8.00am-9.30am	**Plenary Session II: Ferroptosis**	
8.00am-8.30am	*Plenary Lecture II - Ferroptosis targeting in disease*	***Tom Vanden Berghe***
8.30am-8.45am	Inhibition of PKA/CREB1 pathway confers sensitivity to ferroptosis in non-small cell lung cancer	Guangyao Shan
8.45am-9.00am	Catastrophic cell death in mice lacking PCBP1 and PCBP2 in intestinal epithelium	Caroline Philpott
9.00am-9.15am	Ferroptosis promotes T cell activation-induced neurodegeneration in multiple sclerosis	Peng Lei
9.15am-9.30am	Ferroptosis in heart disease	Junxia Min
9.30am-10.00am	***Coffee break***	
10.00am-11.30am	**Plenary Session III: Iron, immunity and infection**	
10.00am-10.30am	*Plenary Lecture III – Title TBA*	***Sarah Atkinson***
10.30am-10.45am	Iron control of regulatory T cells in steady state and diseases	Qian Wu
10.45am-11.00am	Hepatocyte Toll-like receptors mediate the hepcidin inflammatory response to pathogens and pathogen-derived ligands	Oriana Marques
11.00am-11.15am	Iron Regulatory Protein 1 plays a key role in the propagation of inflammation	Esther Meyron-Holtz
11.15am-11.30am	Differential effects of monoferric transferrins on the murine response to inflammation	Nermi Parrow
11.30am-12.00noon	***Board buses for conference excursion***	
12.00noon-6.00pm	**Conference excursion** (included in registration); Jumping crocodiles and Pudakul Indigenous culture tour. Free afternoon if you wish.	
WEDNESDAY AUGUST 30		
7.30am-8.30am	**Meet the Experts II - The future of iron research – unanswered questions and new directions**	
8.30am-10.00am	**Plenary Session IV: Pathogenic consequences of iron**	
8.30am-9.00am	*Plenary Lecture IV – The role of iron in cardiovascular disease*	***Hossein Ardehali***
9.00am-9.15am	The 3D Trial: Deferiprone to delay dementia	Scott Ayton
9.15am-9.30am	Conservative iron chelation for treating focal siderosis: from experimental models to clinical trials	Ioav Cabantchik
9.30am-9.45am	An innovative non-hormonal strategy targeting iron to down-regulate estrogen-, progesterone-, androgen- and prolactin-receptors in breast cancer	Zaklina Kovacevic
9.45am-10.00am	Dopamine regulation by the iron-storage protein ferritin	Gawain McColl
10.00am-10.30am	***Coffee break***	
10.30am-12.00noon	**Concurrent Session V: Ferroptosis**	
10.30am-10.45am	Inhibition of Sat1-mediated ferroptosis alleviates cell death of retinal ganglion cells in diabetic retinopathy	Ying Ying
10.45am-11.00am	Significance of ferroptosis susceptibility and resistance in various neoplastic contexts	Shinya Toyokuni

11.00am-11.15am	Ferroptosis-mitigating Glutathione peroxidase 4 (GPX4) is indispensable for the homeostasis and function of T cell dependent antibody response	Naiqi Wang
11.15am-11.30noon	Cinnamaldehyde ameliorates intracerebral hemorrhage induced brain injury by inhibiting ferroptosis and hematoma clearance	Maryam Mazhar
11.30am-11.45noon	Full-length Amyloid Precursor Protein desensitises ferroptosis	Mohammed Jakaria
11.45am-12.00noon	Ferroptosis causes pancreatic failure in a mouse model of hemochromatosis type 4 (FPNC326S)	Marlene Le Tertre
10.30am-12.00noon	**Concurrent Session VI: Iron loading anaemias**	
10.30am-10.45am	Iron chelation improves ineffective erythropoiesis and iron overload in a mouse model of myelodysplastic syndrome	Yelena Ginzberg
10.45am-11.00am	The molecular pathophysiology of ineffective erythropoiesis at single cell resolution	Raymond Doty
11.00am-11.15am	Bone marrow sinusoidal endothelial cells show Fgf23 upregulation in murine Beta-Thalassemia and in response to direct administration of EPO	Karin Finberg
11.15am-11.30noon	Monoferric forms of transferrin show differences on parameters of ineffective erythropoiesis in Hbbth3/+ mice but not in conditional TFR2KO mice	Amaliris Guerra
11.30am-11.45noon	Dysregulation of placental and fetal iron homeostasis in a mouse model of β-Thalassemia pregnancy (HbbTh3/+ mice)	Jamie Collins
11.45am-12.00noon	Long-term P-selectin deficiency increases iron overload, enhances anemia and attenuates liver extra-medullary hematopoiesis in sickle cell disease mice	Rafal Pawlinski
12.00pm-1.00pm	***Lunch***	
1.00pm-2.00pm	**IBIS Business meeting**	
2.00pm-3.30pm	**Concurrent Session VII: Cellular iron homeostasis**	
2.00pm-2.15pm	FADS1 is a potential connector of iron homeostasis with glucose metabolism	Heinrich Lob
2.15pm-2.30pm	Hemojuvelin mediated hepcidin induction requires both bone morphogenetic protein type I receptors ALK2 and ALK3	Andrea Steinbicker
2.30pm-2.45pm	Iron chaperones PCBP1 and PCBP2 in macrophages control intracellular and systemic iron distribution	Olga Protchenko
2.45pm-3.00pm	Heme biosynthesis and iron-sulfur cluster biogenesis: two main iron utilization pathways with multiple points of intersection and co-dependence	Nunziata Maio
3.00pm-3.15pm	NRF2-independent iron-triggered signaling via p38-ETS1 regulates LSEC Bmp6 mRNA expression	Kararzyna Mleczko-Sanecka
3.15pm-3.30pm	Super-paramagnetic iron oxide nanoparticles reprogram the tumor microenvironment and reduce lung cancer growth	Martina Muckenthaler
2.00pm-3.30pm	**Concurrent Session VIII: Iron deficiency and nutrition**	
2.00pm-2.15pm	Iron bioavailability from foods fortified with wheat aleurone	Paul Sharp
2.15pm-2.30pm	Dietary iron intake benefits to intestinal goblet cell function and alleviates Salmonella Typhimurium invasion in mice	Shuan Liu
2.30pm-2.45pm	Cord blood anemia – a consequence of decreased expression of genes involved in iron uptake and transfer in the placenta?	Nikhitha John
2.45pm-3.00pm	Role of transferrin in the regulation of iron homeostasis in pregnancy	Rob Fleming

3.00pm-3.15pm	Nutritional iron deficiency elicits profound rewiring of phagocytic and metabolic functions of red pulp macrophages	Pratik Kumar Mandal
3.15pm-3.30pm	Iron deficiency in augmenting HIFs and thromboses in disorders of hypoxia sensing and polycythemia vera. Is Phlebotomy a safe therapy?	Josef Prchal
3.30pm-5.30pm	**Poster Walk II**	
6.30pm-11.00pm	**Conference Dinner**	
THURSDAY AUGUST 31		
8.30am-10.00am	**Plenary Session V: Iron homeostasis**	
8.30am-9.00am	*Plenary Lecture V - How systemic and cell iron status affects macrophage plasticity in health and disease*	***Francesca Vinchi***
9.00am-9.15am	Characterization of the erythroferrone structural domains relevant for its iron-regulatory function	Tom Ganz
9.15am-9.30am	Mitochondrial iron deficiency triggers neurodegeneration process in CoA defective cellular models	Sonia Levi
9.30am-9.45am	Iron chaperones PCBP1 and PCBP2 are independent and overlapping in essential liver function	Olga Protchenko
9.45am-10.00am	The role of hemoglobin H on erythropoiesis and iron metabolism and novel therapies for alpha-thalassemia	Stefano Rivella
10.00am-10.30am	***Coffee break***	
10.30am-12.00noon	**Concurrent Session IX: Iron, tissue injury and cancer**	
10.30am-10.45am	Hepcidin and iron status are altered following ST-elevation myocardial infarction (STEMI)	Samira Lakhal-Littleton
10.45am-11.00am	NCOA4-mediated ferritinophagy is a pancreatic cancer dependency via maintenance of iron bioavailability for iron–sulfur cluster proteins	Joseph Mancias
11.00am-11.15am	Employing dual nature of iron to combat cancer via mitochondrial targeting of Deferasirox	Jaroslav Truksa
11.15am-11.30noon	Iron aggravates pulmonary hypertension in a mouse model of hereditary hemochromatosis type 4	Sandro Altamura
11.30am-11.45noon	Ferroportin depletes iron needed for cell cycle progression in head and neck squamous cell carcinoma	Ross Belvin
11.45am-12.00noon	Lipidomic analysis of iron-loaded steatotic mice suggests differential modulation of peroxisomal lipid metabolism	Ross Graham
10.30am-12.00noon	**Concurrent Session X: New discoveries, novel targets and therapies**	
10.30am-10.45am	Iron drives anabolic metabolism through active histone demethylation and mTORC1	Hossein Ardehali
10.45am-11.00am	Endothelin-1 via ETA receptor activation promotes renal iron deposition in acute and chronic iron overload murine models	Malgorzata Kasztan
11.00am-11.15am	Liver sinusoidal endothelial cells (LSECs) constitute a major route for hemoglobin clearance	Katarzyna Mleczko-Sanecka
11.15am-11.30noon	Targeting conditioning-elicited non-transferrin-bound iron by TMPRSS6 silencing improves bone marrow transplant outcome	Francesca Vinchi
11.30am-11.45noon	A combined reduction of mitochondrial elevated labile iron and ROS affords restoration of functions affected by NAF-1-suppression in pancreatic cells	Ioav Cabantchik
11.45am-12.00noon	A systems genetics resource for iron overload and pathology	Jie Zhou

12.00pm-1.00pm	***Lunch***	
1.00pm-2.30pm	**Concurrent Session XI: Haemochromatosis**	
1.00pm-1.15pm	Clinical Characteristics of HFE C282Y/H63D compound heterozygotes identified in a specialty practice: Key differences from HFE C282Y homozygotes	Mukul Singal
1.15pm-1.30pm	Extrahepatic iron loading and disease complications in HFE haemochromatosis	John Olynyk
1.30pm-1.45pm	Predicting hepatocellular carcinoma risk in patients with HFE hemochromatosis and severe fibrosis at diagnosis	Edouard Bardou-Jacquet
1.45pm-2.00pm	Relationships of serum hepcidin and erythroferrone to serum ferritin concentration in HEIRS study p.C282Y homozygotes and control subjects	Gordon McLaren
2.00pm-2.15pm	The novel classification of Hemochromatosis one year after	Domenico Girelli
2.15pm-2.30pm	Haemochromatosis HFE genotypes and clinical penetrance to disease: lessons from the UK Biobank	Janice Atkins
1.00pm-2.30pm	**Concurrent Session XII: Systemic iron homeostasis**	
1.00pm-1.15pm	A role for erythroferrone in the gastro-intestinal tract?	Leon Kautz
1.15pm-1.30pm	Ferroportin participates in liver endothelial cell iron sensing by regulating intracellular iron content and BMP6 expression	Allison Fisher
1.30pm-1.45pm	Single-cell transcriptomics reveals hepatic iron overload causes lean non-alcoholic fatty liver disease by suppressing PPARa signaling pathway	Zewen Sun
1.45pm-2.00pm	Monoferric transferrins differentially influence the relationship between BMP6 and hepcidin expression in mice	Nermi Parrow
2.00pm-2.15pm	Tmprss6 siRNA treatment in mice stops hepcidin reduction across pregnancy	Katherine Fielding
2.15pm-2.30pm	Expected and unexpected roles that Transferrin Receptor 2 domains play in iron homeostasis in mice	Caroline Enns
2.30pm-3.00pm	***Coffee break***	
3.00pm-4.00pm	**Meet the Experts Session III - Haemochromatosis**	
3.00pm-4.00pm	**Concurrent Session XIII – Late-breaking Abstracts**	
3.00pm-3.15pm	Hemochromatosis and colon cancer: Repurposing of a drug to induce ferroptosis as a novel therapy	Vadivel Ganapathy
3.15pm-3.30pm	African-specific genetic loci determine iron status in African children	John Muriuki
3.30pm-3.45pm	Hepcidin and erythroferrone levels across human pregnancy, and the effect of IV iron infusion – A REVAMP substudy	Katherine Fielding
3.45pm-4.00pm	Inflammation-driven NFκB signaling represses the iron exporter Ferroportin via HDAC3	Oriana Marques
4.00pm-5.00pm	**Keynote Lecture III: Incoming President's Address and Closing remarks**	
4.00pm-5.00pm	Hepcidin: a 20-year journey from discovery to therapy	Elizabeta Nemeth