CURRICULUM VITAE

David Gordon Trist

Via N. Sauro, 24, 37047, San Bonifacio (VR), Italy

Telephone - Home: +39 045 6102940 Mobile: +39 348 1901598

Marital Status:	Married with two children
Nationality:	United Kingdom
Education:	1958-1966 - Haberdashers Askes Hatcham Boys' School, Pepys Road, New Cross, London, UK. 1966-1972 – Graduate Institute of Biology in Biochemistry, Bromley College, Rookery Lane, Bromley, Kent, UK. 1974-1978 - PhD in Pharmacology, Department of Pharmacology, University College London, UK.
Professional Bodies and Scientific Societies:	Fellow of the Royal Society of Biology. Fellow of the British Pharmacological Society. Member of the Society for Medicines Research. Member of the American Association of Science.

Summary

David Trist retired in December 2008 as Vice President and Head of Strategy and Operations for the Psychiatry Centre of Excellence for Drug Discovery (*ψCEDD*) within GlaxoSmithKline (GSK). He is presently Co-editor in Chief of Current Opinion in Pharmacology (COPHAR) and occasionally consults in the area of Analytical Pharmacology.

David holds a first degree in Biochemistry (Institute of Biology) and a PhD in Pharmacology from University College London. He worked for some years in Wellcome with Sir James Black on targets in the Central Nervous System (CNS) and Cardiovascular System, before moving to Glaxo, Verona, as Director of Pharmacology, managing some 70 scientists. During his leadership, pharmacology in Verona became totally orientated towards finding medicines for CNS diseases, including stroke, pain, depression, anxiety and drug dependence. After the merger to create Glaxo Wellcome, David took on the wider international role of Disease Strategy Director for Psychiatric Diseases, whilst maintaining a responsibility for improving the process of drug discovery in Verona.

David has published scientific papers (both preclinical and clinical) and abstracts mainly in the areas of neuroscience, cardiovascular and bladder particularly in analytical pharmacology, with emphasis on the classification of drug receptors. This latter has mainly been focused on Histamine, Cholycystokinin (CCK), Glutamatergic, Neuropeptide Y, and Neurokinin 1 receptors.

He has a strong interest in studying the process of drug discovery, particularly in analysing and modelling its productivity.

Occupational History

CURRENT OPINION IN PHARMACOLOGY (ELSEVIER, 2014 TO PRESENT)

I am presently Co-editor in chief for the international journal Current Opinion in Pharmacology.

CONSULTANT (2009 TO 2013)

I have consulted, from time to time, in the areas of Analytical Pharmacology and on the Process of Drug Discovery as applied to discovering and progressing potential medicines for treating diseases of the CNS.

GLAXOSMITHKLINE (2001 TO 2008) - Vice-President, Head of Strategy and Operations, Psychiatry CEDD

In GlaxoSmithKline I was accountable for portfolio strategy for the Psychiatry Centre of Excellence for Drug Discovery (CEDD). This included the strategic direction of the diseases within the portfolio (Unipolar Depression, Anxiety, schizophrenia, Bipolar Disorder, Drug Dependency, Sleep Disorders, Compulsive Eating from target identification through to clinical proof of concept (POC). I was accountable to produce and maintain the Psychiatry CEDD Business Plan. As a member of the psychiatry CEDD Leadership Team, I was jointly responsible for the running of the Psychiatry CEDD (some 260 scientists based on 5 international sites), both organizationally and scientifically. This resulted in a significant number of candidate selections, First Time in Human administrations of new potential medicines and subsequent initiation of clinical Phase II trials.

In addition to my strategic role, I was responsible for organizational and operational issues. Thus, I was Chairman of the Italy R&D Sites integration committee that managed the merger of the GW and SB R&D sites in Italy, I was responsible for interacting with business development functions to evaluate in-licensing opportunities. I also monitored organizational efficiency, proposing process improvement within the Psychiatry CEDD by analyzing the status quo of Discovery, by modeling and proposing possible enhancements.

GLAXOWELLCOME VERONA (1995 TO 2001) – Director of Pharmacology, Disease Strategy Director and Director Discovery Operations and Strategy

As Director of Pharmacology in GW (until 1998) I was responsible for ~70 staff within the Pharmacology Directorate providing pharmacological resources and expertise to research projects involved in CNS diseases and to supporting a calcium antagonist (lacidipine) in the local Italian market. I reorganized the Pharmacology Directorate to be more flexible and resource efficient by widening the professionalism through recruitment of key scientists and by setting up large groups based around key technologies. In particular, I reinforced research in areas such as mood disorders, drug dependency and stroke. During this period I consolidated target identification around neuropeptide receptors (e.g. neurokinins, neuropeptide Y, corticotrophin releasing factor) and excitatory aminoacids (e.g. NMDA and metabotropic receptors).

As Disease Strategy Director (from 1998 until 2001) I consolidated psychiatric research in GW Verona. I encouraged academic and commercial collaborations around specific mechanisms (e,g Neurocrine and CRF). I worked closely with GW clinical and GW commercial to propose clear potential product profiles within the different diseases. I developed Objective Tracking methodology and used it to monitor progress against Research and Discovery objectives as well as modeling resource utilization per phase.

I organized two IUPHAR sponsored meetings on Receptor Classification as well as co-chairing the IUPHAR Nomenclature Committee for calcium channel antagonists.

As Director Discovery Operations and Strategy (1998 until 2001) I set in place a group that was orientated towards process improvement by applying analytical tools (e.g. pipeline analysis, critical path analysis, resource tracking, disease opportunity analysis) to the Verona pipeline productivity. As the result of these analyses from time to time strategic direction and process were modified.

Prior to 1995, I served as Director of Pharmacology in Glaxo Verona Italy and Section Head in Biochemistry in Wellcome UK

Director of Pharmacology Glaxo Verona Italy

As Director of Pharmacology I was responsible for a department of between 40-45 people. Initially, the directorate provided resource and expertise in the CNS, Bladder disorders and cardiovascular therapeutic areas. Later I managed the change from a department mainly focused on cardiovascular and bladder disorders to one orientated towards the CNS.
Research was mainly concentrated on excitatory amino acid receptors (ionotropic and metabotropic), CCK receptors, NPY receptors and Neurokinin receptors. Under my leadership Pharmacology contributed to the candidature to exploratory development of molecules for stroke, anxiety, sleep and chronic pain.
I oversaw the Introduction of molecular biology, cell-based human receptor assays, and robotic screening into Verona Pharmacology. I raised the international recognition of Verona pharmacology by pursuing an active publications and congress participation policy.
I started and initially led the Drug Dependency project and I helped define the definition of craving at the joint UN/WHO meeting on The Craving Mechanism (Vienna, 1992).
I was an Organiser and Chairman of a mini-symposium entitled 'CCK/Gastrin Receptors: Receptor Characterisation & Drug Targets.' British Pharmacological Society Meeting, Brighton, 13th December 1994.

Section Head in Biochemistry in Wellcome UK

I was responsible for ~20 staff studying the classification of prostaglandin receptors in human platelets, the role of 5-HT receptors in the guinea-pig hippocampus, the classification of dopamine receptors in rat brain (particularly in the limbic areas), the development of specific inhibitors of 5-Lipoxygenase from leucocytes and into the feasibility of protein kinase C modification as a target for drug development. During this time I worked closely with Sir James Black (Nobel Laureate in Physiology or Medicine 1988) exploring the potential to use homogenized membrane systems for classifying histamine and adrenergic receptors. I contributed to the discovery of BW A868C, a selective, potent, PGD2 antagonist.

Scientific Interests

My main scientific interests have been / are as follows:

- Lipid biochemistry in response to the administration of potential antidepressant drugs
- Interaction of pharmacological agents with the cyclic adenosine mono-phosphate system, particularly with adenylate cyclase and c-AMP phosphodiesterase
- The classification of histamine, prostaglandin, excitatory amino acid and neuropeptide receptors
- The classification and mode of action of calcium channel antagonists, particularly in relation to lacidipine, a long acting dihydropyridine, L-type channel antagonist

- The mathematical modeling of non-competitive antagonism, allosteric modulation and co-agonism as applied to neuropeptide and NMDA glutamate receptors
- Drug dependence and depression as targets for drug discovery
- Scientific method as applied to the drug discovery process

Some Selected Publications

Clinical pharmacology in neuroscience drug discovery: quo vadis.
DG Trist, A Cohen, A Bye.
Current Opinion in Pharmacology, (2014), ***14****, 50-53.*

Why receptor reserve matters for neurokinin1 (NK1) receptor antagonists.
David G. Trist, Emiliangelo Ratti, Alan Bye.
J Recept Signal Transduct Res, (2013), ***33****, 333-337.*

Full central NK1 receptor blockade is required for efficacy in depression: Evidence from orvepitant clinical studies. Ratti E, Bettica P, Alexander R, Archer G, Carpenter D, Evoniuk G, Gomeni R, Lawson E, Lopez M, Millns H, Rabiner EA, Trist D, Trower M, Zamuner S, Krishnan R, Fava M.
J. Psychopharmacol. (2013), ***27****, 424-434.*

Does Pharmacology Matter?
David G Trist
Pharmacology Matters (2012) ***5****, 5-6*

Results from Two Double-Blind, Placebo-Controlled Studies of the Novel NK1 Receptor Antagonist Casopitant in Patients with Major Depressive Disorder.
Ratti E, Bellew K, Bettica P, Bryson H, Zamuner S, Archer G, Squassante L, Bye A, Trist D, Krishnan KR, Fernandes S.
J. Clin. Psychopharmacol. (2011), ***31****, 727-733.*

Scientific process, pharmacology and drug discovery
David G Trist
Current Opinion in Pharmacology (2011), ***11****, 528–533*

A Selective Neurokinin-1 Receptor Antagonist in Chronic PTSD: a Randomized, Double-Blind, Placebo-Controlled, Proof-of-Concept Trial
Sanjay J. Mathew, Meena Vythilingam, James W. Murrough, Carlos A. Zarate, Jr, Adriana Feder, David A. Luckenbaugh, Gang Wu, Becky Kinkead, Michael K. Parides, David G. Trist, Massimo S. Bani, Paolo U. Bettica, Emiliangelo M. Ratti, Dennis S. Charney
*European Journal of Neuropsychopharmacology, (2011)****, 21****, 221-229*

Differential Effects of the CRF-R1 Antagonist GSK876008 on Fear-Potentiated, Light- and CRF-Enhanced Startle Suggest Preferential Involvement in Sustained vs Phasic Threat Responses
David Walker, Yong Yang, Emiliangelo Ratti, Mauro Corsi, David Trist and Michael Davis
Neuropsychopharmacology, (2009), ***34***, 1533–1542

Anxiolytic-like effects of the neurokinin 1 receptor antagonist GR-205171 in the elevated plus maze and contextual fear-potentiated startle model of anxiety in gerbils
Scott A. Heldt, Michael Davis, Emiliangelo Ratti, Mauro Corsi, David Trist and Kerry J. Ressler
Behavioural Pharmacology, (2009), ***20***, 584–595

The apparent declining efficiency of drug discovery
D.Trist, E. Ratti, L Da Ros
Comprehensive Medicinal Chemistry II, Volume 1 (2007), (Ed. P.D. Kennewell), 615-623

Continuing evolution of the drug discovery process in the pharmaceutical industry.
E. Ratti and D.G. Trist
Pure Appl. Chem. (2001), ***73****, 67-75*

Co-agonism in drug-receptor interaction: illustrated by the NMDA receptors
M. Corsi, P. Fina and D.G. Trist
Trends in Pharmacological Sciences, (1996), ***17****, 220-222.*

Resultant action of cimetidine in a cardiac adenylate cyclase assay : its elucidation by concentration-ratios analysis.
D.G. Trist, P. Leff, Sir James Black, V.P. Gerskowitch & N. P. Shankley.
J. Pharmacol. Exp. Ther. (1987), 243, 1043-1047.