

## Curriculum Vitae

### Personal data

Name	Amit Saxena
Date of Birth	20-12-1976
Sex	Male
Marital Status	Single
Father's Name	Daya Sharan Saxena
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Institute address	Institute of Clinical Pharmacology and Toxicology Charité            Universitätsmedizin            Berlin Campus Benjamin Franklin Hindenburgdamm 30 12203 Berlin Phone 8445-2288 Fax 8445-4482 Email: <a href="mailto:amit.saxena@charite.de">amit.saxena@charite.de</a>
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### **School education**

- 1986-1992 **Carmel Convent School, Sector 7/D, Faridabad (Haryana) India**, (Primary and Secondary School Education).
- 10/08/1992 Secondary School Certificate (*75.2% aggregate, **First division***).
- 1992-1994 **Dayanand Aryurvedic Vedic Public School, Sector 14, Faridabad (Haryana) India**, (Senior Secondary School).
- 27/05/1994 Senior School Certificate (*82% aggregate, Phy, Chem, Bio, **First division***).

### **University studies**

- 1995-1999 **Maharshi Dayanand University, Rohtak, (Haryana) India**  
Four years bachelors program: B-Pharmacy.
- 1<sup>st</sup> year: Pharmaceutics I (theory and practicals), Pharmaceutics II (theory and practicals), Pharmaceutical Chemistry (theory and practicals), Pharmaceutical Chemistry II (theory and practicals), Pharmacognosy I (theory and practicals), Pharmacology I (theory and practicals), Pharmaceutical Mathematics (theory).
- 2<sup>nd</sup> year: Pharmaceutical Engineering (theory and practicals), Engineering Drawing (theory), Pharmaceutical Analysis (theory and practicals), Pharmacognosy (theory and practicals), Computer Science (theory and practicals), Physical Chemistry (theory and practicals), Biochemistry (theory and practicals), Natural product chemistry (theory), Forensic pharmacy (theory).
- 3<sup>rd</sup> year: Pharmaceutics VI (theory and practicals), Pharmaceutics VII (theory and practicals), Pharmacognosy III (theory), Physical Pharmacy (theory and practicals), Microbiology (theory and practicals), Medicinal Chemistry (theory and practicals), Pharmacology (theory and practicals), Pharmaceutical Management (theory).
- 4<sup>th</sup> year: Pharmaceutical Technology (theory and practicals), Biopharmaceutics (theory and practicals), Pharmaceutical

Analysis (theory and practicals), Pharmacognosy (theory and practicals), Pharmacology (theory and practicals), Medicinal Chemistry (theory and practicals), Packaging Technology (theory).

05/1999

Bachelor Examinations.

24/08/1999

Bachelor of Pharmacy Certificate (65% aggregate, **First division**).

2001-2003

**All India Institute of Medical Sciences, New Delhi, India.**

Two year post-graduate course, Master of Science (Pharmacology).

Course work: Research work comprising of working on a given project and post graduate teaching with seminars, classes, journal clubs, therapeutic clubs, scientific discussions, presentations, theory exams and practicals.

Title of the M.Sc. thesis: "**Pharmacological study on the role of endothelin in myocardial ischemia and reperfusion-induced injury in rats: a morphologic, hemodynamic and biochemical study**".

elaborated under the chief guidance of Dr. S. K. Gupta (Professor and Head), coguided by Dr. D. S. Arya and Dr. U. Singh in the Cardiovascular Pharmacology Laboratory at All India Institute of Medical Sciences, New Delhi, India.

05/2003

Master Examinations.

18/06/2003

Master of Pharmacology Certificate (68%, **First Division**).

Since 06/2003            Research fellow of the Deutsche Forschungsgemeinschaft (DFG) Graduiertenkolleg 865 „Vaskuläre Regulationsmechanismen“. Teilprojekt A3 “Bedeutung vaskulärer Endothelinrezeptoren für Gefäßfunktion und -struktur *in vivo*” (under the guidance of Priv.-Doz. Dr. H.-D. Orzechowski and Prof. Dr. M. Paul).

### **Selected Techniques Expertised**

*In Vivo* blood pressure measurements (rats).

*In vivo* ischemia-reperfusion injury by occlusion of left anterior descending artery (LAD) of rat heart.

*Ex vivo* blood pressure measurements (Tail cuff) in rats.

Catheterisation of rats for balloon injury for neo-intima and histomorphometry.

*Ex vivo* vessel perfusion system (pressure myograph), handling of smaller vessels (*mesenteric arteries of rats and mice for vessel function determination*).

Laser Scanning Microscopy for live cells, (handled for 1 week as practical course).

Genotyping from tails.

RNA extraction from vessels and organs.

Histomorphometric analysis for the vessel morphometry and lumen characteristics.

Cell culture (Explant, vascular smooth muscle cells), primary and secondary cultures.

Protein extraction, protein binding, gene expression analysis.

Biochemical assays.

### **Manuscripts in preparation**

1. Saxena A, Zollmann F, Kliesch S, Gschwend S, Bader M, Paul M, Orzechowski HD. Vascular hypertrophic and blood pressure effects of the ETA receptor revealed by phenotypic analysis of a transgenic rat model
2. Kliesch S, Zollmann F, Saxena A, Kassner N, Paul M, Orzechowski HD. Gene dose effects and temporospatial mRNA expression of the human ETA receptor in a transgenic rat model

### Peer-reviewed full papers

1. Lindenau S, von Langendorff C, **Saxena A**, Pul M, Orzechowski HD. Genomic organization of the mouse gene encoding endothelin-converting-enzyme-1 (ECE-1) and mRNA expression of ECE-1 isoforms in murine tissues. *Gene* 2006; 373:109-115.
2. Singh AD, **Saxena A**, Kumar OS, Rajan M, Mukesh N. Cardioprotective effects of bosentan, a mixed endothelin type A and B receptor antagonist, during myocardial ischaemia and reperfusion in rats. *Basic Clin Pharmacol Toxicol* 2006; 98:604-610.
3. Gupta SK, **Saxena A**, Singh U, Arya DS. Bosentan, the mixed ET<sub>A</sub>-ET<sub>B</sub> endothelin receptor antagonist, attenuated oxidative stress after experimental myocardial ischemia and reperfusion. *Mol Cell Biochem* 2005; 275:67-74.
4. Mohanty I, Gupta SK, Talwar KK, Dinda A, Joshi S, Bansal P, **Saxena A**, Arya DS. Cardioprotection from ischemia and reperfusion injury by *Withania somnifera*: A hemodynamic, biochemical and histopathological assessment. *Mol Cell Biochem* 2004; 260:39-47.

### Published abstracts

1. **Saxena A**, Zollmann FS, Kliesch S, Schmidt NS, Gschwend S, Oksche A, Bader M, Paul M and Orzechowski HD. Transgenic rat models of the human ET<sub>A</sub> receptor develop arterial hypertension and show blunted response to adrenergic receptor stimulation. *J Vascular Res* 2005; 42 Suppl 2: II/88.
2. Zollmann FS, **Saxena A**, Gschwend S, Kliesch S, Schmidt NS, Oksche A, Bader M, Paul M, Orzechowski HD. *In vivo*-crosstalk between human endothelin type A receptor and alpha-adrenergic receptors in the vascular wall revealed by functional analysis of transgenic rat models. *Naunyn-Schmiedeberg's Arch Pharmacol* 2005; 371 Suppl 1:R27.
3. **Saxena A**, Zollmann FS, Kliesch S, Gschwend S, Schmidt NS, Paul M and Orzechowski HD. Blutdruck und Vasoreagibilität in einem transgenen Modell des humanen Endothelinrezeptors Typ A. *Dtsch Med Wochenschr* 2005; 130 Suppl 4:S154.

4. Kliesch S, Zollman FS, **Saxena A**, Oksche A, Bader M, Paul M, Orzechowski HD. Genotyp- und Genexpressionsanalyse transgener Rattenmodelle mit glattmuskelspezifischer Expression des humanen Endothelinrezeptors Typ A. Dtsch Med Wochenschr 2005; 130 Suppl 4:S155.
5. **Saxena A**, Arya DS, Mohanty I, Bansal P, Gupta SK. Cardioprotective effect of bosentan, a nonselective endothelin receptor antagonist versus BMS 182874, a selective ET<sub>A</sub> antagonist: A comparative study. Indian J Cardiol 2002; 5 (1-4):23.
6. Mohanty I, Talwar KK, Joshi S, Bansal P, **Saxena A**, Arya DS, Gupta SK. Cardioprotective effect of Withania somnifera in experimental acute myocardial infarction. Indian J Cardiol 2002; 5 (1-4):16.
7. Bansal P, Arya DS, Mohanty I, **Saxena A**, Gupta SK. Pyruvate, a physiological antioxidant, protects the rat myocardium from ischemia-reperfusion injury. Indian J Cardiol 2002; 5 (1-4).
8. **Saxena A**, Arya DS, Mohanty I, Bansal P, Gupta SK. Cardioprotective potential of bosentan in ischemia-reperfusion induced myocardial injury in rats. Indian J Cardiol 2002; 5 (1-4):50.
9. **Saxena A**, Arya DS, Mohanty I, Bansal P, Gupta SK. Cardioprotective effect of BMS 182874, a selective ET<sub>A</sub> receptor antagonist, attenuates experimentally induced myocardial infarction. Indian J Cardiol 2002; 5 (1-4):18.

#### **Published congress contributions**

1. Arya DS, Sharma M, Mohanty I, Bansal P, **Saxena A**, Gupta SK. Molecular Mechanism of Cardioprotection produced by Withania somnifera and Ocimum sanctum. Proceedings of the XXXV Annual Conference of Indian Pharmacological Society, Gwalior, India, 2002.

#### **Poster presentations**

1. **Saxena A**, Zollmann FS, Kliesch S, Gschwend S, Bader M, Oksche A, Paul M, Orzechowski HD. Transgenic rat models of the human ET<sub>A</sub> receptor develop arterial hypertension and show blunted response to adrenergic receptor

- stimulation. Poster: (P-031), Ninth International Conference on Endothelin (ET-9), Salt Lake City, USA; September 11-14, 2005.
2. **Saxena A**, Zollmann FS, Kliesch S, Schmidt NS, Gschwend S, Oksche A, Bader M, Paul M, Orzechowski HD. Transgenic rat models of the human ET<sub>A</sub> receptor develop arterial hypertension and show blunted response to adrenergic receptor stimulation. Poster: (P253), Third European meeting on vascular biology and medicine (EVBM), Hamburg, Germany; September 28-30, 2005.
  3. **Saxena A**, Arya DS, Mohanty I, Bansal P, Gupta SK. Cardioprotective effect of bosentan, a nonselective endothelin receptor antagonist versus BMS 182874, a selective ET<sub>A</sub> antagonist: A comparative study. International Society of Heart Research (ISHR), Chandigarh, India, Feb 7-9, 2003.

### Oral presentations

1. **Saxena A**. A transgenic rat model of the human ET<sub>A</sub> receptor: Structural and functional characterisation. Deutsche Herz Zentrum, Virchow Klinikum, Berlin, 16-17.06.2006.
2. **Saxena A**. Transgenic rat model of the human ET<sub>A</sub> receptor develop acute arterial hypertension which depends on the anesthesia and shows blunted response to adrenergic receptor stimulation. GRK 865, Institute of Physiology, Arnimallee 22, Berlin, 21.10.2005.
3. **Saxena A**. Recombinant receptor systems and structural and functional analysis of a transgenic hET<sub>A</sub> receptor system. Clinical pharmacology and toxicology, CBF, Berlin, 19.04.2004.
4. **Saxena A**. Pharmacological study on the role of endothelin in myocardial ischemia and reperfusion-induced injury in rats: a morphologic, hemodynamic and biochemical study. Clinical pharmacology and toxicology, CBF, Berlin, 24.11.2003.
5. **Saxena A**, Arya DS, Mohanty I, Bansal P, Gupta SK. Cardioprotective effect of bosentan, a nonselective endothelin receptor antagonist versus BMS 182874, a selective ET<sub>A</sub> antagonist: A comparative study. International Society of Heart Research (ISHR) held at Chandigarh, India, Feb 7-9; 2003.

## **Certificates**

Received certificate for oral presentation of my masters research work in the (ISHR), **International Society of Heart Research** held at Chandigarh in Feb, 2003.

Received certificate for participation in 'Iron dilemma and its role in iron deficiency' at **All India Institute of Medical Sciences**, New Delhi, India, 2004.

## **Awards and Scholarships**

Recipient of the **fellowship** from the Deutsche Forschungsgemeinschaft (**DFG**) in context to the research training center Graduiertenkolleg 865 (GRK) „Vaskuläre Regulationsmechanismen“. Teilprojekt A3 “Bedeutung vaskulärer Endothelinrezeptoren für Gefäßfunktion und -struktur *in vivo*” (under the guidance of Priv.-Doz. Dr. H.-D. Orzechowski and Prof. Dr. M. Paul).

Recipient of **Travel award** at Ninth International Conference on Endothelin (**ET-9**), September 11-14<sup>th</sup>, 2005, **Salt Lake City, USA**.

All the above furnished details are true to the best of my knowledge.

Amit Saxena

Berlin