

# PODIUM PRESENTATIONS SCHEDULE

## **MORNING PODIA SESSION • FRIDAY, JUNE 26**

**9:00 a.m. – 11:40 a.m.**

<b>STEWART CENTER, ROOM 202: DRUG DESIGN AND DISCOVERY, DRUG DELIVERY</b>		
09:00AM – 09:20AM	PD-1 Komal Shahani Wayne State University	SUSTAINED RELEASE DEPOT FORMULATION OF CURCUMIN: A NOVEL APPROACH TO CHEMOPREVENTION
09:20AM – 09:55AM	FEATURED SPEAKER Tamara Minko Rutgers University	NANOTECHNOLOGY STRATEGIES TO OVERCOME LIMITATIONS IN DRUG DELIVERY: OPPORTUNITIES AND CHALLENGES
09:55AM – 10:15AM	PD-3 Gaurav Sahay University of Nebraska	NANOMATERIALS-CELL INTERACTIONS: THE ROLE OF CAVEOLAE MEDIATED ENDOCYTOSIS IN TRAFFICKING OF CROSS-LINKED POLYMER MICELLES IN NORMAL AND CANCER CELLS
11:00AM – 11:20AM	PD-5 Ji Young Kim Purdue University	HYDROTROPIC SOLUBILIZATION OF POORLY WATER-SOLUBLE DRUGS
11:20AM – 11:40AM	PD-7 James Randazzo University of Nebraska	NOVEL ORALLY ACTIVE MULTI-FUNCTIONAL ANTIOXIDANTS DELAY RADIATION-INDUCED CATARACT FORMATION

<b>STEWART CENTER, ROOM 206: PREFORMULATION / FORMULATION</b>		
09:00AM – 09:20AM	PD-2 Rhishikesh Mandke North Dakota State University	SYNTHESIS AND IN VITRO EVALUATION OF FATTY ACYL CHITOSAN DERIVATIVES FOR GENE DELIVERY
09:20AM – 09:55AM	FEATURED SPEAKER Edward Kerns Wyeth Pharmaceuticals	APPLYING PHYSICOCHEMICAL AND METABOLIC PRINCIPLES FOR COMPOUND OPTIMIZATION IN DRUG DISCOVERY
09:55AM – 10:15AM	PD-4 Kyle Kleinbeck University of Wisconsin	CYTOKINE PROFILING OF HEALING WOUNDS IN SWINE TREATED WITH A SEMI-INTERPENETRATING NETWORK AS A WOUND TREATMENT AND DRUG DELIVERY MATRIX

11:00AM – 11:20AM	PD-6 David Alonzo Purdue University	DISSOLUTION BEHAVIOR OF AMORPHOUS PHARMACEUTICALS IN THE PRESENCE AND ABSENCE OF POLYMERS
11:20AM – 11:40AM	PD-8 Jhon Rhojas Camargo University of Iowa	MECHANICAL PROPERTIES OF THE CELLULOSE II-SiO <sub>2</sub> COMPOSITE: A NOVEL MULTI-FUNCTIONAL EXCIPIENT FOR TABLETTING

## **AFTERNOON PODIA SESSION · FRIDAY, JUNE 26**

**1:10 p.m. – 3:25 p.m.**

<b>STEWART CENTER, ROOM 202: BIOTECHNOLOGY, PK/PD/BIOPHARMACEUTICS</b>		
01:10PM – 01:30PM	PD-9 Rubi Mahito University of Missouri - KC	SMALL INTERFERING RNA MEDIATED GENE SILENCING OF CD40 FOR ISLET TRANSPLANTATION
01:30PM – 01:50PM	PD-11 Zohreh Amoozgar Purdue University	IN-SITU CROSSLINKABLE, MUSSEL ADHESIVE PROTEIN-INSPIRED CHITOSAN HYDROGEL FOR SOFT TISSUE ENGINEERING
01:50PM – 02:25PM	FEATURED SPEAKER Andrew Vick Seventh Wave Laboratories	ENGINEERING BETTER MEDICINES: NEW APPROACHES TO BIOTHERAPEUTICS
02:25PM – 02:45PM	PD-13 Dhaval Shah University of Buffalo	A PHARMACOKINETIC STRATEGY TO INCREASE THE EFFICACY OF INTRAPERITONEAL CHEMOTHERAPY
02:45PM – 03:05PM	PD-15 Siheem Ait-Oudhia University of Buffalo	PHARMACOKINETIC AND PHARMACODYNAMIC MODELING OF RECOMBINANT HUMAN ERYTHROPOIETIN FOLLOWING MULTIPLE DOSING IN NORMAL RATS
03:05PM – 03:25PM	PD-17 Aiman Abbas University of Iowa	BIOTINYLATED CHITOSAN APPLICATIONS IN GENE DELIVERY

<b>STEWART CENTER, ROOM 206: PHARMACEUTICAL ANALYTICAL METHODS, PHARMACEUTICAL MATERIALS SCIENCE</b>		
01:10PM – 01:30PM	PD-10 Robert Berendt University of Kansas	EFFECT OF CHIRAL IMPURITY ON CRYSTAL FORM

01:30PM – 01:50PM	PD-12 Andria Skinner University of Kansas	PROBING RESIDUE SPECIFIC INTERACTIONS IN THE STABILIZATION OF PROTEINS USING HIGH-RESOLUTION NMR: A STUDY OF DISULFIDE BOND COMPENSATION
01:50PM – 02:25PM	FEATURED SPEAKER Stephen Byrn Purdue University	ACCELERATING PROOF OF CONCEPT USING SOLID STATE CHEMISTRY
02:25PM – 02:45PM	PD-14 Sihui Long University of Kentucky	SELECTIVE FORMATION OF ACID-PYRIDINE CATEMER MOTIF IN 2-ANILINONICOTINIC ACIDS
02:45PM – 03:05PM	PD-16 Ziyang Su Purdue University	MESOPHASES IN THE SODIUM DEOXYCHOLATE / WATER BINARY SYSTEM – THE DETECTION AND CHARACTERIZATION OF LIQUID CRYSTALS
03:05PM – 03:25PM	PD-18 Eduardo Azevedo University of Iowa	DEVELOPMENT AND ASSESSMENT OF CELLULOSE:CHITOSAN COMPOSITE BASED HOLLOW TUBES AS A POTENTIAL VASCULAR GRAFT

# POSTER PRESENTATIONS SCHEDULE



## ***MORNING POSTER SESSION · FRIDAY, JUNE 26***

**10:15 a.m. – 11:00 a.m.**

**STEWART CENTER, ROOMS 302-306**

DRUG DESIGN AND DISCOVERY	
PS-1	DETERMINING THE ROLE OF GLYCOSYLATION IN THE CELLULAR PERMEABILITY OF NEOGLYCOSIDES
PS-2	LOBELANE ANALOGS WITH VARYING METHYLENE LINKER LENGTHS AS NOVEL LIGANDS FOR THE VESICULAR MONOAMINE TRANSPORTER-2
PS-3	SYNTHESIS OF METHIONINE AMINOPEPTIDASE-1 INHIBITORS USING BARBITURATE-BASED COMPOUNDS

<b>DRUG DELIVERY</b>	
PS-4	EXPRESSION OF FOLATE RECEPTOR/TRANSPORTER ON SIRC CELL LINE AND RABBIT CORNEA
PS-5	α <sub>5</sub> β <sub>1</sub> EFFECTIVELY TARGETS NANOPARTICLES TO LFA-1 ON ACUTE LYMPHOBLASTIC T CELL
PS-6	EVALUATION OF NOVEL TARGETED LIPID PRODRUG STRATEGY TO IMPROVE THE CELLULAR ABSORPTION OF ACYCLOVIR
PS-7	A REDOX-SENSITIVE FRET-REPORTER FOR EVALUATION OF DISULFIDE REDUCTION
PS-8	--- CANCELED ---
PS-9	IN SITU POLYMERIC BIODEGRADABLE GELLING SYSTEMS OF STEROIDS FOR THE TREATMENT OF RETINAL DISEASES
PS-10	TARGETED DELIVERY OF DOXORUBICIN FOR THE TREATMENT OF RETINOBLASTOMA
PS-11	SUPERIOR STABILITY OF PEG-BLOCK-POLY(L-AMINO ACID) MICELLES OVER PEG-PHOSPHOLIPID MICELLES
PS-12	LDL-MIMETIC DRUG CARRIER UTILIZING TARGETABLE APOLIPOPROTEIN B
PS-13	ZWITTERIONIC CHITOSAN DERIVATIVES WITH TUNABLE ISOELECTRIC POINTS
PS-14	PERITUMORALLY ACTIVATABLE NANOPARTICLES FOR DRUG DELIVERY TO MULTIDRUG RESISTANT TUMORS
PS-15	ENZYME-ACTIVATED MRI PROCONTRAST AGENT
PS-16	CHARACTERIZATION OF SODIUM DEPENDENT MULTIVITAMIN TRANSPORTER AND ITS UTILIZATION FOR DELIVERY OF HIV PROTEASE INHIBITORS
PS-17	POLYMERS THAT ENHANCE THE EFFICACY OF ADENOVIRUS-BASED IMMUNOTHERAPY OF PROSTATE CANCER
PS-18	ENVIRONMENTALLY RESPONSIVE BLOCK IONOMER COMPLEX MICELLES AS CARRIERS FOR CISPLATIN
PS-19	CHARGE DENSITY AND DEGRADABILITY OF POLYVINYLAMINE NANOGELS EFFECT TRANSFECTION EFFICIENCY AND DURATION
PS-20	LISTERIOLYSIN O-PROTAMINE FUSION PROTEIN FOR IMPROVEMENT OF NON-VIRAL VECTOR-MEDIATED GENE DELIVERY
PS-21	TOWARD TWO-PHOTON-IRRADIATED LIPOSOMAL RELEASE: THE INFLUENCE OF HEAD GROUP IN THE RELEASE EFFICIENCY
PS-22	LEUKOCYTE-MIMETIC NANOPARTICLES (LMNPS) FOR TUMOR TARGETED DRUG DELIVERY
PS-23	SYNTHESIS AND EVALUATION OF METABOLISM AND CELLULAR PERMEABILITY OF ENZYMATICALLY STABLE DIPEPTIDE PRODRUGS OF ACYCLOVIR

PS-24	PREPARATION AND CHARACTERIZATION OF AVASTIN PLGA NANOPARTICLES FOR THE TREATMENT OF AGE RELATED MACULAR DEGENERATION
PS-25	ANTIOXIDANT NANOZYMES FOR PARKINSON'S DISEASE THERAPY
PS-26	SIZE AND SURFACE PROPERTIES DETERMINING NANOPARTICLE UPTAKE IN THE NASAL MUCOSA
PS-27	INHALABLE MICROPARTICLES FOR CO-DELIVERY OF RHDNASE AND CIPROFLOXACIN TO CYSTIC FIBROSIS AIRWAY
PS-28	LOCALIZATION OF CYTOCHROME P450 (CYP450) ENZYMES IN BOVINE OLFATORY AND RESPIRATORY MUCOSA
PS-29	PLGA MICROPARTICULATE CARRIER FOR CO-DELIVERY OF ANTIGEN AND ADJUVANT FOR CANCER IMMUNOTHERAPY
PS-30	MULTICOMPONENT VACCINE DELIVERY SYSTEM TO GENERATE IMMUNITY TO INFLUENZA NUCLEOPROTEIN
PS-31	CO-DELIVERY OF ANTIBIOTIC AND DISPERION COMPOUNDS TO ERADICATE PSEUDOMONAS AERUGINOSA BIOFILMS IN THE CYSTIC FIBROTIC LUNG
PS-32	IMPROVED TREATMENT OF RHEUMATOID ARTHRITIS WITH WELL-DEFINED HPMA COPOLYMER-DEXAMETHASONE CONJUGATE
PS-33	siRNA DELIVERY USING TRI-COMPONENT VEHICLES COMPOSED OF A CATIONIC POLYMER, POLYETHYLENE GLYCOL AND CELL BINDING LIGANDS
PS-34	DEVELOPMENT OF INHALABLE POWDER FORMULATION OF BASIC FIBROBLAST GROWTH FACTOR(bFGF)

### PREFORMULATION / FORMULATION

PS-35	UNDERSTANDING EFFECT OF LEUCINE ON AERODYNAMIC PROPERTIES OF SPRAY-DRIED POWDER
PS-36	SYNTHESIS AND CHARACTERIZATION OF TRIBLOCK COPOLYMERS FOR THE CONTROLLED DELIVERY OF INSULIN
PS-37	FORMULATION AND CHARACTERIZATION OF PHENYTOIN LOADED POLY D,L-LACTIDE NANOPARTICLES
PS-38	CRYSTALLIZATION BEHAVIOR OF API'S PREPARED BY SPIN-COATING FROM SOLUTION
PS-39	COMPARISON OF THE CRYSTALLIZATION TENDENCY OF API'S PREPARED BY MELT AND SOLVENT EVAPORATION BASED TECHNIQUES
PS-40	ASSESSING THE CRYSTALLIZATION TENDENCY OF ORGANIC MOLECULES FROM THE UNDERCOOLED MELT STATE
PS-41	ENTHALPY OF SOLUTION OF EUTECTICS, SOLID DISPERSIONS AND COCRYSTALS OF POORLY SOLUBLE DRUGS USING THE VAN'T HOFF METHOD
PS-42	EVALUATION OF THE THERMODYNAMIC PROPERTIES OF SUGAR SOLUTIONS BY DIFFERENTIAL SCANNING CALORIMETRY

PS-43	CORRELATING SOLID-STATE NMR PARAMETERS WITH PARTICLE SIZE AND PHYSICAL STATE OF SMALL-MOLECULE DRUGS
PS-44	THE EFFECT OF SOURCE VARIABILITY OF TREHALOSE DIHYDRATE ON THE PHYSICAL FORMS OBTAINED AFTER PROCESSING
PS-45	DESIGNING COCRYSTALS WITH DESIRED Ph-DEPENDENT SOLUBILITY
PS-46	SPRAY-DRIED CELLULOSE II MATERIAL: A POTENTIAL COMPACT DISINTEGRANT
PS-47	THIOL/DISULFIDE INTERCHANGE: EFFECT OF FREEZING AND DRYING ON THE PRODUCT DISTRIBUTION

## ***AFTERNOON POSTER SESSION · FRIDAY, JUNE 26***

**3:30 p.m. – 4:15 p.m.**

**STEWART CENTER, ROOMS 302-306**

<b>BIOTECHNOLOGY</b>	
PS-48	3,3'-DIINDOLYLMETHANE ENHANCES THE EFFICACY OF BUTYRATE IN COLON CANCER PREVENTION THROUGH DOWN-REGULATION OF SURVIVIN
PS-49	EFFECTS OF DISULFIDE BOND FORMATION, PROTEIN HELICITY AND VALINE SUBSTITUTION ON THE AGGREGATION OF ACTIVATING TRANSCRIPTION FACTOR 5 (ATF5)
PS-50	THE EFFECTS OF A BIFUNCTIONAL PEPTIDE INHIBITOR (BPI) IN SUPPRESSING RHEUMATOID ARTHRITIS IN AN ANIMAL MODEL
PS-51	NOTCH1 INDUCES TRANSCRIPTIONAL REGULATION OF MULTIDRUG RESISTANCE PROTEIN, ABCC1/MRP1
PS-52	DEVELOPMENT OF SPECIFIC IMMUNOSUPPRESSANT PEPTIDES FOR THE INHIBITION OF EXPERIMENTAL AUTOIMMUNE ENCEPHALOMYELITIS
PS-53	HIGH SPEED ATOMIC FORCE MICROSCOPY FOR IMAGING OF PROTEIN-DNA INTERACTIONS
PS-54	CELL-TYPE DEPENDENT RESPONSES TO FUNCTIONALIZED SURFACES WITH ADHESIVE PROTEINS
PS-55	GENE DELIVERY USING POLYACRIDINE-PEG-PEPTIDES
PS-56	YEAST PRION PROTEIN CHARACTERIZATION: AN AFM STUDY OF MORPHOLOGY AND THERMODYNAMIC PROFILE
PS-57	EVALUATING THE ROLE OF MUCUS PHYSICOCHEMICAL PROPERTIES ON BIOAEROSOL FORMATION IN THE LUNGS

**PK / PD / BIOPHARMACEUTICS**

PS-58	OVEREXPRESSION OF PKC $\alpha$ RESULTS IN A NONINVASIVE PHENOTYPE
PS-59	MICRORNAS CONTRIBUTING TO MULTIDRUG RESISTANCE
PS-60	INVESTIGATION OF THE INFLUENCE OF ANTIBODY-LIGAND BINDING KINETICS ON THE PHARMACOKINETICS OF HIGH-CLEARANCE LIGANDS
PS-61	INVESTIGATION OF SILVESTROL PHARMACOKINETICS, METABOLISM AND STABILITY
PS-62	REGULATION OF OPIOID TOLERANCE BY LET-7 MICRORNAS TARGETING THE HUMAN AND MOUSE MU OPIOID RECEPTORS
PS-63	PHARMACOKINETICS OF STEREOISOMERIC DIPEPTIDE PRODRUGS OF ACYCLOVIR FOLLOWING INTRAVENOUS AND ORAL ADMINISTRATIONS IN RATS: A STUDY INVOLVING CORNEAL UPTAKE FOLLOWING ORAL ADMINISTRATION
PS-64	A MINIGENE REPORTER SYSTEM TO DETECT POLYPYRIMIDINE TRACT BINDING PROTEIN 1 (PTBP1) ACTIVITY
PS-65	VALACYCLOVIRASE-CATALYZED HYDROLYSIS OF AMINO ACID 3-(HYDROXYMETHYL)PHENYL GUANIDINE ESTERS
PS-66	TIME DEPENDENT CLEARANCE OF RECOMBINANT HUMAN ERYTHROPOIETIN: ERYTHROPOIETIN RECEPTORS DOWN REGULATION OR LINEAR CLEARANCE IMPAIRMENT?
PS-67	STERILE FILTRATION OF NANOMICELLAR HUMAN GLP-1(7-36) PEPTIDE DRUG DOES NOT AFFECT ITS BIOPHYSICAL PROPERTIES
PS-68	EFFECT OF GROWTH CONDITIONS ON THE TRANSPORT OF GLY-SAR ACROSS RABBIT CORNEAL EPITHELIAL CELLS (SIRC) AND RETINAL PIGMENTAL EPITHELIAL CELLS (ARPE-19)
PS-69	INTESTINAL PERMEABILITY OF GLYCYLSARCOSINE IN SMALL AND LARGE INTESTINAL SEGMENTS OF WILD-TYPE AND PEPT1 KNOCKOUT MICE: IN SITU SINGLE-PASS INTESTINAL PERFUSION STUDIES
PS-70	DOWNREGULATION OF TOPOISOMERASE II $\alpha$ EXPRESSION IN DRUG RESISTANT CELLS IS ASSOCIATED WITH ALTERED NF-YB EXPRESSION THAT IS MEDIATED BY miR-485-3P
PS-71	PHOTO-ACTIVATED TITANIUM DIOXIDE NANOPARTICLES INDUCE OXIDATIVE TOXICITY IN ZEBRAFISH EMBRYOS
PS-72	CELLULAR PHARMACOKINETIC ANALYSIS OF INTRACELLULAR DRUG INCLUSION FORMATION
PS-73	INTRACELLULAR DRUG INTERACTIONS INVOLVING WEAKLY BASIC DRUGS AND LYSOSOMES
PS-74	TRANSFECTED MDCK CELL LINE WITH ENHANCED EXPRESSION OF CYP3A4 AND EFFLUX TRANSPORTERS AS A MODEL FOR EVALUATING DRUG-DRUG INTERACTIONS

**PHARMACEUTICAL MATERIALS SCIENCE**

PS-75	INVESTIGATING THE EFFECT INTIMACY OF MIXING HAS ON EUTECTIC MIXTURE MELTING USING DIFFERENTIAL SCANNING CALORIMETRY
PS-76	CHARACTERIZATION OF MATERIAL PROPERTIES OF PARTICLES FOR PHARMACEUTICAL APPLICATIONS BY USE OF SCANNING PROBE MICROSCOPY
PS-77	POLYMORPH SELECTION: A STUDY OF TOLFENAMIC ACID
PS-78	INVESTIGATING PRIMARY AND SECONDARY RELAXATIONS IN TABLET COATING POLYMERS AND THEIR INFLUENCE ON DIFFUSION ACROSS THE POLYMERS
PS-79	SYNTHESIS OF LUMINESCENT POLYMERS FOR PROTEIN SURFACE RECOGNITION
PS-80	ROLE OF POLYMER CHEMISTRY IN INHIBITION OF CRYSTAL GROWTH IN SOLID DISPERSIONS

**PHARMACEUTICAL ANALYTICAL METHODS**

PS-81	CHARACTERIZATION OF FREE RADICALS GENERATED <i>IN VITRO</i> BY 15-LOX CATALYZED PEROXIDATION OF DOCOSAPENTAENOIC ACID USING COMBINATION OF SPIN TRAPPING, LC/ESR, AND LC/MS
PS-82	STRUCTURAL ANALYSIS OF MACROMOLECULAR EXCIPIENTS IN THE SOLID STATE AND CORRELATION TO PHARMACEUTICALLY RELEVANT FUNCTIONAL PROPERTIES
PS-83	THE DEVELOPMENT OF QUANTITATIVE ANALYTICAL TECHNIQUES FOR THE STUDY OF DYNORPHIN A 1-17 METABOLISM
PS-84	DEVELOPMENT AND VALIDATION OF AN LC/MS ANALYTICAL METHOD FOR AMANTADINE HYDROCHLORIDE IN PLASMA
PS-85	DELIQUESCENT OF PHARMACEUTICAL AND FOOD INGREDIENTS: THE EFFECT OF RELATIVE HUMIDITY ON THE CHEMICAL STABILITY OF THE SUCROSE-CITRIC ACID SYSTEM
PS-86	CORRELATING BLENDING TIME AND TABLET VARIABILITY USING NEAR INFRARED SPECTROSCOPY HIGHLIGHTING THE INFLUENCE OF SPECTROPHOTOMETER SPOT SIZE ON THE BLENDING END POINT
PS-87	LIPID NANOPARTICLE MEDIATED AMPLIFIED DETECTION OF ENZYME MATRIX METALLOPROTEINASE-9
PS-88	UNFOLDING OF NON-CANONICAL DNA STRUCTURES: CORRELATION OF OPTICAL AND DSC MELTING CURVES WITH FLUORESCENCE MELTS USING 2-AMINOPURINE
PS-89	A NOVEL SANDWICH ELISA METHOD FOR IKBKE DETECTION IN BREAST CANCER RESEARCH