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International Pharmaceutical Abstracts (IPA)

IPA will help you answer the following questions:

- Is there evidence that Computerized Prescriber Order Entry (CPOE) reduces medication errors?
- What national initiatives in bioterrorism preparedness will affect my practice?
- Is there new information that I can use on pain management for the elderly?

IPA is a small, focused database whose strength is pharmaceutical technology and manufacturing. As of Dec 2008, it has over 477,000 records compared to MEDLINE which has over 16 million records.

1. IPA's main purpose is to review and present pharmaceutical literature and the practice of pharmacy, pharmaceutical education, legal aspects of pharmacy and drugs.
2. "Pharmacy literature" includes: drugs and their properties, pharmacokinetics, manufacturer, research and use.
3. IPA began in 1964 and was computerized in 1970.
4. New articles from English-language journals are incorporated in the IPA database within 4 weeks of publication. Foreign language articles take 8 weeks.
5. Includes many U.S. state pharmacy journals and many major cosmetic publications.
6. Emerging areas indexed include: genomics, immunotherapy and nanotechnology
7. IPA is available via OvidSP from the JEFFLINE homepage (<http://jeffline.jefferson.edu>).

Subject index term field ("descriptor") is the most frequently use field qualifier when searching. Example: An article addresses the "viscosity" of a suspension, the indexing terms used would be "viscosity" and "suspensions" as well as "rheology"

- Two-level indexing system has been used. The primary and secondary terms are derived from the controlled vocabulary.
- Starting in 1984 all disease states (e.g. epilepsy) are indexed, Medical Subject Headings are used as the authority for disease entries and toxicity descriptions.
- Plants and microorganisms are indexed using the Latin classification name (e.g. *Saccharomyces cerevisiae*).
- Endogenous chemicals or substances are not indexed.
- If a generic name does not exist for a drug, the investigational drug name or number is used a primary index entry.
- Chemical substances are indexed by their complete chemical name.
- As a last resort, a Trade Name is used as a primary index entry for a drug, but only if no other name can be found to use as an index entry.

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25 IPA section headings

Depending on the emphasis or stage of drug development, understanding the various sections in which an abstract would appear will help the searcher locate specific data. This is where the 25 IPA subject headings can help. When an article discusses synthesis of a drug, the abstract would appear in the “Pharmaceutical chemistry” section. When an abstract relates to a drug being tested to determine if it has pharmacologic activity, it would appear in the “Pharmacology” section. When the abstract relates to a drug being tested in animals for a specific activity (or activities), it would appear in the “preliminary drug testing” section. When a drug is tested in humans, the abstract would appear in the “investigational drugs” section. When a drug is on the market and used clinically, the abstract would appear in the “drug evaluations” section. If the emphasis in an article is specific to some other subject such as metabolism or toxicity, the abstract would appear in “drug metabolism and body distribution” or “toxicity.” Below are all 25 IPA subject headings:

ADVERSE DRUG REACTIONS—Abstracts are included which discuss a reaction not expected or intended when a medication is given in the normal dose range and route of administration, e.g., reactions not normally listed as side effects, unexpected drug addiction, hypersensitivity, potentiation of dormant or other disease state, etc.

BIOPHARMACEUTICS—Abstracts are included which discuss the effect of formulation, physicalchemical properties, particle size and dosage form on the body or tissue, e.g., pharmacokinetic studies, *in vivo* dissociation time studies, absorption and adsorption, effect of sustained-action medications, generic and therapeutic equivalency, bioavailability, drug-complex effects, effects of different salts or esters, effect of route of administration on action if dosage-form related, etc.

DRUG ANALYSIS—Abstracts are included which discuss an assay or analysis in which a drug or drugs are quantitatively tested, e.g., content, impurities, counterfeit drugs, etc.

DRUG EVALUATIONS—Abstracts are included that discuss the therapy or specific *in vivo* human effect of an established (non investigational or experimental) drug in prophylaxis, treatment, diagnosis, or a disease state, e.g., clinical cases, comparison studies, tolerance, placebo effects, DUEs, protocols, prescribing practices, rational therapy, compliance, etc.

DRUG INTERACTIONS—Abstracts are included that discuss an *in vivo* drug-drug, drug-chemical, or drug-food interaction relating to therapy or diagnosis (includes interaction of drug and radiation therapy), e.g., synergism, summation, potentiation, antagonism, competition, *in vivo* drug-complex formation, etc.

DRUG METABOLISM AND BODY DISTRIBUTION—Abstracts are included that discuss the actual metabolism of a drug or distribution of a drug in the human body or in animals, e.g., pharmacokinetics, absorption, adsorption, excretion, endogenous physiologic interaction, biotransformation, test or analysis of drugs in body fluids or tissue, placental barrier and transfer, drugs present in lactation, effect of route of administration on drug’s availability and breakdown, etc.

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DRUG STABILITY—Abstracts are included that discuss decomposition of a specific pharmaceutical or drug and in vitro incompatibilities, e.g., hydrolysis, effects of temperature, effects due to container, moisture, parenteral admixture incompatibilities, etc.

ENVIRONMENTAL TOXICITY—Abstracts are included that discuss toxicity due to human or animal environment or contact, e.g., occupational drug poisoning, pharmaceutical chemicals, zoonoses, pollutants, hospital acquired infections, etc.

HISTORY—Abstracts are included that discuss the history of all phases of pharmacy and drug use, including modern history, e.g., history of the law of pharmacy, drug discoveries, pharmacy practice, pharmacy literature and art, etc.

INFORMATION PROCESSING AND LITERATURE—Abstracts are included that discuss drug literature and information and its use, e.g., computers, data processing, new book and journal references, pharmacopeias, drug information systems, automated record keeping, nomenclature, information transfer, etc.

INSTITUTIONAL PHARMACY PRACTICE—Abstracts are included that discuss institutional pharmacy practice, e.g., hospitals, extended care facilities, nursing homes, long-term care facilities, skilled nursing facilities, mental health facilities, health maintenance organizations, administrative control, hospital administration, drug distribution systems, pharmacist's role in compounding parenteral solutions, outpatient pharmacy services, etc.

INVESTIGATIONAL DRUGS—Abstracts are included that discuss the action in a human of a drug that is investigational or not currently used in the United States, e.g., drugs may be included that are not investigational in countries other than the United States, clinical trials, double-blind studies, etc.

LEGISLATION, LAWS AND REGULATIONS—Abstracts are included that discuss legislation, standards and regulations, e.g., patents, narcotic and dangerous drug regulations, licensure, licensing of drugs, accreditation, taxation, drug recalls, liability cases, FDA, JCAHO, ISO, etc.

METHODOLOGY—Abstracts are included that discuss means and methods of evaluating a drug action in humans, animals, or biological systems, e.g., clinical study design, equipment, systems, procedures, etc.

MICROBIOLOGY—Abstracts are included that discuss pharmaceuticals, their effect on or preparation from microorganisms, and microbiology important to pharmacy, e.g., effect of a medication on an organism in vitro, resistance studies, in vitro antibiotic spectrum studies, effect of environmental conditions on microorganisms, etc.

PHARMACEUTICAL CHEMISTRY—Abstracts are included that discuss chemistry, e.g., synthesis, structure-activity, separation and purification, structure determinations, pure analytical chemistry, etc.

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PHARMACEUTICAL EDUCATION—Abstracts are included that discuss education and training relating to pharmacy or other health professions, e.g., residency programs, technician training, continuing education, academic education, pharmaceutical research, etc.

PHARMACEUTICAL TECHNOLOGY—Abstracts are included that discuss manufacturing, formulas, and formulations of pharmaceuticals, sterilization, and contamination, routine tests on pharmaceutical preparations, plastics and packaging, and numerous other topics of a similar nature, e.g., distillations, preparation of parenterals, aseptic technique, aerosols, containers, preservatives, pyrogens, quality control, flavoring, specific preparation processes, antibiotic manufacturing, equipment, closures, granulation, powder flow studies, vehicles, hardness and disintegration tests, compaction, etc.

PHARMACEUTICS—Abstracts are included that discuss physical pharmacy or chemistry, rheology, non routine tests on pharmaceutical preparations, e.g., dissolution, filtration, pH studies, dissociation constant determinations, surface action studies, ionization, isotonicity, micelles, crystallization, complex formation, emulsion creaming and breaking, solubility, etc.
PHARMACOGNOSY—Abstracts are included that discuss the isolation, extraction, growth, etc., of plants producing drugs or drug products, e.g., separation, biosynthesis of plant products, fungus and fungicides, algae, yeasts, etc.

PHARMACOLOGY—Abstracts are included that discuss the mode or mechanism of action or a general discussion of a drug or diagnostic agent that is not a clinical evaluation, e.g., establishing the biological activity of newly synthesized chemicals, activity due to structural differences, site of action determinations, route of administration determinations, drug-disease discussions, pharmacogenetics, biochemistry, drug screening, establishing dosage and dosage schedules, etc.

PHARMACY PRACTICE—Abstracts are included that discuss pharmacy in general, e.g., pharmacy design, dispensing, professional practice, pharmacist's role in the community, over-the-counter drugs, home health care agencies, first aid supplies, prescriptions, compounding technique, etc.

PRELIMINARY DRUG TESTING—Abstracts are included that discuss an established action in an animal of an experimental drug still in the investigational or pre-investigational stage, e.g., animal studies on new uses for established drugs, antimicrobial studies in animals, tissue cultures, etc.

SOCIOLOGY, ECONOMICS AND ETHICS—Abstracts are included that discuss the effects of drugs, pharmacy, pharmaceutical practice, or medicine on society and the economics and/or ethics involved in pharmacy, e.g., cost surveys, reimbursement, marketing, error studies, pharmacists' civic duties, effect of disease on society, epidemics and eradication, folk medicine, addiction and habituation, drug overuse and abuse, health care and plans, disaster preparedness, etc.

TOXICITY—Abstracts are included that discuss toxicity, toxicology, poisoning, lethal dose studies of a drug or chemical, e.g., addiction, teratogenicity, habituation, withdrawal, side effects, results of drug overuse and abuse, antidotes, contraindications, overdose, etc.

Source: *IPA Users Guide*. Thomson Scientific, 4th Edition, 2004.