UNITED STATES
National Library of Medicine
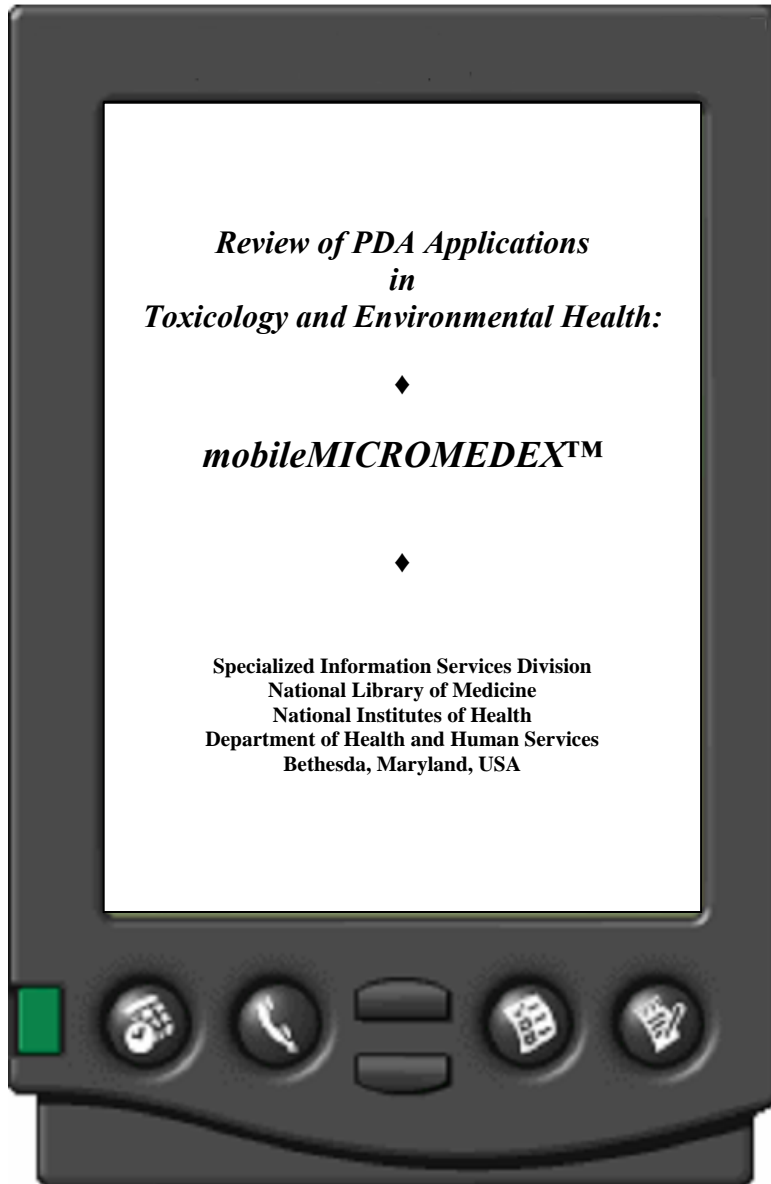
Review of PDA Applications
in
Toxicology and Environmental Health:

♦

mobileMICROMEDEX™
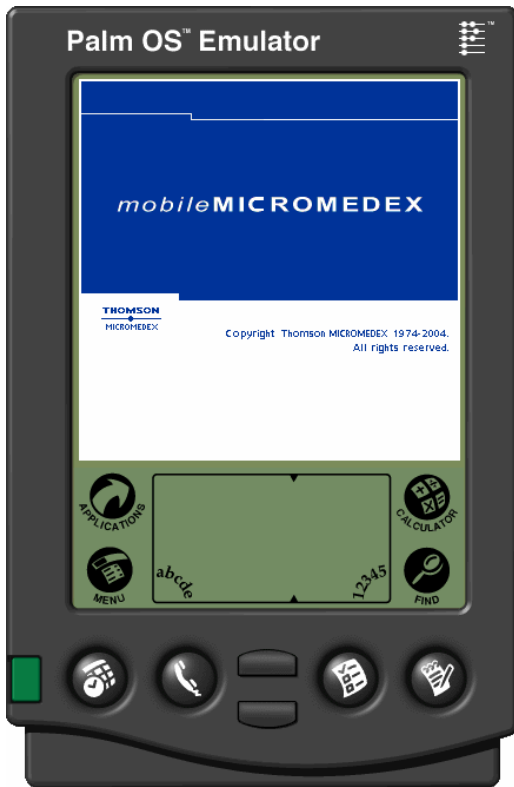
♦

Specialized Information Services Division
National Library of Medicine
National Institutes of Health
Department of Health and Human Services
Bethesda, Maryland, USA

mobileMICROMEDEX™

(Reviewed 06/2004)

General Information

For general comments regarding the *Review of PDA Applications in Toxicology and Environmental Health*, please see the **Overview**. Here we review the main technical and content features of *mobileMICROMEDEX™ (3.2)* based upon the downloadable demo version. *mobileMICROMEDEX™* is a Palm OS- as well as Pocket PC-compatible database application, which makes drug, toxicology, alternative medicine, and acute care information available to healthcare professionals at the point of care. A drug interaction tool, which allows checking a patient's medications for potentially harmful interactions, is included. The *mobileMICROMEDEX™* database software is also available for memory expansion cards. Automatic updates are included with the product's purchase and occur during PDA synchronization.

Intended Users

- Clinical Staff
- Physicians
- Pharmacists
- Nurses
- Medical Librarians

Authorship/Data Source

The *mobileMICROMEDEX™* application for hand-held devices is produced by Thomson MICROMEDEX, a provider of information products for professionals and consumers in the healthcare and industrial sectors. *mobileMICROMEDEX™* is compiled from established MICROMEDEX databases, and its content is reviewed by an editorial staff including physicians, pharmacists, toxicologists, nurses, and other healthcare professionals. The *mobileMICROMEDEX™* application was first made available to the healthcare community in 2001.

Contents

The *mobileMICROMEDEX™* hand-held application makes available in portable format the same information resource that has been used by healthcare professionals around the world for approximately 30 years.


◄ *The mobileMICROMEDEX™ database suite provides a portable resource for those who require access to medical information at the point of care. As shown in the screen shot to the left, the application comprises the following five components:*

* Acute Care Information
* Alternative Medicine Information
* Drug Information
* Toxicology Information
* Drug Interaction Tool

Each of the above components is subdivided into subcomponents or sections, as shown in the screen shots that follow.

► *The Acute Care Information component provides concise information for over 300 common emergency conditions. For each condition, information is provided on:*

* Treatment
* Diagnosis
* Key Points
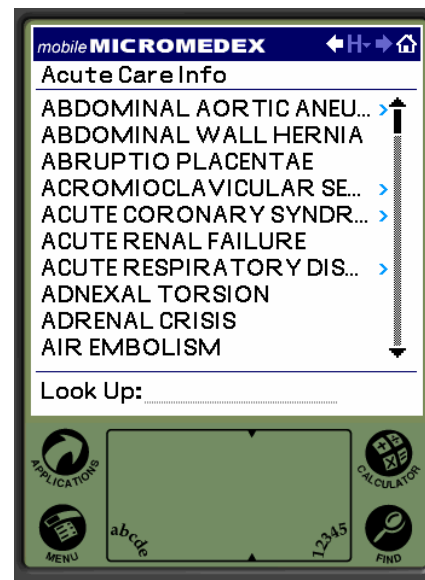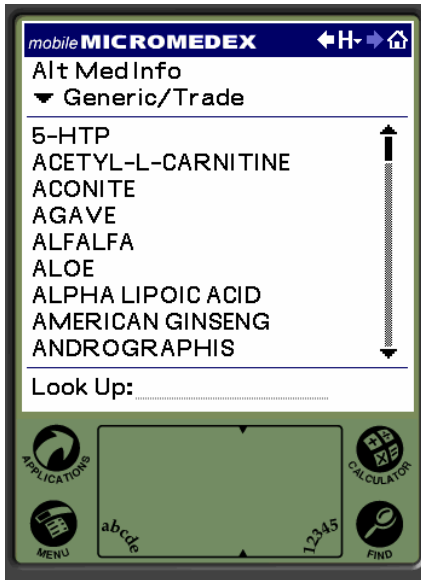
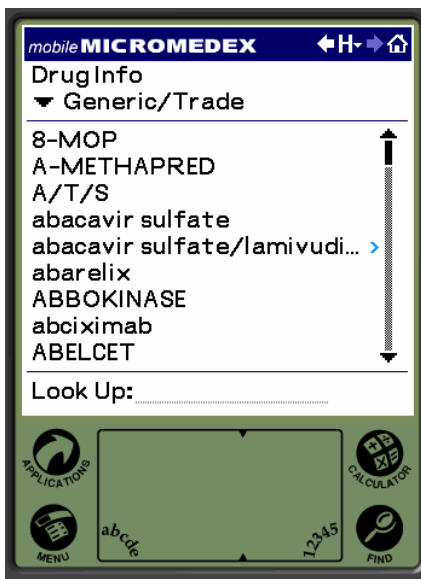◄ *The Alternative Medicine Information component lists over 300 herbals and supplements and provides information on:*

 * *Class*
 * *Dosage, Adult / Pediatric*
 * *Administration*
 * *How Supplied*
 * *Indications / Contraindications*
 * *Adverse Effects*
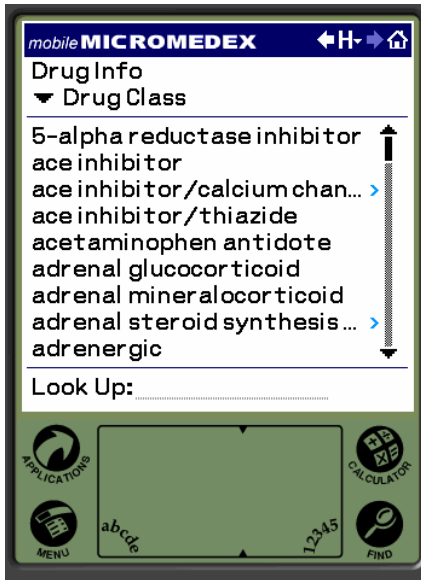 * *Drug Interactions*
 * *Pregnancy Category*
 * *Breast Feeding*

► *The screen shot to the right shows the same Alternative Medicine Information component, in this case arranged by therapeutic class. Each class links to the herbal(s) or supplement(s) belonging to that class.*
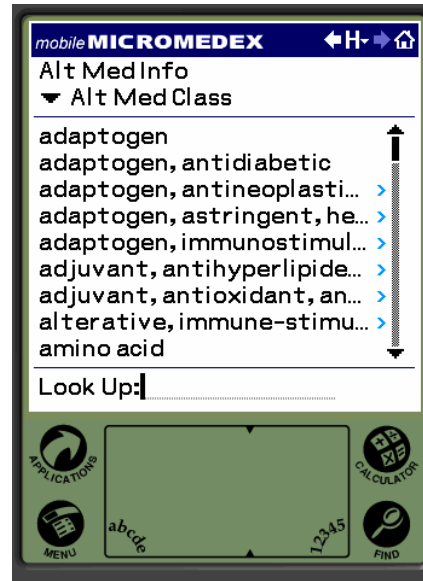
◄ *The Drug Information component covers the topics below for over 2,700 drugs:*

 * *Common Tradenames*
 * *Class*
 * *Dosage, Adult / Pediatric*
 * *Dose Adjustments*
 * *Administration*
 * *Monitoring*
 * *How Supplied*
 * *Indications / Contraindications*
 * *Precautions*
 * *Adverse Effects*
 * *Drug Interactions*
 * *Pregnancy Category*
 * *Breast Feeding*

4

mobile MICROMEDEX ←H→⌂

Drug Info
▼ Drug Class

5-alpha reductase inhibitor
ace inhibitor
ace inhibitor/calcium chan... ›
ace inhibitor/thiazide
acetaminophen antidote
adrenal glucocorticoid
adrenal mineralocorticoid
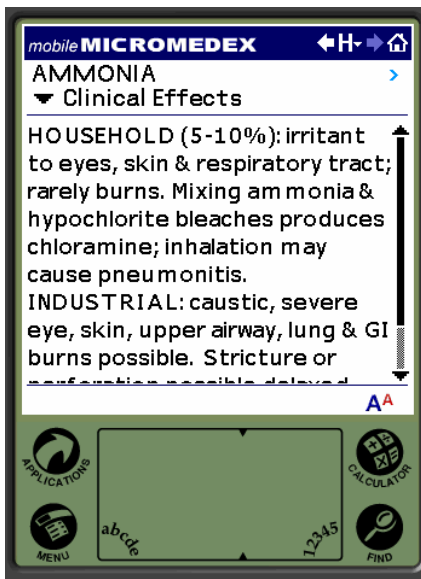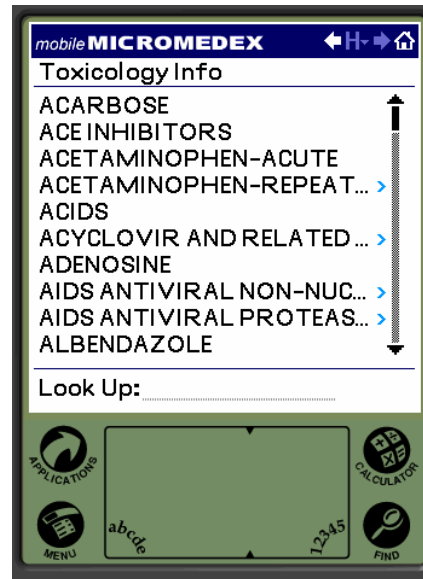adrenal steroid synthesis... ›
adrenergic

Look Up:

◄ *The screen shot to the left shows the same Drug Information component, in this case arranged by drug class. Each class links to the drug(s) belonging to that class.*

mobile MICROMEDEX ←H→⌂

Toxicology Info

ACARBOSE
ACE INHIBITORS
ACETAMINOPHEN-ACUTE
ACETAMINOPHEN-REPEAT... ›
ACIDS
ACYCLOVIR AND RELATED... ›
ADENOSINE
AIDS ANTIVIRAL NON-NUC... ›
AIDS ANTIVIRAL PROTEAS... ›
ALBENDAZOLE

Look Up:

► *The Toxicology Information component (screen shot to the right) lists over 200 potentially toxic substances and provides the following information for each substance:*

  * Clinical Effects
  * Treatment
  * Range of Toxicity

As an example, portions of the information provided for AMMONIA are shown in the three screen shots that follow.

mobile MICROMEDEX ←H→⌂

AMMONIA ›
▼ Clinical Effects

HOUSEHOLD (5-10%): irritant to eyes, skin & respiratory tract; rarely burns. Mixing ammonia & hypochlorite bleaches produces chloramine; inhalation may cause pneumonitis.
INDUSTRIAL: caustic, severe eye, skin, upper airway, lung & GI burns possible. Stricture or perforation possible delayed

A^A

◄ *The screen shot to the left shows the Clinical Effects section for AMMONIA. Note that both household and industrial exposures are covered.*

5
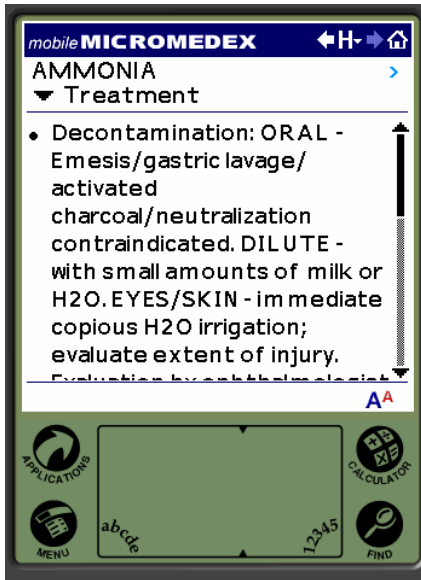
◄ *The Treatment section for AMMONIA is shown in the screen shot to the left. The Treatment section typically includes different treatment protocols.*

► *The screen shot to the right shows the Range of Toxicity section for AMMONIA. Again, note that both household and industrial exposures are covered.*
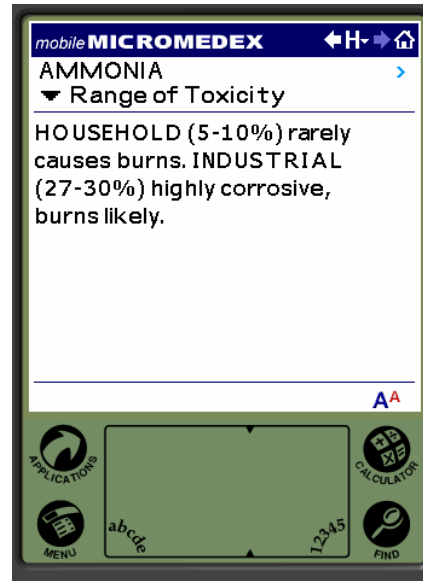

◄ *The opening screen of the Drug Interaction Tool, the fifth component of the mobileMICROMEDEX™ database suite, is shown to the left. This component allows checking up to 32 drugs at once for potentially harmful interactions.*
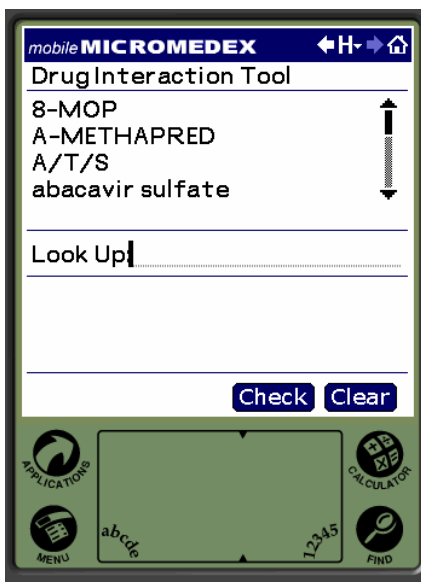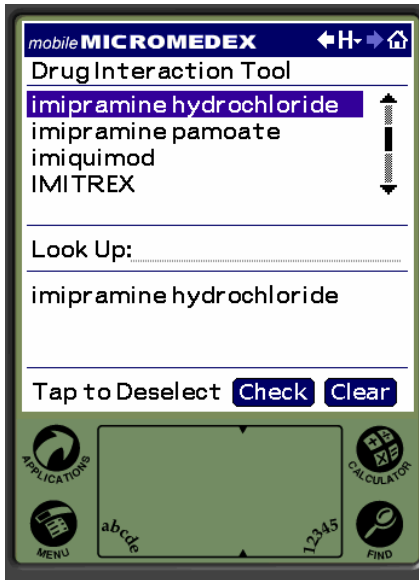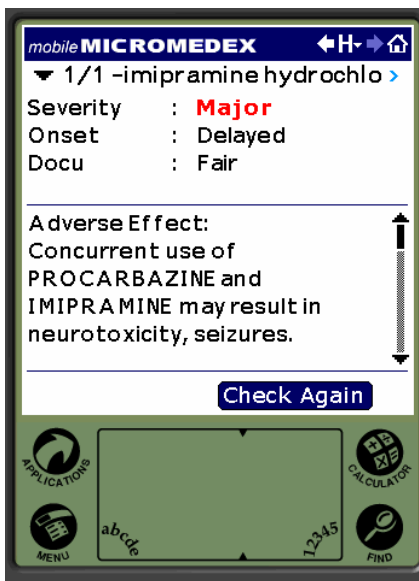
◄ *The three screen shots on this page illustrate how the Drug Interaction Tool might be used. If a user were to select, for example, "imipramine hydrochloride" as the first drug…*

► *…and "procarbazine hydrochloride" as the second drug, and then tap the Check button (bottom of screen),…*
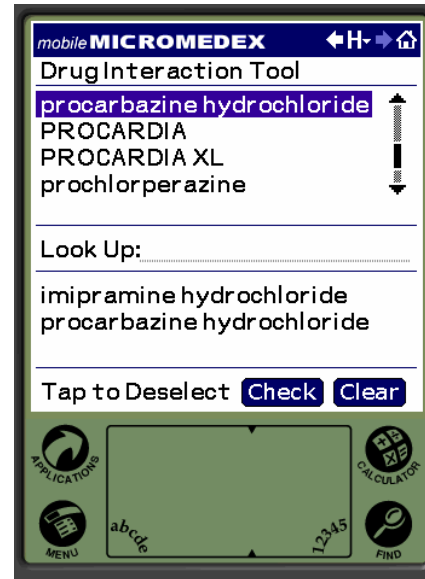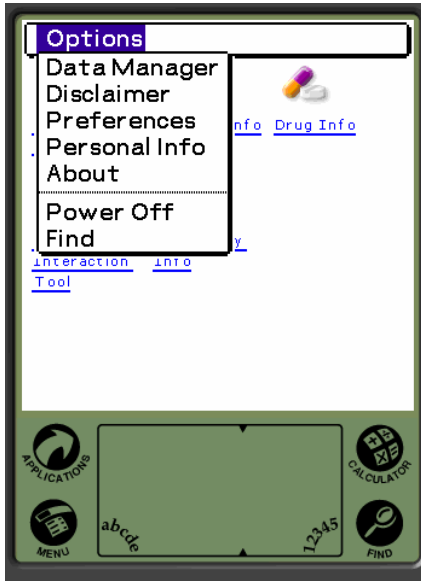

◄ *…he/she would find that a major adverse interaction exists between these two drugs.*
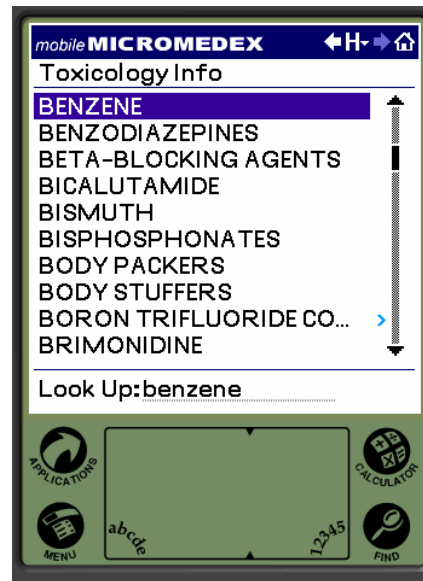
Navigation

This application functions in an offline mode and requires no mobile connectivity.

◄ *On the mobileMICROMEDEX™ open-ing screen the user may access various op-tions: Data Manager, Disclaimer, Prefer-ences, Personal Info, About, Power Off, and Find. The Data Manager option, for instance, allows the user to access size, ver-sion, and expiration date information for each of the five modules. The user may also delete any unwanted modules. The Preferences option allows the user to select the startup screen best suited to his/her needs and to choose to display the scroll bar on the left-hand rather than the right-hand side of the screen.*

► *Each mobileMICROMEDEX™ compo-nent provides a Look Up function. For ex-ample, a user seeking information on "ben-zene" in the Toxicology Information com-ponent can use the on-screen keyboard to input the term and thus find the BENZENE entry in the list of substances, as shown in the screen shot to the right. Alternatively, the user can employ the vertical scroll bar on the right side of the screen to locate the same entry in the list.*

By tapping A^A in the bottom right-hand side of the display (see screen shots on page 6), the text size can be adjusted for readability.

The partial screen shot above displays four navigational features available to the user on most screens — from left to right, a Back button (left arrow), a History (H) button (dis-plays a list of most recently accessed screens), a Forward button (right arrow), and a Home button (returns user to opening screen displaying all five components).

Requirements

- ❖ Palm OS (3.1 or higher) or Pocket PC
- ❖ 1.8 MB of RAM (Palm OS)
- ❖ 2.2 MB of RAM (Pocket PC)

Application Type/Price

- ❖ Commercial
- ❖ $99.95 (includes automatic updates)
- ❖ $74.95 (without Drug Interaction Tool)

Availability

The *mobileMICROMEDEX™* application may be purchased from commercial PDA software distributors.

Useful Web Links

For information about Thomson MICROMEDEX, please visit www.micromedex.com. For additional information about the *mobileMICROMEDEX™* application, please visit www.micromedex.com/products/mobilemicromedex.

Review of PDA Applications
in
Toxicology and Environmental Health

<u>Overview</u>

Handheld computer devices known as Personal Digital Assistants (PDAs) are increasingly being used in the fields of toxicology and environmental health. Moreover, software applications covering specialized subject matter in these fields are increasingly being made available to PDA users.

In an effort to provide information on the main technical and content features of selected applications, the National Library of Medicine's Division of Specialized Information Services (SIS) has undertaken an ongoing review of them. Typically, individual reports in the review series are based on free, downloadable demos.

Each report typically covers the following topics: General Information, Intended Users, Authorship/Data Source, Contents, Navigation, Requirements, Application Type/Price, Availability, Useful Web Links, and Updates.

♦

<u>*Note:*</u>   The *Review of PDA Applications in Toxicology and Environmental Health* is not intended to be all comprehensive, but rather a review of selected applications. SIS staff welcomes any comments on completed reviews or suggestions for additional reviews of applications not currently included, as long as they fall within the scope of toxicology and environmental health. You may contact us via email at <u>tehip@teh.nlm.nih.gov</u> with any comments, questions, or suggestions.

It is not the intention of SIS staff to recommend, or not recommend, any particular PDA device(s) or software application(s), but rather to provide an objective and descriptive review of the main technical and content features of selected applications based on their downloadable demo versions.