Herbal Healing Traditions of South Louisiana

Methods and Sources

C. Ray Brassieur, Ph.D.
Associate Prof. of Anthropology
February 25, 2014
A developing interdisciplinary search for botanical extracts with therapeutic potential for diabetes …

COLLABORATION IS KEY!
South Louisiana Ethnobotany and Diabetes
A Cajun Collaboration

Larry Allain1, Charles R Brassieur2, Anik Boudreau3, David Ribnicky4, Phil Turnipseed1, Tom Doyle1

1 USGS, National Wetlands Research Center, 700 Cajundome Blvd., Lafayette, LA 70506;
2 University of Louisiana at Lafayette, LA. 70504;
3 Pennington Biomedical Research Center, 6400 Perkins Road, Baton Rouge, Louisiana 70808;
4 Rutgers, The State University of New Jersey, 57 US Highway 1, New Brunswick, NJ 08901-8554

Introduction
Since 2000, the BRC has been screening a wide range of botanical extracts for their ability to mitigate insulin resistance, the underlying disorder in metabolic syndrome and type 2 diabetes. For this study, plants were chosen for screening based on historical medicinal use of native plants in South Louisiana.

In 2011, a chance meeting between Dr. David Ribnicky of Rutgers School of Environmental and Biological Sciences, Anik Boudreau of Pennington, and Dr. Ray Brassieur of The University of Louisiana at Lafayette, in a demonstration medicinal garden in Lafayette, would be fortuitous. The medicinal garden was based on Dr. Brassieur’s ethnobotanical research into medicinal plants used by the Creole people of South Louisiana. A partnership was formed to focus future screenings on plants that were used in traditional folk medicine. Larry Allain, a botanist with the USGS National Wetlands Research Center, joined the effort by locating, collecting and vouchering plant material.

Anthropology
Human knowledge of medicinal plants has been declining for hundreds of years as healers die with no record of their knowledge. Despite this trend, more than 70% of the world’s population still relies mainly on traditional herbal medications (Farnsworth and Soejarto 1993; King 1996). Anthropologist Dr. Ray Brassieur of the University of Louisiana at Lafayette has been studying the ethnobotany of Cajuns, Creoles, and Native Americans for over thirty years. The goal of his systematic studies has been to identify a consensus in medicinal plant use based on the hypothesis that the most commonly used plants are most likely to be effective treatments (Amiguet et al. 2005; Berlin and Berlin 1996; Johns et al. 1990; Trotter and Logan 1986). His research includes such sources as Charles J. Bienvenu’s collection (1933) of healing therapies recorded from Creole-speaking users of medicinal plants, and Frank Speck’s study (1943) of plant curatives obtained from Houma Indians.

Botany
USGS botanist Larry Allain, who curates an herbarium collection at the National Wetlands Research Center in Lafayette, LA, collected the plant material needed for extraction and screening.

For some plant parts listed as having medicinal value, sources sometimes indicate which time of year the plants should be collected. Voucher specimens collected from each source population, as well as their data labels, reside in the NWRC herbarium and are critical for ensuring that specimens are correctly identified, that growing conditions and climate factors are documented, and that future collections are facilitated. After collection the plant material was deep frozen and shipped to Rutgers where extracts were made.

Screening
At PBRC and Rutgers, studies were conducted on cultured cells to look for effects of the botanical extracts on insulin sensitivity and related functions. These included assays of insulin signaling in insulin-resistant skeletal muscle cells, adipogenesis in preadipocytes, and inflammatory processes in macrophages. Positive hits from these screens will be pursued with further investigation of mechanisms and, eventually, if warranted, in animal studies. Preliminary results show beneficial effects for 4 of 18 extracts tested.

References
Title: “Screening Native Botanicals for Bioactivity: An Interdisciplinary Approach”

Authors: Anik Boudreaux¹, Diana M. Cheng², Carmen Ruiz¹, David Ribnicky², Larry Allain³, C. Ray Brassieur⁴, D. Phil Turnipseed³, William T. Cefalu¹, Z. Elizabeth Floyd¹,⁵

⁵Corresponding author: Elizabeth Floyd, PhD, Pennington Biomedical Research Center
The Process …

- ID medicinal plant
- catalog/voucher
- extract soluble components
- analyze bioactivity
- secondary screen

ULL/NWRC   Rutgers   Rutgers/PBRC BRC

Figure 1. Boudreau et al.
SOURCES OF TRADITIONAL KNOWLEDGE
THE NEGRO-FRENCH DIALECT OF SAINT MARTIN PARISH

FOR THE DEGREE OF MASTER OF ARTS IN THE DEPARTMENT OF ROMANCE LANGUAGES

BY CHARLES JOSEPH BIENVENU
Baton Rouge, Louisiana
August 5, 1933

Charles J. Bienvenu of St. Martinville

Lived to age of 101
b. Nov. 1905
d. Feb. 2007
Louisiana Folk Healing Continuum

- des remèdes  
  [natural curatives]
- magic
- religio-magic
- traitement  
  [prayer healing]

“part controls the whole”

“like controls like”
Ribbon Cutting for the Healer’s Garden at Vermilionville -- Spring 2011

**LE JARDIN**
**Des Herbes Medicinales**

**April 2, 2011**
10:00 a.m. - 4:00 p.m.
Vermilionville
Lafayette, Louisiana

- Ask A Master Gardener
- Children’s Activities
- Glenda Batiuvero

10:00 - Lafayette Garden Club Flower Show - Board Room
  Inez Barras, Chair, Leslie Runnels, Co-Chair
10:30 - An Inspiration for a Medicinal Garden - Performance Center
  Dr. C. Ray Brassier
11:00 - Cutting the ribbon at the Pieux (fence) - La Maison Acadienne
  Symbolic first shovel of dirt in the garden
  Unveiling the Medicinal Garden Plan - Bill Fontenot
12:00 - How to Build a Sinker Cypress Fence -
  Rodney Dupuy and Thomas Colvin
12:30 - Traiteur: South Louisiana Healing Tradition - Becca Begnnae
1:00 - Planning French Kitchen Garden - Tina Jumonville - Chapel
2:00 - Foraging for your Food - Marcelle Bienvenu - Chapel
3:00 - A Walk with Dr. Charles Allen - begins at Chapel

**Music - Vermilionville Annivers**

**Admission $5**
under 6 yrs. Free

**Information: vermilionville.org**
or **337-233-4072**
All proceeds will benefit the Vermilionville Medicinal Garden Project.
Vermilionville memberships not honored.

---

Booklet available online at http://www.vermilionville.org
## Indian Curatives in Bienvenu’s Collection

<table>
<thead>
<tr>
<th>French</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>menguilié</td>
<td>groundsel bush</td>
</tr>
<tr>
<td>herbe cabri</td>
<td>goat weed</td>
</tr>
<tr>
<td>mamou</td>
<td>coral bean</td>
</tr>
<tr>
<td>des mauves</td>
<td>bristle mallow</td>
</tr>
<tr>
<td>lozeille sauv.</td>
<td>sorrel / dock</td>
</tr>
<tr>
<td>du bois connu</td>
<td>hackberry</td>
</tr>
<tr>
<td>l’herbe à vers</td>
<td>jesuit’s tea</td>
</tr>
<tr>
<td>shassepareille</td>
<td>french mulberry</td>
</tr>
<tr>
<td>cornard</td>
<td>jimson weed</td>
</tr>
<tr>
<td>guimauve</td>
<td>mallow</td>
</tr>
<tr>
<td>le sureau</td>
<td>elderberry</td>
</tr>
<tr>
<td>sassafran</td>
<td>sassafras</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baccharis halimifolia</td>
<td>groundsel bush</td>
</tr>
<tr>
<td>Croton capitatus</td>
<td>goat weed</td>
</tr>
<tr>
<td>Erythrina herbacea</td>
<td>coral bean</td>
</tr>
<tr>
<td>Modiola caroliniana</td>
<td>bristle mallow</td>
</tr>
<tr>
<td>Rumex sp.</td>
<td>sorrel / dock</td>
</tr>
<tr>
<td>Celtis laenigata</td>
<td>hackberry</td>
</tr>
<tr>
<td>Chenopodium ambrois.</td>
<td>jesuit’s tea</td>
</tr>
<tr>
<td>Callicarpa ámericana</td>
<td>french mulberry</td>
</tr>
<tr>
<td>Datura stramonium L</td>
<td>jimson weed</td>
</tr>
<tr>
<td>Hibiscus lasiocarpus</td>
<td>mallow</td>
</tr>
<tr>
<td>Sambucus canadensis</td>
<td>elderberry</td>
</tr>
<tr>
<td>Sassafras albidum</td>
<td>sassafras</td>
</tr>
</tbody>
</table>
Indian plant medicine

Du Pratz lived with the Natchez from 1720 - 1728

sweet gum tree

copal

Liquidambar styraciflua
Headache

You take sweet gum leaves and put them in a vase. Then you pour in some warm water to wilt them. And then, you press them together and encircle the head with them.
Sassafras albidum
Sassafras
sassafras or sassafran

gumbo filé
Measles
You must take sassafras tea.
Taylor recorded 185 SE Indian plants
Saururus cernuus
Lizard's Tail
z-herbe à Malo
z-herbe baume à l'eau
To cut teeth

Put some *lizard tail* in a glass of water. Mix in a little elm (shavings?). Change the water every day. Let the baby drink whenever thirsty.
<table>
<thead>
<tr>
<th>Plant ID</th>
<th>Latin Name</th>
<th>English Name</th>
<th>Plant Part</th>
<th>IL-1β</th>
<th>COX-2</th>
<th>iNOS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAHA 4-1</td>
<td><em>Baccharis halimifolia</em></td>
<td>Groundsel Bush</td>
<td>Stems and Leaves</td>
<td>xxx</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>CAAM 1-1</td>
<td><em>Callicarpa americana</em></td>
<td>Beautyberry</td>
<td>Berries</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>CELE 8-1</td>
<td><em>Celtis laevigata</em></td>
<td>Hackberry, Sugarberry</td>
<td>Bark</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>CRCA 1-1</td>
<td><em>Croton capitatus</em></td>
<td>Goat Weed</td>
<td>Leaves</td>
<td>xxx</td>
<td>-</td>
<td>x</td>
</tr>
<tr>
<td>ERHE 1-1</td>
<td><em>Erythrina herbacea</em></td>
<td>Coral Bean</td>
<td>Berries</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>MEAZ 10-1</td>
<td><em>Melia azedarach</em></td>
<td>Chinaberry</td>
<td>Leaves</td>
<td>x</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>MEAZ 10-2</td>
<td><em>Melia azedarach</em></td>
<td>Chinaberry</td>
<td>Stems</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>PEBO 5-1A</td>
<td><em>Persea borbonia</em></td>
<td>Red Bay</td>
<td>Old Leaves</td>
<td>xx</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>PEBO 5-1B</td>
<td><em>Persea borbonia</em></td>
<td>Red Bay</td>
<td>New Leaves</td>
<td>xxx</td>
<td>x</td>
<td>-</td>
</tr>
<tr>
<td>SACA 1-1</td>
<td><em>Sambucus canadensis</em></td>
<td>Elderberry</td>
<td>Inflorescences</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>SACA 1-2</td>
<td><em>Sambucus canadensis</em></td>
<td>Elderberry</td>
<td>Leaves</td>
<td>xx</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>SACA 1-3B</td>
<td><em>Sambucus canadensis</em></td>
<td>Elderberry</td>
<td>Young Stems</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>SACA 1-5</td>
<td><em>Sambucus canadensis</em></td>
<td>Elderberry</td>
<td>Inflorescences</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>SACA 2-1</td>
<td><em>Sambucus canadensis</em></td>
<td>Elderberry</td>
<td>Stems &amp; Inflorescences</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>SACE 3-1</td>
<td><em>Saururus cemuus</em></td>
<td>Lizard's Tail</td>
<td>Leaves</td>
<td>xxx</td>
<td>xx</td>
<td>-</td>
</tr>
<tr>
<td>SACE 3-2</td>
<td><em>Saururus cemuus</em></td>
<td>Lizard's Tail</td>
<td>Inflorescences</td>
<td>xxx</td>
<td>-</td>
<td>xx</td>
</tr>
<tr>
<td>SACE 3-3</td>
<td><em>Saururus cemuus</em></td>
<td>Lizard's Tail</td>
<td>Stems</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>SACE 3-4~</td>
<td><em>Saururus cemuus</em></td>
<td>Lizard's Tail</td>
<td>Roots</td>
<td>xxx</td>
<td>xx</td>
<td>x</td>
</tr>
<tr>
<td>SOAM 2-3~</td>
<td><em>Solanum americanum</em></td>
<td>American Black Nightshade</td>
<td>Green Berries</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>SOAM 2-4~</td>
<td><em>Solanum americanum</em></td>
<td>American Black Nightshade</td>
<td>Roots</td>
<td>xx</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

~ Cytotoxic, x: > 30% inhibition, xx: > 50% inhibition, xxx: > 90% inhibition
Figure 2. Boudreau et al.
Baccharis halimifolia L.; groundsel-tree, consumption-weed, mangolier, menguilié, manglier, mongrier, mango

For inflamed kidneys and fever
Boil menguilié and drink the water three times a day.
For “flu”

Boil three *menguilié* roots. Reduce the liquid by half, and add a good drink of whisky. Drink three cups without stopping.
For Fever
You make a tea with elderberry flowers and drink it.
MAMOU
Acadian Folklore,
Natural History,
and Botany of the
Mamou Plant,
Erythrina
herbacea L.
(Fabaceae)

William
Dean
Reese
(with the assistance
of Charles M. Allen)
For pneumonia

You boil mamou seeds in a little water. Drink a little coffee cup full every three hours.
Hibiscus lasiocarpus
guimauve
mallow, rose-mallow
Coqueliche
Fais la racine guilmauve bouilli dans dolo, et bois ein démi-verre trois fois par jour.

Whooping Cough
Boil mallow root in water, and drink a half-cup three times per day.

Rhime
Fait ein siro avéc la racine guilmauve, et bois ça trois fois par jou.

Cold
Make a syrup with the root of mallow, and drink it three times per day.
Modiola caroliniana
mauve
Bristle Mallow
Creeping Mallow
Enflamation

Fait ein cataplace avéc des féilles *siro*, avéc la *raquette* et avéc les *mauves* et mette ça si l’enflamation

Inflammation

Make a poultice with *elderberry* leaves, *prickly pear cactus*, and *bristle mallow*, and put that on the inflammation
Speck found 73 plant curatives among Houma
… gourd seeds are steeped to make an infusion taken internally for curing chills (p. 59).
Dan Moerman’s “Native American Ethnobotany”
http://herb.umd.umich.edu/
Xanthium strumarium L. var. Canadense

cockle bur
In Moerman’s Database …

*Xanthium strumarium var. canadense (P. Mill.) Torr. & Gray*
Canada Cocklebur; Asteraceae
Houma Drug (Febrifuge)
Decoction of root taken for high fever.
*Speck, Frank* G. 1941 *A List of Plant Curatives Obtained From the Houma Indians of Louisiana.* Primitive Man 14:49-75 (p. 60)
Render Louisiana French ethnolinguistic data into ethnomedical data.

Linguistic analysis and dialectal translation of Louisiana French term(s) into scientific nomenclature.

<table>
<thead>
<tr>
<th>Houma Creole</th>
<th>accrochée</th>
<th>/ɑkrətʃɛ/</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cajun French, var. 1</td>
<td>herbe coquin</td>
<td>/ɛəkətʃɛn/</td>
</tr>
<tr>
<td>Cajun French, var. 2</td>
<td>herbe coquin</td>
<td>/ɛəkəkɛn/</td>
</tr>
<tr>
<td>English</td>
<td>cockle bur</td>
<td></td>
</tr>
<tr>
<td>Scientific notation</td>
<td><em>Xanthium strumarium</em></td>
<td></td>
</tr>
</tbody>
</table>
Severe headache

You take four or five leaves of cockle bur, coat with vinegar and salt and apply to the head.
Bienvenu: Cockle Bur Remedy # 2

Mordire Serpent

mon din zen y3

To pren' ein ficelle avec nef brins,^2 to fais huit né^3
to qum ë fivel avec nef brins to fe fit me
en dans li pendant ta pé répétê-jambe, jambe, majaumbe,
s d fies ta pé népetê-35m z5m ma z5m
jambe, jaumbe giri.4 Lâ, to pren' tabac noir et di sel et pi
z5m z5m giri. Lâ to qum têbra mwar e di sel e pi
to fais ein cataplace et to met li en mordire-là. To cabe
to fe ë kataplas e to met li 3 mordir-là to kâl
fais ein cataplace avec des fêilles z'herbe coquin et di sel,
fe ë kataplas avec de fê zenê konê e di sel
c'est aussi bon.
se oai ls
Snake Bite

You take a string with nine strands, you make eight knots on it while saying, “leg, leg, my leg, leg, leg, my leg, heal.” Then you take black tobacco and salt and you make a plaster and put it on the bite.

You can make a plaster with cockle bur leaves and salt, that will work just as well.