



**PLANTERRA®**

Since 1973

# PLANTS THAT HEAL INDOOR THERAPEUTIC GARDENS

## CASE STUDY

### *Henry Ford Hospital West Bloomfield*

Nestled in 80 tranquil acres, the design of Henry Ford West Bloomfield Hospital was inspired by a northern Michigan lodge. The two atriums at Henry Ford Hospital are considered to be the lungs of the facility. Combined, the atriums have approximately 2,500 live plants, installed as a design-build project by Planterra.

### *Features of the Atrium:*

**Natural Views** All 300 inpatient rooms have views of nature overlooking the indoor atriums or the exterior woodlands surrounding the hospital.

**A Place of Refuge** Isolated from the Main Atrium, the Quiet Atrium is insulated from distracting noises as a place of rest, rejuvenation and meditation. This area includes intimate seating areas and an interfaith sanctuary.

**Privacy Screening** Plantings screen inpatient rooms which overlook the atriums. Isolated walking paths are integrated into the plan to provide for private, well-screened seating areas.

**Clean Air** Plants and trees with the highest toxin absorption rates were specified and planted, such varieties include the Peace Lily, Ficus and Boston Fern.

**A Community Venue** The Ravitz Foundation Main Atrium serves as a gathering place for patients, visitors, employees and the local community. The atrium contains an organic tea kiosk, a grand piano and ample space for events and fundraisers.

**Real, Live Plants** Management mandated that all plants be real to achieve the maximum healing benefits.

**Sanitized Plantings** All plantings were grown, isolated and acclimated according to specific standards that ensure sanitation. The plants and trees are planted with a sterilized, soil-free mix.

**Expert Care** The atriums are maintained under the supervision of senior horticultural specialists at Planterra using environmentally sound practices such as IPM management and sub-irrigation. Excellent maintenance is critical to delivering a healthy environment and long-term value.



Foliage on a winding walking path provides privacy and screening for patients.

**“ Plants bring nature inside the building so even in the off season times our community can still come here and be connected to nature and really take advantage of its healing affects.”**

– Gerard Van Grinsven, President and CEO,  
Henry Ford Hospital West Bloomfield



The Interfaith Sanctuary in the Quiet Atrium is a place for meditation and rejuvenation

Through the process of photosynthesis, plants absorb light, carbon dioxide and water to manufacture sugar. The byproduct of this complex process of chemical reactions is oxygen. Even in buildings with the most advanced air filtration systems, none manufacture oxygen - the vital ingredient for healthy, breathable air.

**CO<sub>2</sub>**

Pollutants in the air are absorbed through microscopic openings in leaves called stomata.

**Phytochemicals**

**H<sub>2</sub>O**

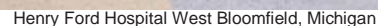
Water vapor and phytochemicals are emitted into the air through a process called transpiration.

Root microbes (e.g., *Pseudomonas* sp.) biodegrade the pollutants.

Convection currents caused by leaf transpiration pull pollutants to the root zone.

**Peace Lily**

Chemical	Sample 1 (Left)	Sample 2 (Right)
Acetone	20 dots	20 dots
Methyl	12 dots	12 dots
Ethyl acetate	10 dots	10 dots
Benzene	8 dots	8 dots
Ammonia	6 dots	6 dots
Trichloroethylene	4 dots	4 dots
Formaldehyde	3 dots	3 dots
Xylene	1 dot	1 dot





[illegible]

### Bioeffluent removal by the Peace Lily

Substance	Removal Percentage (%)
Ethyl alcohol	90
Acetone	80
Methyl alcohol	60
Ethyl acetate	30

◆ Bioeffluent removal per plant

Source:  
B.C Wolverton, *How To Grow Fresh Air*, Penguin New York 1996.

## A portrait of a middle-aged man with dark hair, smiling and looking towards the camera. He is wearing a light-colored, patterned suit jacket over a pink shirt and a dark tie. His right hand is raised near his face, with his index finger pointing upwards. The background is dark and out of focus, featuring some green foliage.

1. Ulrich RS. View through a window may influence recovery from surgery. *Science* 1984; 224:420-421.
2. Ulrich RS, Simons RF. Recovery from stress during exposure to everyday outdoor environments. 1986. In: Wineman J, Barnes R, Zimring C (eds.). *The cost of not knowing: Proceedings of the Seventeenth Annual Conference of the Environmental Design Research Association*. Environmental Design Research Association, Washington D.C.
3. Stiles J. 1995. PhD thesis at Oxford Brookes University, Oxford, England.



Established in 1973, Planterra is the leading interior landscape firm serving the healthcare industry. Planterra specializes in interior landscape consulting, design, installation and ongoing horticultural care. Known for personal service, high quality and exceptional specimen plants, Planterra is the preferred vendor among architects, interior designers and healthcare facilities professionals.



**PLANTERRA®**

Since 1973

**Planterra Corporation • 7315 Drake Rd. • West Bloomfield, MI • 48322 USA**  
**Toll-Free 866-322-4766**



@PlanterraPlants



@Planterra



/planterraplants



**866-322-4766**

©2018 Planterra Corporation



**www.planterra.com**

Photo Credit: Geoffrey George and Planterra