



The Inaugural

# Dermatology Entrepreneurship Conference

*an Advancing Innovation in Dermatology conference*

## MoleScope from MetaOptima

### Primary Point of Contact

Name: Vladimir Ratushny, MD

Company / Institution: MetaOptima

Address: 205 Kent St  
Apt 38  
Brookline, MA 2446  
United States

E-Mail Address: vratushny@gmail.com

Telephone: (516) 713-9622

The problem – Please define the dermatologic clinical problem worth solving, the current solutions, and the strengths and weaknesses of the current solutions.

Many methods for spectral analysis and imaging for the detection of skin cancer are in use or in development. These methods include optical, spectral and thermal imaging, visible and infrared, electromagnetic microwave, acoustic, magnetic, ultraviolet and X-rays. Following extensive review of the market we consider our direct competition to consist of professional and consumer products, none of which provide the range of features and functionality offered by MoleScope™. There are currently several professional high-definition imaging devices, which cost up to \$37,000. Notable market incumbents include MelaFind, MoleMate, HandyScope and Mole.

Your solution – Describe how your solution is it different and why is it valuable.

MoleScope™ has a unique advantage in the dermatology and oncology markets as it is the first solution that can be used by specialists, PCPs and patients. MetaOptima is the first company to offer an affordable, high quality comprehensive solution to managing the screening, diagnosis and monitoring of moles and melanomas. MetaOptima is developing a smartphone attachable dermatoscope, a cloud-based physician's portal and clinical software, and an analytical platform named DermEngine™ that integrates output from mobile dermatology devices with proprietary databases, analytics and visualization tools. Subscribers will be provided use of a sophisticated dermatology image search capability, evolution tracker and computer assisted diagnosis tools. The system will be expanded to support additional



The Inaugural

# Dermatology Entrepreneurship Conference

*an Advancing Innovation in Dermatology conference*

dermatological indications including chronic wounds, psoriasis, and eczema. The suite of technologies may be extended to fields such as ophthalmology, otoscopy, dentistry and mobile microscopy.

**Clinical hypothesis** Summarize the scientific or technical basis of the drug/device/diagnostic/other technology you are developing, and briefly provide evidence that support its approach as useful and feasible.

The use of mobile devices for medical applications is rapidly growing. Although smartphones contain digital cameras, the basic lens is incapable of capturing microscopy medical images. However, a custom external lens can improve image quality and ensure greater consistency with less dependence on user technique. With increasing image quality and software designed to take advantage of the growing computational power and affordability of smartphones, mHealth imaging has the potential to change the future of medical imaging. MetaOptima believes that dermatology is the ideal specialty for the application of mHealth as it necessitates an intervention that can encompass diagnostic ability, monitoring and after-care of skin lesions that can be improved by using objective measures. Case studies have shown the high sensitivity and specificity of mobile phone tele-dermoscopy to assess and monitor potentially malignant skin lesions. Similarly, the capacity for observing images taken on a smartphone has been extended to monitoring wound care in specialties including plastic surgery, assessment of burns, postoperative wounds, diabetic ulcers and bed sores. This would be of considerable benefit in rural and remote areas where there are challenges with accessing medical facilities and shortages of specialists.

**Product profile and development plan-** Describe the product (i.e. some information of what it is) and what stage it is in (e.g. concept, preclinical, prototyped, closed beta, etc. as applicable). Also please include the next major milestone (and costs to that milestone) in the product's development.

MetaOptima is developing two mini-microscopic high-resolution imaging devices: a smartphone-attachable model (MoleScope™ I) and a Wi-Fi-enabled standalone model (MoleScope™ Pro). MoleScope™ I: functionalities and manufacturing prototype complete, currently in clinical evaluation in 90 patients in Vancouver. Both devices are paired with a smartphone app, allowing consumers, patients and care providers to capture and share high quality microscopy images with specialists. The MoleScope™ patient app, cloud-based physician's portal and the clinical software are under development. MetaOptima is raising its first round of funding (\$750,000) at this time to accompany approximately \$500,000 of non-dilutive government, award and sponsorship funding received since the company began operations.

**Value of your solution –** What is your rough estimate of the yearly market revenue potential (and what are some for the basic assumptions underlying that estimate, e.g. this product could be used by X individuals per year, etc.).

2016 Projected Revenue: \$4,117,750 from Bundle Purchase (\$3.0 mil) + Patient Submissions (\$416,250) + Patient Subscription (\$575,000) + Doctor Subscription (\$126,500). This is based on the following assumptions: Patients: 23,000, Doctors: 46, Case submissions: 89,000. Patients/doctor/year: 500, Doctor fee per consultation: \$20, MetaOptima fee: \$15, Bundle fee (MoleScope, app, 3 consultations): \$150, Patient subscription fee per year: \$100 and consultation fee is \$35 (\$50 if consultation without subscription), physician subscription fee per year: \$500 Basic, \$5000 Premium.