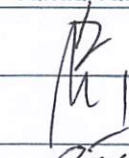
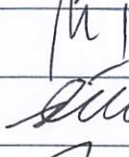
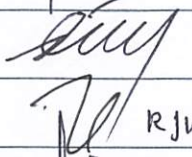
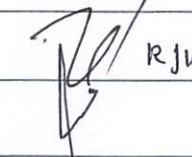
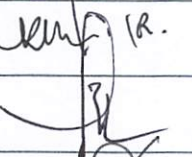
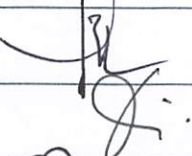
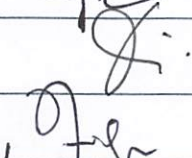
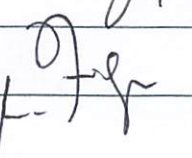
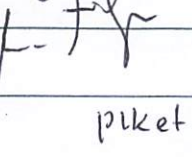
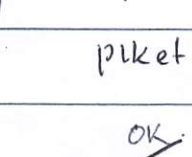
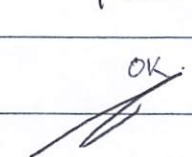
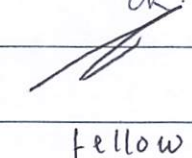
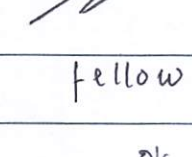
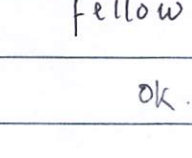
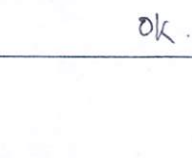


**DAFTAR HADIR**

Hari/ Tanggal : Sabtu, 13 November 2021  
 Waktu : 08.00 WIB – Selesai  
 Tempat : Ruang Rapat 1 Lt 3B  
 Acara : Rapat Rutin Staf Medis  
 Agenda : 1) presentasi: produc peran.

No.	Nama	Bagian	Jabatan	Tanda Tangan
1.	dr. Rita Tjandra, Sp.M	Komite Medik	Ketua	
2.	dr. Farida Moenir, Sp.M (K)	KSM Mata	Ketua	
3.	dr. Donny Whisnu Chandra, Sp.M	Divisi Vitreoretina	Staf Medis	
4.	dr. Noviana Kurniasari, Sp.M	Divisi Vitreoretina	Staf Medis	 Rju.
5.	dr. Ria Sylvia, Sp.M	Divisi Pediatrik dan Strabismus	Staf Medis	
6.	dr. Irma Praminiarti, Sp.M	Divisi Pediatrik dan Strabismus	Staf Medis	 R.
7.	dr. Sahata P.H. Napitupulu, Sp.M	Divisi Katarak dan Bedah Refraktif	Staf Medis	
8.	dr. Dini Dharmawidiarini, Sp.M (K)	Divisi Katarak dan Bedah Refraktif	Staf Medis	
9.	dr. Lydia Nuradianti, Sp.M (K)	Divisi Glaukoma	Staf Medis	
10.	dr. Dewi Rosarina, Sp.M	Divisi Glaukoma	Staf Medis	
11.	dr. Nur Alim Basyir H, Sp.M	Divisi Infeksi dan Imunologi	Staf Medis	 piket.
12.	dr. Yana Rosita, Sp.M (K)	Divisi Onkologi dan Rekonstruksi	Staf Medis	 OK.
13.	dr. Muh. Valeri Al Hakiim, Sp.M	Divisi Onkologi dan Rekonstruksi	Staf Medis	
14.	dr. Dedik Ipung Setiyawan, Sp.M	Oftalmologi Umum	Staf Medis	 fellow
15.	dr. Dyah Kusuma Arnovita, Sp.M	Oftalmologi Umum	Staf Medis	 OK.





**RS MATA  
UNDAAN**

## NOTULEN

**TANGGAL** : Jumat, 13 November 2021  
**WAKTU** : 08.00 WIB - Selesai  
**TEMPAT** : Ruang Rapat 1 Lt 3B  
**AGENDA RAPAT** : Presentasi produk Feron  
**PEMIMPIN RAPAT** : Dr. Farida Moenir, Sp.M  
**NOTULIS** : Eny Kustiyaningsih, Amd.Kep  
**JUMLAH PESERTA** : 12 Orang.  
**TIDAK HADIR** : Piket 2 orang, RJK 1 Orang, Operasi 2 orang, Fellow 1 orang  
**PEMBAHASAN** : 1. Presentasi Produk Feron

Rapat dibuka oleh dr. Farida Moenir, Sp.M

- Presentasi dari Feron dimulai.
- Materi ada.

**HASIL RAPAT** :

**TINDAK LANJUT** : -

PEMIMPIN RAPAT,

( dr. Farida Moenir, Sp.M )

NOTULIS,

( Eny Kustiyaningsih, Amd.Kep )

**Innovation,  
Quality and  
Care**

**fe  
FERRON**

Indonesian Pharma Company  
with International Standard

www.ferron-pharma.com

Company Profile

### Profil Ferron Par Pharmaceuticals

<p>Kawasan Industri Jababeka I, Cikarang, Jawa Barat</p>	<p>400 karyawan di Ferron Site Cikarang</p>	<p>Produksi karya anak bangsa Ferron Par Pharmaceuticals baik Manufaktur dan Proses Pengujian (R&amp;D) Obat Medika dan uji klinik oleh pemerintah (Eudima)</p>
<p>Luas Lahan : 18,900 m<sup>2</sup> Fungsi Lahan : 10,500 m<sup>2</sup></p>	<p>70 karyawan bersertifikat farmasis</p>	<p>90 produk, 240 SKU farmasi</p>
<p>Luas Bangunan : 12,950 m<sup>2</sup> Gudang : 2,750 m<sup>3</sup> Fabrik : 4,600 m<sup>3</sup> Laboratorium : 1,400 m<sup>3</sup> Kantor dan utilitas lainnya : 4,200 m<sup>3</sup></p>	<p>2-3 shift operasional</p>	<p>Ekspor produk ke Eropa</p> <ul style="list-style-type: none"> <li>* Produk pengembangan</li> <li>* Outs Development Center</li> <li>* Produk formula partner</li> </ul>

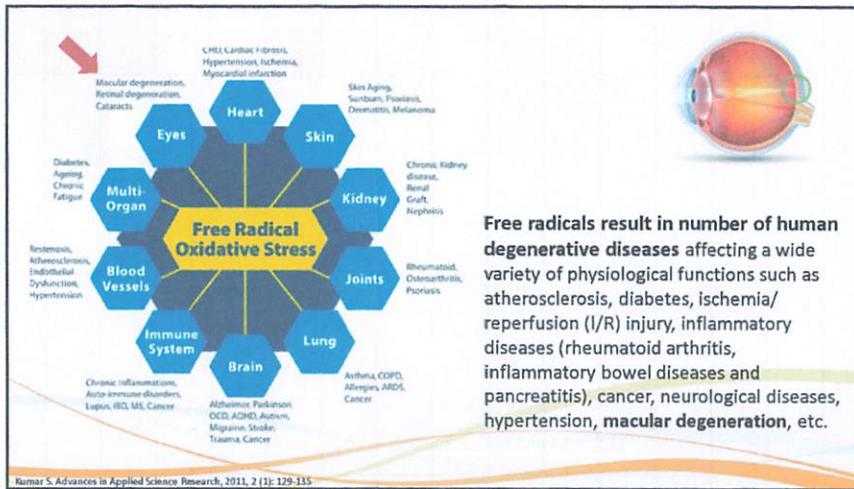
### Certification

- 2002 : GMP Certification BPOM RI
- 2003 : ISO 9001-2000 SGS
- 2008 : GMP Certification UK MHRA
- 2015 : CPBBAOB (Cara Pembuatan Bahan Baku Aktif Obat yang Baik)
- 2019 : Sistem Jaminan Halal

# OPTIMAX **PREMIO**

Scientific Communication  
Medical Information Management

35	Sofiatin	Bagian Keuangan dan Akuntansi			
36	Bagus Prasetyo, A.Md.PK	PJK			
37	Eka Puji Lestari, S.KM	PJK			
38	Erwin Krestianto, A.Md.PK	PJK			
39	Muhammad Arif Budiono, S.KM	PJK			
40	Nikmatus Sholihah, A.Md. K.L	PJK			
41	Ni'matul Aziza, A.Md.Keb	PJK			
42	Bimoadi Wicaksono, S.I.Kom	Humas dan Pemasaran			
43	Bramantia Anggara Putra, SE	Humas dan Pemasaran			
44	Muhammad Adrian Reynald Sukma Adhy, S.I.Kom	Humas dan Pemasaran			
45	Akhmad Dzulfiqri, S.Tr.TEM	IPSRS			
46	Hadi Santoso	IPSRS			
47	Nur Huda	IPSRS			
48	Riadi	IPSRS			
49	Sudarto, S.T	IPSRS			
50	Wawan Supra Wismana, S.KM	Sanitasi dan Lingkungan			
51	Boiran	Sanitasi dan Lingkungan			
52	Defi Fajar Risman, A.Md.K.L	Sanitasi dan Lingkungan			
53	Eko Rahayu	Sanitasi dan Lingkungan			
54	El Hanim Majajah	Sanitasi dan Lingkungan			
55	Sugiarti	Sanitasi dan Lingkungan			
56	Suhartini	Sanitasi dan Lingkungan			
57	Edi Susanto, A.Md.Si	SIRS			
58	Fiki Hafiz Alfarisi, S.Kom	SIRS			
59	Anton Suharto Putro, A.Md.Farm	FARMASI			
60	Antonius Bayu Aribowo, S.Farm., Apt	FARMASI			
61	Apriliani Nurhasana Budiarti, A.Md.Farm	FARMASI			
62	Ayu Ajeng Wendari	FARMASI			
63	Dany Kurniawati	FARMASI			
64	Fendi Setiyanto	FARMASI			
65	Lury Yundarti	FARMASI			
66	Weni Safitri	FARMASI			
67	Yeni Agustinah, S.Farm	FARMASI			
68	Yessika Meike Permatasari	FARMASI			
69	Yuyun Rahmadian, A.Md.Farm	FARMASI			
70	Adi Hariyono	GIZI			
71	Ahmanad Rino Hariyansyah	GIZI			



### The role disease in the development of eye diseases

- **Cataract and age-related macular degeneration (AMD)** are the major causes of vision impairment and blindness worldwide
- Both conditions are **strongly age-related** with earlier signs (usually asymptomatic) occurring in middle age and becoming severer and more prevalent with increasing age
- The aetiology of these conditions is thought to fit with the 'free radical theory' of ageing which postulates that ageing and age-related diseases result from the **accumulation of cellular damage from reactive oxygen species (ROS)**

Ophthalmic Res. 2010;44(1):191-6

### Age-related Macular Degeneration

- AMD is a disease affecting the central area of the retina resulting in loss of central vision
- In its advanced form, AMD can occur in two distinct forms: dry (atrophic, nonexudative) and wet (exudative)

Current Opinion in Clinical Nutrition and Metabolic Care 2010, 13:28-33

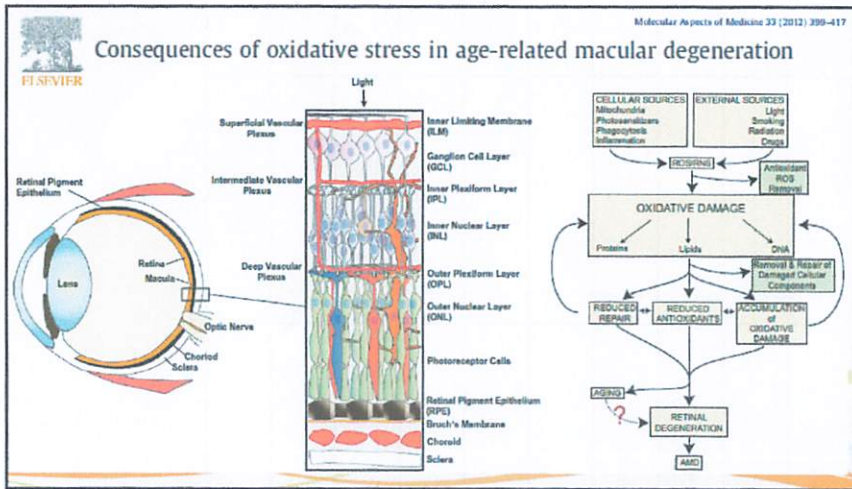
### Age-related Macular Degeneration

- The main risk factors for the development of AMD are aging, ethnicity, genetics and environmental insults, including cigarette smoking, high fat diet and light-induced photooxidative reactions
- Aging, cigarette smoking and photo-oxidative reactions share the capacity to increase in ROS generation and promote oxidative stress

Bellezza J (2018) Oxidative Stress in Age-Related Macular Degeneration: Nrf2 as Therapeutic Target. Front. Pharmacol. 9:1280.

**TANDA TERIMA SERAGAM BATIK KARYAWAN  
RUMAH SAKIT MATA UNDAAN SURABAYA**

NO	NAMA	SUB BAGIAN/UNIT/INSTALASI	CELANA	KEMEJA	JILBAB
1	Rizqiyah, S.KM	Sub Bagian Tata Usaha			
2	Eny Kustiyarningsih, A.Md.Kep	Sub Bagian Tata Usaha			
3	Zendy Dwi Putra, S.H	Sub Bagian HRD			
4	Shofia Fatkurrotin, S.Kom	SPI			
5	Andri Permadi	Sub Bagian Rumah Tangga			
6	Ginanjar Sugeng Ristyadi	Sub Bagian Rumah Tangga			
7	Ita Susanna	Sub Bagian Rumah Tangga			
8	R. Hery Widarijanto	Sub Bagian Rumah Tangga			
9	Ulwiyatul Musyarofah	Sub Bagian Rumah Tangga			
10	Ahmad Rhomadoni	PPRM			
11	Alvi Istiqomah, A.Md.RMIK	PPRM			
12	Andhika Romadhoni	PPRM			
13	Aula Dina Rahmah, S.Tr.Kes	PPRM			
14	Desi Linda Kusumawati, S.ST	PPRM			
15	Endang Isbandiah	PPRM			
16	Hartono, S.Ag	PPRM			
17	I Gusti Made Diatmika	PPRM			
18	Mas'ud	PPRM			
19	Moch. Zainal Abidin	PPRM			
20	Rosita Palupi Ningtyas	PPRM			
21	Siti Mailana	PPRM			
22	Sri Puntolorukmi Prasetyo	PPRM			
23	Sugeng Hari Wibowo	PPRM			
24	Udin Apriliansyah, S.S.T	PPRM			
25	Amal Okky Prahasto, S.E	Bagian Keuangan dan Akuntansi			
26	Anis Yuliati, A.Md	Bagian Keuangan dan Akuntansi			
27	Fitrananda Kenate, S.Sos	Bagian Keuangan dan Akuntansi			
28	Irfah Kharisma Cahyani	Bagian Keuangan dan Akuntansi			
29	Jaja Nurjanah	Bagian Keuangan dan Akuntansi			
30	Muchammad Baihaqi, S.A	Bagian Keuangan dan Akuntansi			
31	Nurhayati	Bagian Keuangan dan Akuntansi			
32	Reni Apriliya Ningsih., S.E	Bagian Keuangan dan Akuntansi			
33	Rizad Dhirotsaka, S.Pd	Bagian Keuangan dan Akuntansi			
34	RR. Mia Agustina, S.Mn	Bagian Keuangan dan Akuntansi			



## Cataract

- Cataracts are when the lens, a small transparent disc inside your eye, develops cloudy patches
- The major causes for cataract formation are free radicals, and these free radicals are neutralized by the presence of endogenous antioxidants in the eye
- The fact that oxidation of the lens is a contributing cause for cataracts suggests that antioxidants may play a positive role in cataract prevention

The image shows two eyes. The top eye is labeled 'Healthy eye' and has a clear, bright blue iris. The bottom eye is labeled 'Eye with cataract' and has a cloudy, greyish patch over the iris, indicating the presence of a cataract.

Free Radic Res 2013 May;47(5):337-45  
<https://www.ncbi.nlm.nih.gov/pubmed/23714014>  
 Nutrifoods (2015) DOI 10.1007/s13749-015-0014-0

# OPTIMAX PREMIO

Each soft capsule contains:

Vitamin C	250 mg
Vitamin E	200 IU
Lutein	5 mg
Zeaxanthin	1 mg
Zinc	12.5 mg

Scientific Communication  
 Medical Information Management

## Lutein, Zeaxanthin, & the Macular Pigment

### Biological function of lutein & zeaxanthin

- Light absorption
- Protection against oxidative stress
- Protection against oxidative stress
- **Role in visual health:** visual acuity, contrast sensitivity, photostress recovery and glare reduction, visual processing speed, dark adaptation
- Other functions (e.g. play a role in cell-to-cell communication)

Cross-section of a primate retina. In the macula, photographed in either white or blue light, indicating macular pigment (composed of lutein, zeaxanthin, and meso-zeaxanthin) in retinal layers and its absorption of blue light from macular pigment. Figure adapted with permission from the *American Journal of Clinical Nutrition* and D. Max Swackherly (1979).

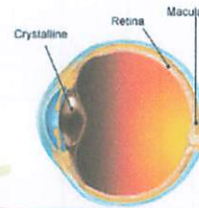
Annu Rev Nutr. 2016 July 17; 36: 571-601



158	Soedjiati	Rawat Jalan		
159	Sori Sumarno, A.Md.RO	Rawat Jalan		
160	Sri Haryati, A.Md.RO	Rawat Jalan		
161	Susi Susanti, A.Md.RO	Rawat Jalan		
162	Thresia Lingga Waraastuti, S.Kep., Ns	Rawat Jalan		
163	Ulayya, S.E	Rawat Jalan		
164	Winarsih, A.Md.Kep	Rawat Jalan		
165	Zidni Taqwim, S.Kep., Ns	Rawat Jalan		
166	Ahmad Rofiq, A.Md.Kep	Penunjang Medis		
167	Amana Dana Permata, S.Kep., Ns	Penunjang Medis		
168	Darwin Indah Sulistyowati, A.Md.Kep	Penunjang Medis		
169	Emi Trisilowati, A.Md.Kep	Penunjang Medis		
170	Erliana Damayanti, S.Kep., Ns	Penunjang Medis		
171	Firmansyah Putra Nuryar, A.Md.A.K	Penunjang Medis		
172	Gabella Yulya Esterlitha, A.Md.A.K	Penunjang Medis		
173	Harmanto	Penunjang Medis		
174	Kuncoro Jakti, S.E	Penunjang Medis		
175	Maria Pebrianty Simamora, A.Md.A.K	Penunjang Medis		
176	Sri Yani, A.Md.Kep	Penunjang Medis		
177	Sumaryati., Amd.RO	Penunjang Medis		
178	Wiskha Dany Firawan, S.Kep., Ns	Penunjang Medis		
179	Miftakhul Huda, S.Kep., Ns	LASIK		
180	Pristanto Dwibyantoro, A.Md.RO	LASIK		
181	Ranti Purbani Suryandari	LASIK		
182	Efani Dwi Khoirunnisa, S.Kep., Ns	IGD		
183	Lailatul Chabriah Safitri, S.Kep., Ns	IGD		
184	Matsihan, S.Kep., Ns	IGD		

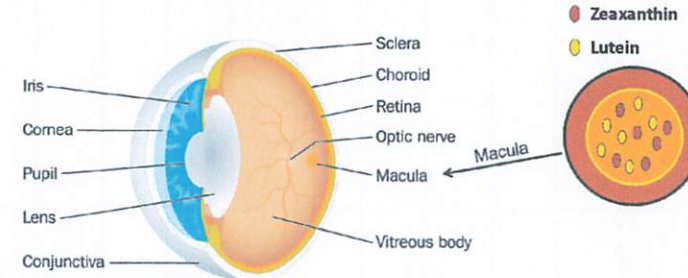
## Lutein, Zeaxanthin, & the Macular Pigment

- Lutein & zeaxanthin are predominant carotenoids of the macular pigment
- Macular pigment is important for optimal visual function → protects against light-induced retinal damage and because of the anti-inflammatory and antioxidant activities of MP's constituent carotenoids
- Supplementation with lutein and zeaxanthin augments MP and enhances visual performance in diseased and non-diseased eyes, and may reduce risk of AMD development and/or progression



Nutrients. 2013 Jun; 5(6): 1962-1969

## Lutein, Zeaxanthin, & the Macular Pigment



Nutrients. 2013 Jun; 5(6): 1962-1969

Nutrition Research Reviews (2007), 20, 163-179

### Macular zeaxanthins and lutein – a review of dietary sources and bioavailability and some relationships with macular pigment optical density and age-related macular disease

Thus the lutein:zeaxanthin ratio in vegetables (36:1) and fruits (3-5:1) differs considerably and fruit consumption rather than vegetables is likely to have a larger impact on zeaxanthin consumption in humans. It is reported that the lutein:zeaxanthin ratio in the diet in the USA is 5:1 based on the USDA data<sup>30</sup> while in Europe reports indicate 5-5:1 in fresh fruit and vegetables consumed in a large Spanish survey<sup>31</sup>, 15:1 in the diet of young, type I diabetics and 8:1 in that of age- and sex-matched controls<sup>32</sup>.

**Lutein:zeaxanthin ratio of 5:1 is optimal to maintain visual health**

### Intakes of Lutein, Zeaxanthin, and Other Carotenoids and Age-Related Macular Degeneration During 2 Decades of Prospective Follow-up

**Results**—We confirmed 1361 incident intermediate and 1118 advanced AMD cases (primarily neovascular AMD) with a visual acuity of 20/30 or worse by medical record review. Comparing extreme quintiles of predicted plasma lutein/zeaxanthin score, we found a risk reduction for advanced AMD of about 40% in both women and men (pooled relative risk comparing extreme quintiles = 0.59; 95% CI, 0.48-0.73; *P* for trend < .001). Predicted plasma carotenoid scores for other carotenoids, including β-cryptoxanthin, α-carotene, and β-carotene, were associated with a 25% to 35% lower risk of advanced AMD when comparing extreme quintiles. The relative risk comparing extreme quintiles for the predicted plasma total carotenoid index was 0.65 (95% CI, 0.53-0.80; *P* for trend < .001). We did not identify any associations of carotenoids, either as predicted plasma score or calculated intake, with intermediate AMD.

**Conclusions and Relevance**—Higher intake of bioavailable lutein/zeaxanthin is associated with a long-term reduced risk of advanced AMD. Given that some other carotenoids are also associated with a lower risk, a public health strategy aimed at increasing dietary consumption of a wide variety of fruits and vegetables rich in carotenoids may reduce the incidence of advanced AMD.

- Age-related macular degeneration (AMD) is the leading cause of blindness in the developed world
- Higher intake of bioavailable lutein/zeaxanthin is associated with a long-term reduced risk of advanced AMD

JAMA Ophthalmol. 2015 December ; 133(12): 1415-1424

126	Suci Sutioningsih, S.Kep., Ns	Rawat Inap		
127	Syahrul Amin, A.Md.Kep	Rawat Inap		
128	Syaiful Rachmad, S.Kep., Ns	Rawat Inap		
129	Windy Ery Tamara, A.Md.Kep	Rawat Inap		
130	Yanti, S.Kep., Ns	Rawat Inap		
131	Yulia Santi Setyorini, A.Md.Kep	Rawat Inap		
132	Zainab, S.Kep., Ns	Rawat Inap		
133	Ahmad Ilham Wahyudi, S.Kep., Ns	Rawat Jalan		
134	Ahmad Sabiq Hidayat, A.Md.RO	Rawat Jalan		
135	Amirul Mu'minin	Rawat Jalan		
136	Anang Herlandho	Rawat Jalan		
137	Anggoro Rubyanto, A.Md.RO	Rawat Jalan		
138	Bagus Dwi Prayogo	Rawat Jalan		
139	Ermawati, A.Md.Kep	Rawat Jalan		
140	Eva Andriyanti, A.Md.RO	Rawat Jalan		
141	Even Tirtasari, A.Md.Kep	Rawat Jalan		
142	Fathor Rahman, S.E	Rawat Jalan		
143	Fitri Rusdiana, A.Md.Kep	Rawat Jalan		
144	Hani Riasari, A.Md.Kep	Rawat Jalan		
145	Hendrawati, A.Md.RO	Rawat Jalan		
146	Iva Rohmawati, S. Kep., Ns	Rawat Jalan		
147	Kris Widyawati, S.Kep., Ns	Rawat Jalan		
148	Kukuh Hari Prayogo, S.Kep., Ns	Rawat Jalan		
149	Mahmudah Wahyu Fitriani, A.Md.RO	Rawat Jalan		
150	Muhamad Rohmat Rofi'i, A.Md.RO	Rawat Jalan		
151	Muhammad Ibrohim, S. Kep., Ns	Rawat Jalan		
152	Nadhifatul Aini	Rawat Jalan		
153	Novita Kristiani, S.Kep., Ns	Rawat Jalan		
154	Nur Yuliatiningsih, A.Md.Kep	Rawat Jalan		
155	Selfi Seftian Windarti, A.Md.RO	Rawat Jalan		
156	Siti Laely Rochmah, S.Kep., Ns	Rawat Jalan		
157	Siti Rochmah, A.Md.Kep	Rawat Jalan		

## Zinc for the Prevention and Treatment of Age-Related Macular Degeneration

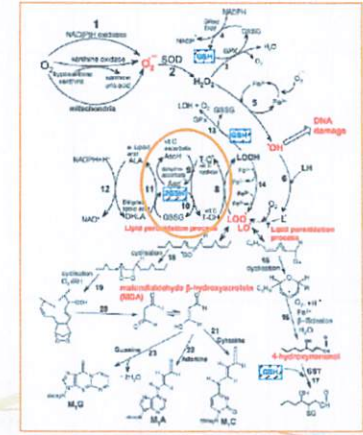
- Zinc has been proposed to have a role in AMD prevention because of its structural role in antioxidant enzymes
- Zinc is found in high concentrations in regions of the retina that are affected by AMD
- Retinal zinc content has been known to decline with age
- Decreased zinc is associated with impaired body's antioxidant capacity → Zn is cofactor of SOD enzyme & participate in GSH metabolism



Invest Ophthalmol Vis Sci. 2013;54:3985-3998. DOI:10.1167/inv.12-11552

## The role of vitamins in antioxidant defenses

- Vitamin C and vitamin E are major antioxidant vitamins (non-enzymatic)
- Under normal conditions, there is a balance between both the activities and the intracellular levels of these antioxidants. **This balance is essential for the survival of organisms and their health**



<https://www.webmd.com/food-recipes/antioxidants-you-immune-system-super-foods-optimal-health>  
 M Valko et al. The International Journal of Biochemistry & Cell Biology 2007; 39:44-84  
 Pham Huu, et al. Int J Biomed Sci 2008;4(2): 389-406

## The Diabetes Visual Function Supplement Study (DiVFuSS)

**Background** Diabetes is known to affect visual function before onset of retinopathy (diabetic retinopathy (DR)). Protection of visual function may signal disruption of mechanisms underlying DR.

**Methods** This was a 6-month randomised, controlled clinical trial of patients with type 1 and type 2 diabetes with no retinopathy or mild to moderate non-proliferative retinopathy assigned to twice daily consumption of placebo or a novel, multi-component formula containing xanthophyll pigments, antioxidants and selected botanical extracts. Measurement of contrast sensitivity, macular pigment optical density, colour discrimination, 5-2 macular threshold perimetry, Diabetic Peripheral Neuropathy Symptoms, foveal and retinal nerve fibre layer thickness, glycohaemoglobin (HbA1c), serum lipids, 25-OH-vitamin D, tumour necrosis factor α (TNF-α) and high-sensitivity C reactive protein (hsCRP) were taken at baseline and 6 months. Outcomes were assessed by differences between and within groups at baseline and at study conclusion using mean ± SDs and t tests (p<0.05) for continuous variables.

**Results** There were no significant intergroup differences at baseline. At 6 months, subjects on active supplement compared with placebo had significantly better visual function on all measures (p values ranging from 0.008 to <0.0001), significant improvements in most serum lipids (p values ranging from 0.01 to 0.0004), hsCRP (p=0.01) and diabetic peripheral neuropathy (Fisher's exact test, p=0.0024). No significant changes in retinal thickness, HbA1c, total cholesterol or TNF-α were found between the groups.

**Conclusions** This study provides strong evidence of clinically meaningful improvements in visual function, hsCRP and peripheral neuropathy in patients with diabetes, both with and without retinopathy, and without affecting glycaemic control.

**Better visual performance was observed for all measures in the supplemented group (containing lutein, zeaxanthin, and antioxidants)**

Chen JP, et al. J Ophthalmol 2016; 150:272-278. doi:10.1167/jop.1500272

## NIH National Eye Institute AREDS/AREDS2 Frequently Asked Questions

### Which AREDS/AREDS2 formula is right for me?

Consult your doctor or eye care professional about which supplement, if any, is right for you.

Commercially available formulas based on AREDS/AREDS2

Nutrient	AREDS formula*	AREDS2 formula
Vitamin C	500 mg	500 mg
Vitamin E	400 IU	400 IU
Beta-carotene	15 mg	-
Copper (cupric oxide)**	2 mg	2 mg
Lutein	-	10 mg
Zeaxanthin	-	2 mg
Zinc	80 mg	80 mg


\*Not recommended for current or former smokers

\*\*Added to avoid zinc-related copper deficiency

mg = milligrams

IU = International units

94	Rizal Maulana, S.Kep., Ns	Kamar Operasi		
95	Seppya Endriani, A.Md.Kep	Kamar Operasi		
96	Sulastri Ningsih, S.Kep., Ns	Kamar Operasi		
97	Suwarto	Kamar Operasi		
98	Tri Arganita, S.Kep., Ns	Kamar Operasi		
99	Wahyu Dian Puspa, A.Md.Kep	Kamar Operasi		
100	Zuli Nur Aida, A.Md.Kep	Kamar Operasi		
101	Achmad Rifqi Fuadi, S.Kep., Ns	Rawat Inap		
102	Adam Malik, A.Md.Kep	Rawat Inap		
103	Ainul Masrurroh, S.Kep., Ns	Rawat Inap		
104	Aji Galih Nur Pratomo, S. Kep., Ns	Rawat Inap		
105	Aprilia Eka Santi	Rawat Inap		
106	Arista Suelfid Desy Panglipur, A.Md.Kep	Rawat Inap		
107	Ayuk Megarisma, S.Kep., Ns	Rawat Inap		
108	Bagus Imam Santosa, S.Kep., Ns	Rawat Inap		
109	Devi Oktavianti, S.Kep., Ns	Rawat Inap		
110	Dian Erlita Sari, A.Md.Kep	Rawat Inap		
111	Dian Widya Anitasari, S.Kep., Ns	Rawat Inap		
112	Eri Yavie Ramadhani, S.Kep., Ns	Rawat Inap		
113	Fajar Aryan Pratama, S.Kep., Ns	Rawat Inap		
114	Fatika Maulidyah Yuwanto, S.Kep., Ns	Rawat Inap		
115	Febyana Dwi Cahyanti, S.Kep., Ns	Rawat Inap		
116	Hafiz Arman Zulfy, A.Md.Kep	Rawat Inap		
117	Ihda Maulida Muhajjah, S.Kep., Ns	Rawat Inap		
118	Jeffry Chairdyansyah, S.Kep., Ns	Rawat Inap		
119	Joko Susanto, S.Kep., Ns	Rawat Inap		
120	Moh. Guntur Arifandi, S.Kep., Ns	Rawat Inap		
121	Muhammad Nur Gantang	Rawat Inap		
122	Nidhommudin, S.Kep, Ns	Rawat Inap		
123	Raden Ahmad Joko Sumotrikromo Laksono, S.Kep., Ns	Rawat Inap		
124	Ramadani	Rawat Inap		
125	Rumiyati, S.Kep., Ns	Rawat Inap		




# OPTIMAX **PREMIO**

## PRODUCT PROFILE

Each soft capsule contains:


Vitamin C	250 mg
Vitamin E	200 IU
Lutein	5 mg
Zeaxanthin	1 mg
Zinc	12.5 mg



# OPTIMAX **PREMIO**

**KEGUNAAN:**  
Suplemen untuk membantu memelihara kesehatan mata.


**KONTRAINDIKASI:**  
Pasien yang hipersensitif terhadap zat aktif atau komponen yang terkandung di dalam sediaan OPTIMAX PREMIO.



# OPTIMAX **PREMIO**

**PETUNJUK PENGGUNAAN:**  
Dewasa:  
2 kapsul lunak per hari bersama makan atau sesuai petunjuk dokter.

Gunakan beberapa jam sebelum atau beberapa jam setelah menggunakan obat lainnya.




# OPTIMAX **PREMIO**

**PERINGATAN & PERHATIAN:**  
Penggunaan zinc dengan dosis 30 mg perhari secara umum aman digunakan. Penggunaan jangka panjang dan dosis yang lebih besar dapat menyebabkan gangguan saluran cerna dan defisiensi tembaga.

**EFEK SAMPING:**  
Tidak ada efek samping yang serius pada dosis lazim yang dianjurkan.

**INTERAKSI OBAT:**  
Penggunaan bersama zinc dengan tetracycline atau antibiotik quinolone atau penicillamine dapat menurunkan absorpsi keduanya. Penggunaan suplemen zinc dan tetracycline atau antibiotik quinolone atau penicillamine harus diberi jarak waktu setidaknya 2 jam.

62	Apriliani Nurhasana Budiarti, A.Md.Farm	FARMASI		
63	Ayu Ajeng Wendari	FARMASI		
64	Dany Kurniawati	FARMASI		
65	Fendi Setiyanto	FARMASI		
66	Lury Yundarti	FARMASI		
67	Weni Safitri	FARMASI		
68	Yeni Agustinah, S.Farm	FARMASI		
69	Yessika Meike Permatasari	FARMASI		
70	Yuyun Rahmadian, A.Md.Farm	FARMASI		
71	Adi Hariyono	GIZI		
72	Ahmanad Rino Hariyansyah	GIZI		
73	Anis Wahyu Minarti	GIZI		
74	Arizta Primadiyanti, S.Gz, Dietisien	GIZI		
75	Eko Bagus Prastya	GIZI		
76	Ely Kurnilasari, A.Md.Gz	GIZI		
77	Alfilia Mariana, S.Kep., Ns	Kamar Operasi		
78	Anggi Surya Arsana, A.Md.Kep	Kamar Operasi		
79	Anik Mustikowati, A.Md.Kep	Kamar Operasi		
80	Aviati Faradhika, S.Kep., Ns	Kamar Operasi		
81	Dian Hadi Kuncoro, S.Kep., Ns	Kamar Operasi		
82	Elly Elvira, S.Kep., Ns	Kamar Operasi		
83	Fachrozi, S.Kep., Ns	Kamar Operasi		
84	Fajar Santoso, S.Kep., Ns	Kamar Operasi		
85	Habibiy, S.Kep	Kamar Operasi		
86	Ida Haryanti., A.Md.Kep	Kamar Operasi		
87	Khotimatul Husnah, A.Md.Kep	Kamar Operasi		
88	Luqman Hakim	Kamar Operasi		
89	Machmud Abu Bakar, S.Kep., Ns	Kamar Operasi		
90	Mas Achmad Malik Apriyan, A.Md.Kep	Kamar Operasi		
91	Maya Puspa Indasari, S.Kep., Ns	Kamar Operasi		
92	Murtiani, A.Md.Kep	Kamar Operasi		
93	Rahman Hakim, A.Md.Kep	Kamar Operasi		



# OPTIMAX **PREMIO**

**PENYIMPANAN:**  
Simpan pada suhu di bawah  
25°C, di tempat  
kering, terlindung dari cahaya



# OPTIMAX **PREMIO**

*Thank  
you*

Scientific Communication  
Medical Information Management 



30	Muchammad Baihaqi, S.A	Bagian Keuangan dan Akuntansi		
31	Nurhayati	Bagian Keuangan dan Akuntansi		
32	Reni Apriliya Ningsih., S.E	Bagian Keuangan dan Akuntansi		
33	Rizad Dhirotsaka, S.Pd	Bagian Keuangan dan Akuntansi		
34	RR. Mia Agustina, S.Mn	Bagian Keuangan dan Akuntansi		
35	Sofiatin	Bagian Keuangan dan Akuntansi		
36	Bagus Prasetyo, A.Md.PK	PJK		
37	Eka Puji Lestari, S.KM	PJK		
38	Erwin Krestianto, A.Md.PK	PJK		
39	Muhammad Arif Budiono, S.KM	PJK		
40	Nikmatus Sholihah, A.Md. K.L	PJK		
41	Ni'matul Aziza, A.Md.Keb	PJK		
42	Bimoadi Wicaksono, S.I.Kom	Humas dan Pemasaran		
43	Bramantia Anggara Putra, SE	Humas dan Pemasaran		
44	Muhammad Adrian Reynald Sukma Adhy, S.I.Kom	Humas dan Pemasaran		
45	Sudarto	IPSRS		
46	Akhmad Dzulfiqri, S.Tr.TEM	IPSRS		
47	Hadi Santoso	IPSRS		
48	Nur Huda	IPSRS		
49	Riadi	IPSRS		
50	Sudarto, S.T	IPSRS		
51	Wawan Supra Wismana, S.KM	Sanitasi dan Lingkungan		
52	Boiran	Sanitasi dan Lingkungan		
53	Defi Fajar Risman, A.Md.K.L	Sanitasi dan Lingkungan		
54	Eko Rahayu	Sanitasi dan Lingkungan		
55	El Hanim Majahah	Sanitasi dan Lingkungan		
56	Sugiarti	Sanitasi dan Lingkungan		
57	Suhartini	Sanitasi dan Lingkungan		
58	Edi Susanto, A.Md.Si	SIRS		
59	Fiki Hafiz Alfarisi, S.Kom	SIRS		
60	Anton Suharto Putro, A.Md.Farm	FARMASI		
61	Antonius Bayu Aribowo, S.Farm., Apt	FARMASI		



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Quality and  
Care**

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Indonesian Pharma Company  
with International Standard

www.ferron-pharma.com

Company Profile

### Inovasi Anak Bangsa di Industri Riset Farmasi



**dexa group**

- Solid & Cephalosporin Production  
PT. Dexa Medica Palembang
- Titan Center Office Building  
Bintaro
- National Distribution Center  
PT. Anugrah Higien Medica Cikarang
- Solid, Liquid, Injectables & API Production  
PT. Ferron Pari Pharmaceutical Cikarang
- Oncology Injectable Production  
PT. Fonku International Cikarang
- Dexa Development Center  
PT. Dexa Medica Cikarang
- DLBS Research & API Production  
PT. Dexa Medica Cikarang
- Solid Production  
PT. Beta Pharmason Karawang

### Inovasi Anak Bangsa di Industri Riset Farmasi



**dexa group**

Per 2020 telah dilengkapi dengan:

- Fasilitas mesin tetes mata botol 5 ml
- Fasilitas mesin minicose

- Solid & Cephalosporin Production  
PT. Dexa Medica Palembang
- Oncology Injectable Production  
PT. Fonku International Cikarang
- Solid, Liquid, Injectables & API Production  
PT. Ferron Pari Pharmaceutical Cikarang
- Oncology Injectable Production  
PT. Fonku International Cikarang
- Dexa Development Center  
PT. Dexa Medica Cikarang
- DLBS Research & API Production  
PT. Dexa Medica Cikarang
- Solid Production  
PT. Beta Pharmason Karawang

### Certification

- 2002 : GMP Certification BPOM RI
- 2003 : ISO 9001-2000 SGS
- 2008 : GMP Certification UK MHRA
- 2015 : CPBBAOB (Cara Pembuatan Bahan Baku Aktif Obat yang Baik)
- 2019 : Sistem Jaminan Halal



**TANDA TERIMA SERAGAM BATIK KARYAWAN  
RUMAH SAKIT MATA UNDAAN SURABAYA**

NO	NAMA	SUB BAGIAN/UNIT/INSTALASI	TANDA TANGAN	TANGGAL
1	Rizqiyah, S.KM	Sub Bagian Tata Usaha		
2	Eny Kustiyaningsih, A.Md.Kep	Sub Bagian Tata Usaha		
3	Zendy Dwi Putra, S.H	Sub Bagian HRD		
4	Shofia Fatkurrotin, S.Kom	SPI		
5	Andri Permadi	Sub Bagian Rumah Tangga		
6	Ginanjari Sugeng Ristyadi	Sub Bagian Rumah Tangga		
7	Ita Susanna	Sub Bagian Rumah Tangga		
8	R. Hery Widarijanto	Sub Bagian Rumah Tangga		
9	Ulwiyyatul Musyarofah	Sub Bagian Rumah Tangga		
10	Ahmad Rhomadoni	PPRM		
11	Alvi Istiqomah, A.Md.RMIK	PPRM		
12	Andhika Romadhoni	PPRM		
13	Aula Dina Rahmah, S.Tr.Kes	PPRM		
14	Desi Linda Kusumawati, S.ST	PPRM		
15	Endang Isbandiah	PPRM		
16	Hartono, S.Ag	PPRM		
17	I Gusti Made Diatmika	PPRM		
18	Mas'ud	PPRM		
19	Moch. Zainal Abidin	PPRM		
20	Rosita Palupi Ningtyas	PPRM		
21	Siti Mailana	PPRM		
22	Sri Puntolorukmi Prasetyo	PPRM		
23	Sugeng Hari Wibowo	PPRM		
24	Udin Apriliansyah, S.S.T	PPRM		
25	Amal Okky Prahasto, S.E	Bagian Keuangan dan Akuntansi		
26	Anis Yuliaty, A.Md	Bagian Keuangan dan Akuntansi		
27	Fitrananda Kenate, S.Sos	Bagian Keuangan dan Akuntansi		
28	Irfah Kharisma Cahyani	Bagian Keuangan dan Akuntansi		
29	Jaja Nurjanah	Bagian Keuangan dan Akuntansi		

The screenshot shows the LPPOM MUI website with a navigation menu and four product detail cards. Each card lists the product name, registration number, manufacturer, and expiration date.

Product Name	Registration Number	Manufacturer	Expiration Date
1. HCLCH EYE DROP 5 MG/ML 3 ML	001402095500619	PT. INERTIA UTAMA	2025-07-28 00:00:00
2. LATANOPROST Eye Drop 50 mcg/ml 2.5 ml	001402095500619	PT. INERTIA UTAMA	2025-07-28 00:00:00
3. DOLPATAONE EYE DROPS 1 MG/ML 5 ML	001400995500819	PT. INERTIA UTAMA	2021-06-18 00:00:00
4. HEDIFLOXACIN EYE DROP 5 MG/ML 3 ML	001400295500619	PT. INERTIA UTAMA	2021-05-19 00:00:00

**dexa group**  
Expertise for The Promotion of Health

The map highlights the following regions: USA, Canada, UK, Netherland, 2019: Poland, Nigeria, Myanmar, Srilanka, Vietnam, Cambodia, Philippines, Malaysia, and Singapore.

**Dexa Group telah hadir di empat benua (Asia, Afrika, Eropa dan Amerika)**

**HIGH QUALITY PRODUCT  
COMPETING IN THE GLOBAL MARKET**

The only Indonesian drugs that presence in the UK market

Key player in UK's metformin sustain release market

Conventional & unique dosage form

New drug delivery system

Nano encapsulation

**Produk aliansi dengan farmasi luar negeri**

Logos: Santen, Ferron, MBI

Cravit	Tarivid	Hialid	ViscAid
Alegysal	Flumetholon	Kary Uni	

Lampiran I

Nomor : /PKS/DIR/RSMU/ /2021

Nomor :

Perihal : Jenis Produk dan Harga dalam Perjanjian ini

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**PERJANJIAN KERJASAMA  
RUMAH SAKIT MATA UNDAAN SURABAYA DENGAN  
PT. SURYA TAMA MEDIKA**

PIHAK KESATU	PIHAK KEDUA

**Suplemen dan vitamin mata terlengkap**



**OPTIMAX FOR G    OPTIMAX    OPTIMAX PLUS    OPTIMAX PREMIO**



**OPTIMAX O3    NEUVISS PRO SYRUP    NEUVISS PRO 1000**

Optimax (kaplet salut selaput)	Optimax Plus (tiap 5 ml)	Optimax for G (kapsul)	Optimax O3 (kapsul lunak)	Optimax Premio (kapsul lunak)
<ul style="list-style-type: none"> <li>Lutein 3 mg</li> <li>Bilberry extr. 80 mg</li> <li>Lycopene 2 mg</li> <li>Vitamin E 25 mg</li> <li>Vitamin C 100 mg</li> <li>Zinc 10 mg</li> <li>Betacarotene 6000 IU</li> </ul>	<ul style="list-style-type: none"> <li>Lutein 1 mg</li> <li>Lycopene 0,5 mg</li> <li>Zeaxanthine 350 µg</li> <li>Vitamin E 12,5 mg</li> <li>Vitamin C 50 mg</li> <li>Zinc 2,5 mg</li> <li>Betacarotene 10% 2,5 mg</li> <li>Bilberry extr. 40 mg</li> </ul>	<ul style="list-style-type: none"> <li>Ekstrak Mirtogenol* 120 mg yang terdiri dari ekstrak bilberry (<i>Vaccinium myrtillus L.</i>) terstandar, Mirtoselect* 31,6%</li> <li>Ekstrak kulit kayu French maritime pine (<i>Pinus pinaster</i>) terstandar, Pycnogenol* 63,4%</li> </ul>	<ul style="list-style-type: none"> <li>Omega-3 600 mg (EPA 180 mg dan DHA 120 mg)</li> <li>Lutein 10 mg</li> <li>Lycopene 2 mg</li> </ul>	<ul style="list-style-type: none"> <li>Vitamin C 250 mg</li> <li>Vitamin E 200 IU</li> <li>Lutein 5 mg</li> <li>Zeaxanthin 1 mg</li> <li>Zinc 12,5 mg</li> </ul>

**Tetes mata produksi Ferron**



**Molcin**  
Tetes mata *moxifloxacin* 5 mg/ml

**Lergio**  
Tetes mata *olopatadine* 1 mg/ml

**Lacoma**  
Tetes mata *latanoprost* 50 mcg/ml

**Molcin**  
Moxifloxacin HCl  
Ophthalmic solution 5mg/ml

**Moxifloxacin HCl**  
Tetes mata *moxifloxacin* 5 mg/ml

Ricawati Santoso, dr  
Business Unit Manager, PT Ferron par- Dexa Medica Group

## Keratitis

- Approximately 71,000 cases of microbial keratitis (including bacteria, fungus, and *Acanthamoeba*) occur annually in the United States, with an increasing incidence in recent years
- Prompt recognition, management and urgent referral for ophthalmic review are required to minimise vision loss.
- The rate of disease progression is dependent on the virulence of the infecting organism and on host factors

**Table 2. Potential pathogens in microbial keratitis**

Staphylococcus spp.	Opportunistic pathogens particularly in the compromised cornea
Streptococcus spp.	
Pseudomonas aeruginosa	Aggressive keratitis causing >60% of contact lens-related keratitis
Moraxella spp.	Associated with decreased host immune defences (malnutrition, alcoholism, diabetes)
Neisseria spp.	Can penetrate intact corneal epithelium
Corynebacterium diphtheriae	
Haemophilus influenzae	
Candida albicans	Can cause fungal keratitis; acquired from contaminated water sources, including contact lens solutions
Fusarium solani	
Aspergillus spp.	
Herpes simplex virus (type 1 or 2)	Can cause viral keratitis from previous viral exposure
Varicella zoster virus	
Acanthamoebae	Can cause protozoal keratitis; acquired from contaminated water sources, including contact lens solutions

Nguyen V. AJOP 2019; 48:8. <https://doi.org/10.1016/j.ophtha.2018.10.018>

## Bacterial Keratitis Preferred Practice Pattern®



### MANAGEMENT

- Prevention: avoiding or correcting predisposing factors. Early detection and appropriate treatment are important to minimize permanent visual loss
- Initial Treatment:
  - Topical antibiotic eye drops are capable of achieving high tissue levels and are the preferred method of treatment in most cases.** Ointments lack solubility and therefore the therapeutic agents are not able to penetrate into the cornea significantly for optimum therapeutic benefit.
  - For central or severe keratitis (e.g., deep stromal involvement or an infiltrate larger than 2 mm with extensive suppuration), a loading dose such as every 5-15 minutes followed by frequent applications such as every hour is recommended

2018 by the American Academy of Ophthalmology  
<https://doi.org/10.1016/j.ophtha.2018.10.018>

## Bacterial Keratitis Preferred Practice Pattern®



TABLE 2 Antibiotic Therapy For Bacterial Keratitis

Organism	Antibiotic	Topical Concentration	Subconjunctival Dose
No organism identified or multiple types of organisms	Cefazolin or vancomycin with Tetracycline or gentamicin	25–50 mg/ml	100 or 25 mg in 0.5 ml
	Fluoroquinolones*	Various†	20 mg in 0.5 ml
Gram-positive cocci	Cefazolin	50 mg/ml	100 mg in 0.5 ml
	Vancomycin‡	10–60 mg/ml	25 mg in 0.5 ml
	Bacitracin§	10,000 IU	Various†
Gram-negative rods	Fluoroquinolones*	Various†	20 mg in 0.5 ml
	Tetracycline or gentamicin	5–14 mg/ml	20 mg in 0.5 ml
	Ceftazidime	50 mg/ml	100 mg in 0.5 ml
Gram-negative cocci	Fluoroquinolones*	Various†	20 mg in 0.5 ml
	Ceftriaxone	50 mg/ml	100 mg in 0.5 ml
	Ceftazidime	50 mg/ml	100 mg in 0.5 ml
Gram-positive rods (Non-tuberculous mycobacteria)	Fluoroquinolones*	Various†	20 mg in 0.5 ml
	Amikacin	20–40 mg/ml	20 mg in 0.5 ml
	Clarithromycin	10 mg/ml	
	Azithromycin¶	10 mg/ml	
Gram-positive rods (tuberculous mycobacteria)	Fluoroquinolones*	Various†	20 mg in 0.5 ml
	Sulfacetamide	100 mg/ml	
	Amikacin	20–40 mg/ml	20 mg in 0.5 ml
Gram-positive rods (Neisseria)	Trimethoprim/sulfamethoxazole	16 mg/ml	
	Sulfamethoxazole	30 mg/ml	

Single-drug therapy using a fluoroquinolone has been shown to be as effective as combination therapy utilizing antibiotics that are fortified by increasing their concentration over commercially available topical antibiotics [I+, Good, Strong]

2018 by the American Academy of Ophthalmology  
<https://doi.org/10.1016/j.ophtha.2018.10.018>

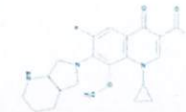
## Moxifloxacin BROAD SPECTRUM BACTERICIDAL

**BACTERICIDAL**  
Moxifloxacin is a bactericidal, concentration dependent, anti-infective



### BROAD SPECTRUM

Improved activity against Streptococci and Staphylococci and moderate to excellent activity against clinically relevant, gram negative ocular pathogens



Miller D, Clinical Ophthalmology 2008;2(1):77-9

**Review of Third- and Fourth-Generation Fluoroquinolones in Ophthalmology: In-Vitro and In-Vivo Efficacy**

Stephen V. Scuper  
Virginia Eye Consultants, Norfolk, Virginia, USA

Adv Ther 2008;25(10):979-994  
DOI:10.1007/s12325-008-0107-w

**Results:** Nine eligible studies published between 2002 and 2008 were identified, eight of which are presented. The five in-vitro studies demonstrated that moxifloxacin and gatifloxacin are statistically more potent than levofloxacin against Gram-positive organisms and similar in potency in most cases of Gram-negative bacteria. In-vivo animal models testing moxifloxacin or gatifloxacin against levofloxacin 0.5% (no clinical trials testing the efficacy of levofloxacin 1.5% have yet been published) demonstrated that fourth-generation agents were superior to third-generation levofloxacin 0.5% for prophylaxis of Gram-positive bacteria-induced infections and were equal to, or better than, levofloxacin 0.5% for the treatment of Gram-negative infections.

**Conclusion:** Fourth-generation agents have increased potency against Gram-positive bacteria compared with levofloxacin, while maintaining similar potency against Gram-negative bacteria. Although levofloxacin 1.5% has demonstrated superior ocular penetration relative to gatifloxacin, the limited available data do not suggest this translates into superior clinical activity compared with moxifloxacin, which has significantly greater ocular penetration and better Gram-positive potency than gatifloxacin.

Fourth-generation agents have increased potency against Gram-positive bacteria compared with levofloxacin, while maintaining similar potency against Gram-negative bacteria.

Brazilian Journal of Medical and Biological Research (2017) 50(7), e9071, <http://dx.doi.org/10.1007/s13514-017-0207-0>  
ISSN 1414-4312

**Penetration of 0.3% ciprofloxacin, 0.3% ofloxacin, and 0.5% moxifloxacin into the cornea and aqueous humor of enucleated human eyes**

G.C.M. Silva<sup>1</sup>, V.A.P. Jabor<sup>2</sup>, P.S. Bonato<sup>2</sup>, E.Z. Martinez<sup>3</sup> and S.J. Faria-e-Sousa<sup>1</sup>

**Abstract**

We aimed to quantify the penetration of ciprofloxacin, ofloxacin, and moxifloxacin into the cornea and aqueous humor of cadaver eyes. A total of 50 enucleated eyes, not eligible for corneal transplantation, were divided into three groups and immersed in commercial solutions of 0.3% ciprofloxacin, 0.3% ofloxacin, or 0.5% moxifloxacin for 10 min. Whole corneas and samples of aqueous humor were then harvested and frozen, and drug concentrations analyzed by liquid chromatography tandem mass spectrometry. The mean corneal concentration of moxifloxacin was twice as high as ofloxacin, and the latter was twice as high as ciprofloxacin. The mean concentration of moxifloxacin in the aqueous humor was four times higher than the other antibiotics, and the mean concentrations of ciprofloxacin and ofloxacin were statistically similar. The amount of drug that penetrated the anterior chamber after a 10-min immersion was far below the safety limit of endothelial toxicity of each preparation. Moxifloxacin demonstrated far superior penetration into the cornea and anterior chamber of cadaver eyes compared to ciprofloxacin and ofloxacin. One should not expect endothelial toxicity with the conventional eye drops of ciprofloxacin, ofloxacin, and moxifloxacin that reach the anterior chamber through the cornea.

**Key words:** Ciprofloxacin; Eye bathing; Eye drops; Fluoroquinolones; Moxifloxacin; Ofloxacin

**PENETRATION**  
The mean corneal concentration of moxifloxacin was twice as high as ciprofloxacin and ofloxacin



**Asian Journal of Pharmaceutical and Clinical Research**  
Vol. 4, Issue 2, 2011 ISSN - 0974-2144

**Research Article**

**A CLINICAL COMPARISON OF THE EFFICACY & PENETRATION OF MOXIFLOXACIN AND LEVOFLOXACIN IN CATARACT SURGERY CASES**

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**ABSTRACT**

A cataract is the clouding or opacity of the normally clear, natural crystalline lens of the eye, which lies behind the iris and the pupil. There are an estimated 9-12 million blind in India, half of which can be attributed to cataract. Endophthalmitis is a potentially sight threatening complication of cataract surgery. Fluoroquinolones penetrate vitreous better than other antibiotics and is used by many clinicians, but have not been suggested to rigorous, blinded clinical trials.

**Objectives:** The main objective of this study is to compare the efficacy and penetration ability of topically applied 0.5% Moxifloxacin and 0.5% Levofloxacin ophthalmic solutions into human aqueous humor before routine cataract surgery.

**Materials and Method:** Microbiological study was carried out on patients' conjunctival smear before and after administration of antibiotic. Fifty patients that underwent cataract extraction were divided randomly into two groups with Moxifloxacin (25 Patients) and Levofloxacin (25 Patients).

**Result:** Based on the penetration study, the mean concentration of Moxifloxacin in the aqueous humor was significantly greater than that of Levofloxacin in both types of regimens namely regime A and B. The MIC<sub>90</sub> values of Moxifloxacin was found to be lower than that of Levofloxacin for most key ocular pathogens.

**Conclusion:** This study provides an evidence based conclusion that cataract surgery can be done as an outpatient procedure without any complication to the patients and that Moxifloxacin has a better penetrating power than Levofloxacin in the aqueous humor.

**Keywords:** Moxifloxacin, Levofloxacin, Endophthalmitis.

Moxifloxacin has a better penetration in the aqueous humor than levofloxacin

**Comparison of Corneal and Aqueous Humor Penetration of Moxifloxacin, Gatifloxacin and Levofloxacin During Keratoplasty**

**Results:** A total of 63 patients across eight centers in Japan were enrolled in the study. Overall, 61 corneal and 58 aqueous humor samples were evaluated. The concentration (mean ± standard deviation) of moxifloxacin in corneal tissues was 12.66 ± 8.93 µg/g, which was significantly higher than that of gatifloxacin (4.71 ± 3.39 µg/g; P < 0.0001) and levofloxacin (5.95 ± 4.02 µg/g; P < 0.0001). The mean concentration of moxifloxacin in aqueous humor samples was 1.40 ± 1.17 µg/mL, which was significantly higher than that of gatifloxacin (0.65 ± 0.80 µg/mL; P = 0.0001) and levofloxacin (0.89 ± 0.86 µg/mL; P < 0.05). The sequence of drug administration did not significantly affect the results.

**Conclusion:** These results show that 0.5% moxifloxacin achieved superior ocular concentration than both 0.3% gatifloxacin and 0.5% levofloxacin.

Adv Ther (2012) 29(4):338-349  
DOI 10.1007/s12325-012-0016-x



### Evaluation of Moxifloxacin 0.5% in Treatment of Nonperforated Bacterial Corneal Ulcers

Sharma N, et al. *Ophthalmology* 2013;120:1173-1178

**Purpose:** To compare the equivalence of moxifloxacin 0.5% with a combination of fortified cefazolin sodium 5% and tobramycin sulfate 1.3% eye drops in the treatment of moderate bacterial corneal ulcers.

**Design:** Randomized, controlled, equivalence clinical trial.

**Participants and Controls:** Microbiologically proven cases of bacterial corneal ulcers were enrolled in the study and were allocated randomly to 1 of the 2 treatment groups.

**Intervention:** Group A was given combination therapy (fortified cefazolin sodium 5% and tobramycin sulfate) and group B was given monotherapy (moxifloxacin 0.5%).

**Main Outcome Measures:** The primary outcome variable for the study was percentage of the ulcers healed at 3 months. The secondary outcome variables were best-corrected visual acuity and resolution of infiltrates.

**Results:** Of a total of 224 patients with bacterial keratitis, 114 patients were randomized to group A, whereas 110 patients were randomized to group B. The mean  $\pm$  standard deviation ulcer size in groups A and B were  $4.2 \pm 2$  and  $4.41 \pm 1.5$  mm, respectively. The prevalence of coagulase-negative *Staphylococcus* (40.9% in group A and 48.2% in group B) was similar in both the study groups. A complete resolution of keratitis and healing of ulcers occurred in 90 patients (81.8%) in group A and 88 patients (81.4%) in group B at 3 months. The observed percentage of healing at 3 months was less than the equivalence margin of 20%. Worsening of ulcer was seen in 18.2% cases in group A and in 18.5% cases in group B. Mean time to epithelialization was similar, and there was no significant difference in the 2 groups ( $p = 0.065$ ). No serious events attributable to therapy were reported.

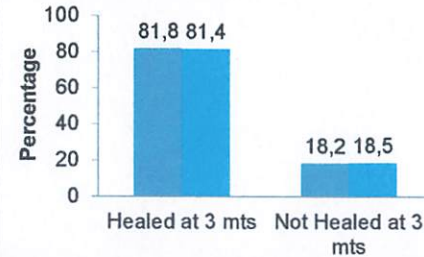
**Conclusions:** Corneal healing using 0.5% moxifloxacin monotherapy is equivalent to that of combination therapy using fortified cefazolin and tobramycin in the treatment of moderate bacterial corneal ulcers.

**Financial Disclosures:** The authors have no proprietary or commercial interest in any materials discussed in this article. *Ophthalmology* 2013;120:1173-1178 © 2013 by the American Academy of Ophthalmology.

### Evaluation of Moxifloxacin 0.5% in Treatment of Nonperforated Bacterial Corneal Ulcers

Sharma N, et al. *Ophthalmology* 2013;120:1173-1178

- Cefazoline 5%+Tobramycin 1,3%
- Moxifloxacin 0,5%



Corneal healing using 0.5% moxifloxacin monotherapy is equivalent to that of combination therapy using fortified cefazolin and tobramycin in the treatment of moderate bacterial corneal ulcers.

### Effect of Topical Moxifloxacin on the Bacterial Flora of the Ocular Surface following Cataract Surgery: A Randomized, Single-Masked Clinical Trial

Int J Ophthalmol Clin Res 2018, 5:088 DOI: 10.23937/2378-346X/1410088

Erick Mendoza-Schuster\*, Guadalupe Cervantes-Coste, Virginia Vanzini and Cecilia Velasco-BaronaD



Table 1: Percent of eyes with positive culture at baseline (t<sub>0</sub>) and at the end of treatment schedule (t<sub>1</sub>).

Time Point	3-Day Moxifloxacin n = 30		1-Hour Moxifloxacin n = 30		P
	Swabs	% eyes with positive culture	Swabs	% eyes with positive culture	
t <sub>0</sub>	7/10	70%	4/8	50%	0.84
t <sub>1</sub>	7/18	39%	1/16	7%	0.038

P-value for between-group using Fisher's test.

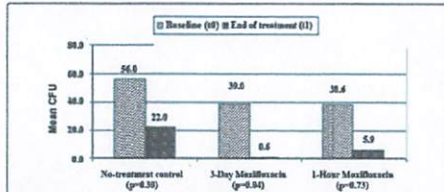


Figure 1: Mean number of colony forming units (CFU) of organisms cultured from swab samples at baseline (t<sub>0</sub>) and at the end of treatment schedule (t<sub>1</sub>).

The 3-day prophylactic regimen with 0.5% moxifloxacin ophthalmic solution resulted in statistically significantly fewer positive conjunctival cultures and fewer CFU than the 1-hour regimen, suggesting 3-day regimen would prevent postoperative endophthalmitis

### Effect of Topical Moxifloxacin on the Bacterial Flora of the Ocular Surface following Cataract Surgery: A Randomized, Single-Masked Clinical Trial

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Erick Mendoza-Schuster\*, Guadalupe Cervantes-Coste, Virginia Vanzini and Cecilia Velasco-BaronaD



**Abstract**

**Objective:** To determine the efficacy of topical 0.5% moxifloxacin ophthalmic solution in reducing conjunctival flora when administered for 3 days versus 1 hour prior to surgery.

**Methods:** This was a randomized, single-masked, comparative, longitudinal, single-center study. Sixty eyes of 60 patients scheduled for cataract surgery were randomized to receive either 1 drop of moxifloxacin 4 times daily for 3 days prior to surgery or 1 drop every 15 minutes for 1 hour prior to surgery. The non-surgical eye of each patient served as the no-treatment control. Conjunctival cultures were obtained from both eyes at baseline (t<sub>0</sub>) and 1 hour after the last dose of treatment (t<sub>1</sub>).

**Results:** There was no statistically significant difference (p = 0.54) in the percent of culture-positive eyes between the 3-day and 1-hour groups at baseline; however, the difference was statistically significant (p = 0.035) in favor of the 3-day group at t<sub>1</sub>. The mean number of colony forming units (CFU) was significantly lower at t<sub>1</sub> compared to t<sub>0</sub> in the 3-day group (p = 0.04), but not in the 1-hour group (p = 0.73). At t<sub>1</sub>, eyes in the 3-day group showed statistically significant reduction in the percent of culture-positive eyes (p = 0.019) and the mean number of CFU (p = 0.002) for *S. epidermidis*, the most frequently isolated organism from swab samples at t<sub>0</sub> and t<sub>1</sub>. No treatment-related adverse events were reported.

**Conclusion:** The 3-day prophylactic regimen with 0.5% moxifloxacin ophthalmic solution resulted in statistically significantly fewer positive conjunctival cultures and fewer CFU than the 1-hour regimen, suggesting 3-day regimen would

## Moxifloxacin 0.5% Ophthalmic Solution In Bacterial Conjunctivitis

Gillian M. Keating

### Abstract

The fourth-generation 8-methoxyfluoroquinolone moxifloxacin is available as an 0.5% ophthalmic solution for use in the treatment of bacterial conjunctivitis. Moxifloxacin had good activity against various Gram-positive and -negative ocular isolates in vitro, and moxifloxacin 0.5% ophthalmic solution achieved good penetration into ocular tissues in healthy volunteers and patients undergoing ocular surgery. The efficacy of moxifloxacin 0.5% ophthalmic solution in the treatment of bacterial conjunctivitis has been shown in three randomized, double-blind, multicentre trials. In a trial in patients aged  $\geq 1$  year, the clinical success rate was significantly higher with moxifloxacin 0.5% ophthalmic solution than with placebo. In a trial in patients aged  $\geq 12$  years, moxifloxacin 0.5% ophthalmic solution was noninferior to levofloxacin 0.5% ophthalmic solution in terms of the clinical success rate. In a third trial, the clinical cure rate was significantly higher with moxifloxacin 0.5% ophthalmic solution than with trimethoprim 1.0%/polymyxin B 10,000 IU/mL ophthalmic solution in paediatric patients aged  $\leq 18$  years. **Moxifloxacin 0.5% ophthalmic solution was well tolerated in patients with bacterial conjunctivitis. Ocular adverse events (e.g. eye pain, eye irritation) were the most commonly reported treatment-related adverse events, with the majority being of mild severity.**

Drugs 2011; 71 (1): 89-99  
0013-6667/11/0001-0089/550.55/0

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## Efficacy and Safety of Moxifloxacin 0.5% Eye Drops versus Tobramycin 0.3% Eye Drops in Pediatric Population with Purulent Bacterial Conjunctivitis

Koul and Gupta  
International Journal of Scientific  
Study | May 2019 | Vol 7 | Issue 2

### Abstract

**Aims:** The study aims to determine the efficacy and safety of moxifloxacin 0.5% eye drops versus tobramycin 0.3% eye drops in pediatric population with purulent bacterial conjunctivitis.

**Study design:** Prospective, randomized, investigator-masked, clinical study was conducted on patients.

**Place and Duration of Study:** This study was conducted by the Department of Ophthalmology Veer Chandra Singh Garhwali Government Medical College, Srinagar, Uttarakhand, between March 2018 and February 2019.

**Methodology:** This study included 100 children with purulent discharge and bulbar conjunctival injection. Children either received moxifloxacin 0.5% 4 times a day for 5 days or received tobramycin 0.3% eye drops (every 2 h for 2 days and then 4 times for 5 days). Clinical signs were evaluated on days (D) 0, 3, and 7 and cultures on D0 and D7. The primary variable was the clinical cure (absence of bulbar injection and discharge) on D3 in the worst eye for patients with positive culture on D0.

**Results:** 100 culture-positive cases were included on D0. Moxifloxacin was superior to tobramycin in clinical cure rate on D3 (47.1% vs. 28.7%)  $P = 0.013$  and was non-inferior to tobramycin on D7 (69.6% vs. 79.2%, respectively). Moxifloxacin treatment eradicated causative pathogens, including resistant species with a similar resolution rate to tobramycin (89.6% vs. 87.2%).

**Conclusion:** Moxifloxacin 0.5% eye drops provided a more rapid and effective clinical cure than tobramycin 0.3% eye drops in the treatment of purulent bacterial conjunctivitis in children, with 4 times dosing.

**Moxifloxacin 0,5% eye drops provided a more rapid and effective clinical cure than tobramycin 0,3% eye drops**

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Koul and Gupta  
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Study | May 2019 | Vol 7 | Issue 2

Table 1: Patients characteristics at baseline

Gender	Moxifloxacin (n=50)	Tobramycin (n=50)
Male	25	24
Female	25	26
Mean age in years	2.7(3.2)	3.2(3.9)
Bulbar conjunctival injection in worst eye		
Absent	21 (42%)	21 (42%)
Mild	18 (36%)	18 (36%)
Moderate	11 (22%)	11 (22%)
Severe	0	0
Concomitant conjunctival discharge in worst eye		
Absent	0	0
Mild	3 (6%)	2 (4%)
Moderate	20 (40%)	28 (56%)
Severe	27 (54%)	20 (40%)

Table 3: Bacterial resolution (day 7) in worst eye

Organism	Cagle's category	Moxifloxacin (n=50)		Tobramycin (n=50)	
		Day 0	Day 7	Day 0	Day 7
<i>Staphylococcus aureus</i>	2	10	5/8	9	7/8
<i>Staphylococcus epidermidis</i>	3	5	2/3	6	3/6
Cocci-gram-negative Staph	3	5	5/6	7	6/6
<i>Streptococcus pneumoniae</i>	1	15	12/13	16	13/14
<i>Neisseria</i>	1	1	1/1	1	1/1
<i>Staphylococcus carnosus</i>	2	1	1/1	1	1/1
<i>Haemophilus</i>	1	5	7/8	8	6/7
<i>Pseudomonas</i>	1	1	1/1	2	2/2
Overall resolution rate			89.6%		87.2%

Table 2: Clinical cure rates in worst eye

	Moxifloxacin (n=50)	Tobramycin (n=50)	Between group difference	Superiority testing P value	Non-inferiority testing
Day 3	23 (47.1)	15 (28.7)	18.3	0.013	-
Day 7	45 (89.2)	39 (78.2)	11.0	0.077	-2.9 to 24.3

**Moxifloxacin 0,5% eye drops provided a more rapid and effective clinical cure than tobramycin 0,3% eye drops**

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## Indikasi

Larutan tetes mata MOLCIN diindikasikan untuk pengobatan bakterial keratitis yang disebabkan oleh jenis organisme sensitif

- Gram-positif aerob: *Corynebacterium* species, *Micrococcus luteus*, *Staphylococcus aureus*, *Staphylococcus epidermidis*, *Staphylococcus haemolyticus*, *Staphylococcus hominis*, *Staphylococcus warneri*, *Streptococcus pneumoniae*, *Streptococcus viridans*
- Gram-negatif aerob: *Acinetobacter lwoffii*, *Haemophilus influenzae*, *Haemophilus parainfluenzae*
- Mikroorganisme lain: *Chlamydia trachomatis*

## Kontraindikasi

Larutan tetes mata MOLCIN dikontraindikasikan pada pasien yang memiliki riwayat hipersensitivitas terhadap *moxifloxacin*, *quinolone* lain, atau terhadap komponen lain yang ada dalam obat ini.

Molcin. Package Insert

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## Dosis dan Cara Pemberian

Teteskan satu tetes pada mata yang terkena 3 kali sehari selama 7-14 hari.  
Dosis dapat ditingkatkan hingga 8 kali per hari tergantung gejala klinis

- Hanya untuk penggunaan pada mata. Tidak untuk injeksi.
- Larutan tetes mata MOLCIN tidak boleh diinjeksikan secara subkonjungtiva, atau tidak boleh diberikan langsung ke dalam rongga anterior mata.



Molcin: Package Insert

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## Kemasan



Tiap ml mengandung:  
*Moxifloxacin* HCl setara dengan  
*moxifloxacin* 5 mg.

- HARUS DENGAN RESEP DOKTER.
- SIMPAN PADA SUHU DI BAWAH 30°C.
- HANYA DAPAT DIPAKAI SELAMA 28 HARI SETELAH TUTUP DIBUKA.
- NO Preservatives

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# Molcin

Moxifloxacin HCl  
Ophthalmic solution 5mg/ml

Broad spectrum antibiotic  
Better penetration into ocular tissue  
Good efficacy and safety profile

PT FERRON FAR PHARMACEUTICALS

Member of Ferron Group

## Tetes mata Ferron OGB untuk pasien BPJS



**Moxifloxacin HCl**  
Tetes mata moxifloxacin 5 mg/ml



**Olopatadine HCl**  
Tetes mata olopatadine 1 mg/ml



**Latanoprost**  
Tetes mata latanoprost 50 mcg/ml

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**Moxifloxacin HCl**  
Tetes mata *moxifloxacin* 5 mg/ml



Listed in e-katalog 2021-2022



Tiap ml mengandung:  
*Moxifloxacin* HCl setara dengan *moxifloxacin* 5 mg.

Kemasan dan nomor registrasi:  
Kotak, 1 botol x 3 ml; GKL1934614646A1

- HARUS DENGAN RESEP DOKTER.
- SIMPAN PADA SUHU DI BAWAH 30°C.
- HANYA DAPAT DIPAKAI SELAMA 28 HARI SETELAH TUTUP DIBUKA.
- NO Preservatives

FERRON —  
**opta**

*Broad-spectrum antibiotic with affordable price!*

**Olopatadine HCl**  
Tetes mata *olopatadine* 1 mg/ml



Listed in e-katalog 2021-2022



Tiap ml mengandung:

- Olopatadine hydrochloride* setara dengan *olopatadine* 1 mg
- Benzalkonium chloride* 0,21 mg

Kemasan dan nomor registrasi:  
Kotak, 1 botol x 5 ml; GKL1934614346A1

- HARUS DENGAN RESEP DOKTER.
- SIMPAN PADA SUHU DI BAWAH 30°C.
- HANYA DAPAT DIPAKAI SELAMA 28 HARI SETELAH TUTUP DIBUKA.

FERRON —  
**opta**

*Dual-action anti-allergy with affordable price!*

**Latanoprost**  
Tetes mata *latanoprost* 50 mcg/ml




FERRON —  
**opta**

*Preserving sight with affordable price!*

**LATANOPROST**

isi berisi: 1 botol x 2,5 ml  
**LATANOPROST**  
Tetes mata 50mcg/ml

- First-line therapy**  
*Latanoprost* direkomendasikan sebagai *first-line topical IOP-lowering agent* pada glaukoma sudut terbuka<sup>1</sup>
- Proven efficacy**  
*Latanoprost* terbukti efektif menurunkan tekanan intraokular<sup>2,3</sup>
- Good safety profile**  
Kejadian efek samping *conjunctival hyperemia* minimal<sup>2,4</sup>
- Affordable price**  
Harga terjangkau dengan kualitas terjamin

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# LATANOPROST



**Komposisi:**

Tiap ml mengandung:  
*Latanoprost* 50 mcg  
*Benzalkonium chloride* 0,4 mg

**Kemasan dan nomor registrasi:**

Kotak, 1 botol x 2,5 ml; GKL1934615046A1

**HARUS DENGAN RESEP DOKTER.  
SIMPAN PADA SUHU DI ANTARA 2-8 C.  
SETELAH DIBUKA, SIMPAN PADA SUHU  
DI BAWAH 25 C DAN HANYA DAPAT DIPAKAI  
SELAMA 28 HARI.**

ecatalogue

Katalog Elektronik v.5.0



GENERIK Moxifloxacin hydrochloride (HCl)/ Mo...

PT Ferron Par Pharmaceutic...

TKDN(%): 32.0

IDR 48,862.00



GENERIK Olopatadine hydrochloride (HCl)/ Olo...

PT Ferron Par Pharmaceutic...

TKDN(%): 32.0

IDR 43,714.00



GENERIK Latanoprost tts mata 0,005%

PT Ferron Par Pharmaceutic...

TKDN(%): 33.42

IDR 64,150.00

Thank You

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